



*Steep-Slope Roofing  
Materials Guide*

**2000**

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# Steep-Slope Roofing Materials Guide

## Introduction

The 2000 edition of NRCA's *Steep-Slope Roofing Materials Guide* is a comprehensive report on steep-slope roof products currently on the market in the United States. It also provides pertinent information about the warranties offered for most asphalt shingle products.

The National Roofing Contractors Association (NRCA) publishes the guide as a service to the roofing industry. The objective of the guide is to provide information that will be helpful to users in determining which specific manufacturers' products will best serve their particular needs. It is of special value to those associated with the design, specification, application and use of steep-slope roof systems.

The guide's first edition was published in November 1992 and has been published annually since that time. From 1992 through 1998, this publication was titled *Residential Steep-Slope Roofing Materials Guide*. The term "residential steep-slope" distinguished it from a companion publication, the *Commercial Low-Slope Roofing Materials Guide*, which has been published since 1983. The *Commercial Low-Slope Roofing Materials Guide* provided product information on built-up, polymer modified bitumen, single-ply, sprayed polyurethane foam-based and structural metal panel roof system products, and warranty information for roof membrane systems.

When applied to the U.S. roofing market, the terms "commercial low-slope" and "residential steep-slope" are by no means definitive. Low-slope roofing products commonly are used on non-residential buildings (e.g., commercial, industrial, and institutional buildings) and are sometimes used on residential buildings (e.g., single family homes, townhouses). Conversely, steep-slope roofing products are commonly used on residential buildings and are sometimes used on non-residential buildings.

Beginning in 1999, the titles of these guides changed to the *Low-Slope Roofing Materials Guide* and the *Steep-Slope Roofing Materials Guide*. The reason for these title changes, and division of product categories, is for consistency with other NRCA publications, including *The NRCA Roofing and Waterproofing Manual*.

Steep-slope roofing products are those primarily intended for roofs with slopes greater than 3:12 (14 degrees). Asphalt shingle, fiber-cement, clay and concrete tile, wood shake and shingle, slate and architectural metal panel roof systems fit this category.

Low-slope roofing products are those primarily intended for roofs with slopes of 3:12 (14 degrees) or less. Built-up, polymer modified bitumen, single-ply, spray

polyurethane foam-based and structural metal panel roof systems fit this category.

In publishing the *Steep-Slope Roofing Materials Guide*, NRCA maintains a policy of objectivity in its reporting of data. Nothing is required from listing manufacturers other than to adhere to the prescribed reporting formats. Any manufacturer of a product in the product categories included in the guide can be listed by submitting its information in accordance with the procedures developed for this purpose. Companies involved only in the distribution of other companies' brand-name roofing products are not included in this publication. Manufacturers interested in having their products listed in future editions of the guide are encouraged to contact NRCA at:

National Roofing Contractors Association  
Attention: Roofing Materials Guide  
10255 West Higgins Road, Suite 600  
Rosemont, Illinois 60018-5607

NRCA exercises due care in accurately reporting the data supplied by product manufacturers. NRCA does not audit test procedures used to arrive at the reported data, nor assume responsibility for the accuracy or completeness of the data submitted. The presence or absence of a listing of products or manufacturers in the guide does not imply NRCA's approval or disapproval of the products or companies, nor does NRCA recommend that any specific materials be used or not.

NRCA does not develop standards itself but, instead, works towards and supports the improvements of existing standards and development of new ones by those organizations responsible for standards development. The fact that materials listed in the guide do or do not meet all the values of the reference standards, documents, recommendations or criteria does not necessarily imply that they will or will not produce acceptable roof systems.

## How the Guide is Organized

The *Steep-Slope Roofing Materials Guide* is divided into nine primary sections:

- Section 1: Asphalt Shingles
- Section 2: Fiber-Cement and Synthetic
- Section 3: Clay and Concrete Tile
- Section 4: Metal Panels
- Section 5: Wood Shakes and Shingles
- Section 6: Slate
- Section 7: Underlayment Sheets
- Section 8: Incomplete Data

There is a general index listing all product manufacturers included in the guide and the locations of their specific product listings at the end of this introductory section. Also a listing of all product

manufacturers and the locations of their specific products is provided at the beginning of each section, with exception to Section 9: Incomplete Data.

There is also an introduction to information for each section at the beginning of each section. Finally, there are separate appendices at the end of each section with exception to Section 9: Incomplete Data. The purpose of these appendices is to provide manufacturer-supplied information that expands data listed in the category section itself. Appendix information can be found for a product when an "X" appears in the space at the end of the listing entitled "See Appendix if Checked".

When reviewing the data in the guide, users should keep in mind that the format is designed to facilitate side-by-side product comparisons. For this reason, listing companies can only respond to existing items of requested information; they cannot add their own items. Footnoting is not permitted in guide listings; companies instead may expand on or clarify information by providing copy for the appendix.

## **Product Listings with Incomplete Data**

Product manufacturers included in the guide are encouraged to provide NRCA with listing information for their products that is as complete as possible for publication in the guide. Beginning with this edition of the guide, when manufacturers submit product information (e.g., test results) that is incomplete, these specific products have been omitted from the detailed listing sections of the guide. Manufacturers and products with incomplete product listing information are included in a new section of the guide, entitled Section 6: Incomplete Data.

NRCA has established this policy regarding manufacturers' product listings with incomplete data at the request of users of the guide, who are clearly seeking detailed and complete product information from the guide and the companies listed.

Users of the guide who are interested in specific product information on a manufacturer's product that is included in Section 6: Incomplete Data are encouraged to contact the product manufacturer directly. Manufacturers' contact information is provided in the index section of the guide.

# GENERAL INDEX

	Asphalt Shingles	Asphalt Shingle Warranties	Fiber-Cement & Synthetic	Clay Tile	Concrete Tile	Metal Panels	Wood Shakes & Shingles	Slate	Underlayment Sheets	Incomplete Data
AIR VENT INC. 3000 West Commerce St. Dallas, TX 75212 800/AIR-VENT FAX 800/635-7006 E-mail: ventilation@certainteed.com Web site: www.airvent.com			118							
ALCO-NVC, INC. P.O. Box 14001 Detroit, MI 48214 800/323-0029 FAX 313/331-4726 E-mail:alconvc@aol.com Web site: www.alconvc.com									211	
ALTUSA/INTERCLAY, CORP. 6645 N.W. 77th Ave. Miami, FL 33166 305/471-5830 305/471-5883					126					
ANDEK CORPORATION P.O. Box 392 Moorestown, NJ 08057 888/88ANDEK FAX 888/44ANDEK E-mail: andekcorp@aol.com									215	
ARS INDUSTRIES, INC. 9609 Parkway East, Suite E Birmingham, AL 35215 205/836-6777 FAX 205/836-4090						166				
ATAS INTERNATIONAL INC. 6612 Snowdrift Rd. Allentown, PA 18106 610/395-8445 FAX 610/395-9342 E-mail: info@atas.com						166				
ATLAS ROOFING CORPORATION 1775 The Exchange, #160 Atlanta, GA 30339 770/933-4478 FAX 770/952-3170	24 54	88							215	
AUBURN TILE INC. 545 W. Main St., P.O. Box 10 Ontario, CA 91762 909/984-2841 FAX 909/984-1517					146					
BERRIDGE MANUFACTURING CO. 1720 Maury St. Houston, TX 77026 713/223-4971 FAX 713/236-9422 E-mail: sales@berridge.com						169				

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	Asphalt Shingles	Asphalt Shingle Warranties	Fiber-Cement & Synthetic	Clay Tile	Concrete Tile	Metal Panels	Wood Shakes & Shingles	Slate	Underlayment Sheets	Incomplete Data
BIRD INCORPORATED see Certainteed 800/322-3060	27								217	
	59									
CERTAINTEED CORPORATION ROOFING PRODUCTS GROUP P.O. Box 1100 1400 Union Meeting Rd. Blue Bell, PA 19422 800/322-3060 FAX 610/341-6212	27								217	
	59									
CLASSIC PRODUCTS, INC. P.O. Box 701 Piqua, OH 45356 800/543-8938 FAX 937/773-9261 E-mail: info@classicroof.com						171				
DANIEL PLATT LTD. c/o NORTHERN ROOF TILE SALES 4408 Milestrip Rd., Suite 266 Blasdell, NY 14219 905/627-4035 FAX 905/627-9648				126						
DECRA ROOFING SYSTEM/ TASMAN ROOFING, INC. 1230 Railroad Street Corona, CA 91720 909/272-8180 FAX 909/272-4476						173				
DURA-LOC ROOFING SYSTEMS LIMITED Box 220 Courtland, ON Canada N0J 1E0 519/688-2200 FAX 519/688-2201						173				
ELK 14643 Dallas Parkway, Suite 1000 Dallas, TX 75240 972/851-0400 FAX 972/851-0401 Web site: www.elkcorp.com	33	88								
	65									
ETERNIT, INC. 610 Corporate Dr. Reading, PA 19605 610/926-0100 OR 800/233-3155 FAX 610/926-9232 Web site: www.etermitusa.com			114							
EVERGREEN SLATE COMPANY, INC. 68 E. Potter Ave. P.O. Box 248 Granville, NY 12832 518/642-2530 FAX 518/642-9313 E-mail: slate@evergreenslate.com								206		

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	Asphalt Shingles	Asphalt Shingle Warranties	Fiber-Cement & Synthetic	Clay Tile	Concrete Tile	Metal Panels	Wood Shakes & Shingles	Slate	Underlayment Sheets	Incomplete Data
<b>FIELDS CORPORATION</b> 2240 Taylor Way Tacoma, WA 98421 253/627-4098 FAX 253/383-2181									218	
<b>GAF MATERIALS CORP.</b> 1361 Alps Road Wayne, NJ 07470 973/628-3000 FAX: 973/628-3356	34 67	90							221	
<b>GEORGIA-PACIFIC CORPORATION</b> 4300 Wildwood Pkwy., Suite 300 Atlanta, GA 30339 770/221-2441 FAX 770/221-8149	36 69	92								
<b>GERARD ROOFING TECHNOLOGIES</b> 955 Columbia Street Brea, CA 92821-2923 714/529-0407 OR 800/23-ROOFS FAX 714/529-6643 E-mail: info@gerardusa.com						175				
<b>GLADDING, MCBEAN</b> P.O. BOX 97 Lincoln, CA 95648 800/964-2529 FAX 916/645-1723				127						
<b>GLOBE BUILDING MATERIALS, INC.</b> 2230 Indianapolis Blvd. Whiting, IN 46394 219/473-4500 FAX 219/473-4504		92							221	233
<b>GREEN RIVER LOG SALES</b> P.O. Box 515 Sumas, WA 98295 800/663-8707 FAX 604/820-3872							194			
<b>GS ROOFING PRODUCTS CO. INC.</b> See: Certainteed 800/322-3060	27 59								213	
<b>HEISTERHOLZ</b> c/o HG ROOFING & CONSULTING P.O. Box 406 Lakeville, IN 46536 219/784-2006 FAX 219/784-3872				129						

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HILLTOP SLATE INC. P.O. Box 201 Middle Granville, NY 12849 518/642-2270 FAX 518/642-1220 Web site: www.hilltopslate.com								206		
HUGUENOT FENAL c/o NORTHERN ROOF TILE SALES 4408 Milestrip Rd., Suite 266 Blasdell, NY 14219 905/627-4035 FAX 905/627-9648				130						
IKO MANUFACTURING INC. 120 Hay Rd. Wilmington DE 19809 302/764-3100 FAX 302/764-5852	38 69	96								
JAMES HARDIE BUILDING PRODUCTS INC 26300 La Alameda, Suite 250 Mission Viejo, CA 92691 949/348-1800 FAX 949/367-0185			115							
LUDOWICI ROOF TILE, INC. P.O. BOX 69 New Lexington, OH 43764 800/945-8453 (tile) FAX 740/342-5229				131						
MALARKEY ROOFING COMPANY P.O. Box 17217 Portland, OR 97217 503/283-1191 FAX 503/283-5405 Web site: www.malarkey-rfg.com	43 75	94							223	
MBCI P.O. Box 38217 Houston, TX 77238 281/445-8555 FAX 281/445-1791 Web site: www.mbc.com						176				
M.C.A. CLAY ROOF TILE 1985 Sampson Ave. Corona, CA 91719 909/736-9590 OR 800/736-6221 FAX 909/736-6052 Web site: www.mca-tile.com				139						
MCELROY METAL CO. 1500 Hamilton Road Bossier City, LA 71111 318/747-8000 FAX 318/747-8029 E-mail: dowens@softdisk.com						177				

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	Asphalt Shingles	Asphalt Shingle Warranties	Fiber-Cement & Synthetic	Clay Tile	Concrete Tile	Metal Panels	Wood Shakes & Shingles	Slate	Underlayment Sheets	Incomplete Data
METAL SALES MANUFACTURING CORP. 7800 State Road 60 Sellersburg, IN 47172 812/246-0819 FAX 812/246-0829 Web site: www.mtlsales.com						179				
MET-TILE INC. P.O. Box 4268 Ontario, CA 91761 909/947-0311 FAX 909/947-1510 E-mail:met-tile@met-tile.com Web site: www.met-tile.com/roof						181				
MONIER LIFETILE 1 Park Plaza, Suite 900 Irvine, CA 92614 714/756-1605 FAX 714/756-2401 Web site: www.monier.com					146					
MONSEY BAKOR DIV. OF HENRY CO. Cold Stream Road Kimberton, PA 19442 610/933-8888 FAX 610/933-4598 Web site: www.henry.com									224	
NORTH COUNTRY SLATE 8800 Sheppard Ave. East Scarborough, ON Canada M1B 5R4 416/724-4666 OR 800/975-2835 FAX 416/281-8842								207		
OWENS CORNING One Owens Corning Pkwy. Toledo, OH 43659 419/248-8000 FAX 419/248-7354 Web site: www.owenscorning.com	45	98	118			181			225	
	77									
PABCO ROOFING MANUFACTURERS 1718 Thorne Rd. Tacoma, WA 98421 253/272-0374 FAX 253/572-4997 E-mail: pabcoroof@paccoast.com	49	100							225	
	81									
PERFECTION: THE VERY BEST IN BUILDING PRODUCTS P.O. Box 1524 Piqua, OH 45356 888/788-2427 OR 937/778-5117 FAX 937/778-5116 E-mail: info@perfectionusa.com						182				
PETERSEN ALUMINUM CORP. 1005 Tonne Rd. Elk Grove Village, IL 60007 800/323-1960 FAX 800/722-7150 www.pac-clad.com						183				

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RE-CON BUILDING PRODUCTS P.O. Box 5659 Eugene, OR 07405 800/347-3373 FAX 541/349-8928			115							
SANDTOFT ROOF TILES c/o NORTHERN ROOF TILE SALES 4408 Milestrip Rd., Suite 266 Blasdell, NY 14219 905/627-4035 FAX 905/627-9648 E-mail: nrts@wchat.on.ca				141						
SANTAFÉ TILE CORPORATION 10302 NW South River Dr., Bay #16 Medley, FL 33178 305/885-9002 FAX 305/888-0050				142						
SPRINGHOUSE INC. 97 Thames Rd., East Exeter, ON Canada N0M 1S3 519/235-1566 FAX 519/235-2852						186				
TAMARK MANUFACTURING, LLC P.O. Box 1386 508 Stella Ave. Savannah, GA 31402 912/232-0786 FAX 912/232-7826 E-mail: sales@lifepine.com Web site: www.lifepine.com							197			
TAMKO ROOFING PRODUCTS INC. P.O. Box 1404 220 W. 4th St. Joplin, MO 64801 417/624-6644 FAX 417/624-8935 Web site: www.tamko.com	50 83	102							226	
TBF c/o THE NORTHERN ROOF TILE SALES 4408 Mile Strip Road, Suite 266 Blasdells, NY 14219 905/627-4035 FAX 905/627-9648 E-mail: nrts@wchat.on.ca				143						
TC MIRADRI 2170 Satellite Blvd. #350 Duluth, GA 30097 770/689-2627 FAX 770/689-2628 E-mail: W.Harvie@Miradri.com									228	
TUILERIE DE PONTIGNY ALEONARD c/o NORTHERN ROOF TILE SALES CO. 4408 Mile Strip Road, Suite 266 Blasdell, NY 14219 905/627-4035 FAX 905/627-9648 E-mail: nrts@wchat.on.ca				144						

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	Asphalt Shingles	Asphalt Shingle Warranties	Fiber-Cement & Synthetic	Clay Tile	Concrete Tile	Metal Panels	Wood Shakes & Shingles	Slate	Underlayment Sheets	Incomplete Data
<b>U.S. TILE COMPANY</b> A Division of Boral Industries, Inc. 909 Railroad St./P.O. Box 1509 Corona, CA 92882-1906 909/737-0200 FAX 909/734-9591 E-mail: clayinfo@ustile.com				145						
<b>VINCENT METAL GOODS</b> 455 85th Avenue NW P.O. Box 360 Minneapolis, MN 55433 612/717-9000 FAX: 612/717-7184						187				
<b>WARRIOR ROOFING MANUFACTURING, INC.</b> P.O. Box 40185 Tuscaloosa, AL 35404 205/553-1734 FAX 205/553-1755									229	
<b>WESTILE</b> 8311 West Carder Court Littleton, CO 80125 303/791-1700 FAX 303/791-9906 Web site: www.westile.com					155					
<b>W.R. GRACE &amp; CO.-CONN.</b> 62 Whitmore Ave. Cambridge, MA 02140 617/876-1400 FAX 617/498-2643 Web site: www.gcp-grace.com									231	

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# Section 1

*Steep-Slope Roofing  
Materials Guide*

**2000**

*Asphalt Shingles*

# Information on Section 1: Asphalt Shingles

## General Information

Section 1: Asphalt Shingles in the 2000 edition of NRCA's *Steep-Slope Roofing Materials Guide* provides a comprehensive listing of asphalt shingle products commonly used in steep-slope roofing.

Asphalt shingle products are composed of (1) a base material, either organic felt or glass fiber mat, that provides support for the weather resistant components and gives the shingle strength; (2) asphalt; and (3) surfacing material, generally in the form of mineral granules, that provides protection from impact and ultraviolet degradation and improves fire resistance.

Asphalt shingles are categorized in different ways, depending on their reinforcement and shape. Asphalt shingles that use an organic reinforcing mat are referred to as *organic-reinforced asphalt shingles*, and those that use a glass fiber-reinforcing mat are referred to as *glass fiber-reinforced asphalt shingles*.

The appearance and shape of an asphalt shingle are generally identified as follows:

- *Strip Shingles* -- These shingles are in a strip form and are the most common type of asphalt shingles produced. They generally are longer in width than height. Common dimensions for standard shingles are 12 inches (300 mm) by 36 inches (910 mm). For metric-sized shingles, the common dimensions are approximately 13-1/4 inches (335 mm) by 39-3/8 inches (1 m). These dimensions can vary depending on the manufacturer, and some newer products are available in larger dimensions than traditional standard- or metric-sized asphalt strip shingles. Products referred to as 3-tab, 4-tab, random tab and no cut-out shingles are all generally categorized as *strip shingles*. Most strip shingles are "self-sealing"; that is, they contain an adhesive seal strip that bonds to the overlying course of shingles for increased wind resistance.

- *Laminated strip shingles* -- Sometimes called "dimensional" or "architectural" shingles, these shingles have additional material laminated to the strip to create random thicknesses thereby giving the shingles a more dimensional look. Most laminated shingles are "self-sealing"; that is, they contain an adhesive seal strip that bonds to the overlying course of shingles for increased wind resistance. Dimensions can vary depending on the manufacturer, and some newer products are available in larger dimensions than traditional standard- or metric-sized asphalt strip shingles.

- *Individual Shingles* -- Individual shingles are typically smaller than strip shingles, and more pieces are required to cover the same roof area than with strip shingles. Particularly in the past, individual shingles were known for their unique visual patterns. Scalloped,

fish scale, diagonal, diamond, and octagon are a few of the different patterns which can be achieved with individual shingles depending on their design, and some of these products are still available. Some of the individual shingles offer a locking feature to provide for increased wind resistance, since individual shingles typically do not contain self-sealing adhesive strips. The "T-Lock" design is an example of this locking type feature.

## Specific Information Included in the Guide

Information on asphalt shingle products is presented in the guide in three parts: Part 1: General Information, Part 2: Technical Data and Part 3: Asphalt Shingle Warranties.

Specific information included in Part 1: General Information is as follows:

1. Company name
2. Product name
3. Product description
4. Shingle type
5. Availability
6. Dimensions and coverage
7. Hip/ridge shingle available
8. Slope/underlayment requirements
9. Recommended deck material
10. Year product first sold
11. Number of squares installed
12. Manufacturers plant locations
13. Distribution
14. Sales and technical information contacts

In Part 2: Technical Data, specific listing information is as follows:

1. Company name
2. Product name
3. Product description
4. Complies with (ASTM standards)
5. Masses of asphalt shingles
6. Physical requirements
7. Fire/wind/impact resistance
8. Code acceptance

Reporting of technical data in Items 5 and 6 is based on the following American Society for Testing and Materials (ASTM) standards:

- ASTM D225, titled "Standard Specification for Asphalt Shingles (Organic Felt) Surfaced With Mineral Granules"
- ASTM D3462, titled "Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules".

Additional information regarding asphalt shingle roof systems is provided in *The NRCA Steep Roofing Manual* and *The NRCA Roofing and Waterproofing Manual*.

In Part 3: Asphalt Shingle Warranties information is derived from two sources: an examination of the warranty or guarantee document itself and the manufacturer's response to a questionnaire sent by NRCA.

All manufacturers listing asphalt shingles in the guide are invited to submit their warranties for examination and listing. Those without warranty listings have elected not to participate.

For each warranty, there are 20 categories, or items of information listed. The information provided in the following categories was obtained by examination of the document itself.

- | <u>No.</u> | <u>Item of Information</u>  |
|------------|---|
| 1.         | Identity of issuing entity  |
| 2.         | Title, original publication date, and identifying symbol (if any) |
| 3.         | Products covered  |
| 4.         | Scope of coverage   |
| 5.         | Length of coverage  |
| 6.         | Nature of remedy  |
| 7.         | Monetary limitations  |
| 8.         | Specific exclusions from coverage                                 |
| 9.         | Wind coverage/exclusion   |
| 10.        | Notification of requirements                                      |
| 11.        | Determination of warranty applicability and coverage              |
| 13.        | Specific conditions that make warranty ineffective or void        |
| 14.        | Inclusion of consequential damages                                |
| 15.        | Assignability   |
| 18.        | Is the warranty an additional or exclusive remedy for the owner?  |
| 19.        | Special features/conditions                                       |
| 20.        | Executed by owner   |

In addition, information in the following categories was provided by the manufacturer in response to a questionnaire accompanying the warranty document:

- | <u>No.</u> | <u>Item of Information</u>  |
|------------|---|
| 2.         | Title, original publication date, and identifying symbol (if any)                         |
| 3.         | Products covered (if products are not specified in the language of the warranty document) |
| 4.         | Scope of coverage   |
| 5.         | Length of coverage  |
| 6.         | Nature of remedy  |
| 9.         | Wind coverage/exclusion   |
| 10.        | Issuing entity manufacturers and/or sells shingles  |
| 16.        | Cost to obtain  |
| 17.        | Warranty backed by insurance coverage   |

In response to this information, NRCA endeavors to prepare an accurate, comprehensive, and objective listing for each warranty submitted by a manufacturer. Generally, a separate listing is generated for each document. Sometimes, however, a manufacturer uses

the same warranty document to cover different products, and in the length of coverage, the cost to obtain it, the minimum charge, or the monetary limitation vary. In such cases, there may be more than one listing for a particular warranty reflecting these differences.

A blank space appears for a category of information if a manufacturer does not provide the relevant data. Brackets ([ ]) are used in listings to indicate information that a manufacturer feels is pertinent but that may not be contained in the document or at least was not apparent to NRCA in its review. In effect, the use of bracketed statements provides a means for manufacturers to disagree with the analysis made of the document by NRCA; in some instances, these statements may even contradict NRCA's conclusions concerning the import of language in a warranty,

It should be noted that the name of the manufacturer as it appears in Item 1 Identity of Issuing Entity may not necessarily be identical to or even similar to the one listed in the Index or in the asphalt shingle sections. This is because the name appearing in the warranty section is the name of the entity *appearing in the warranty document itself*. For example, if a manufacturer changes its corporate name but does not change a warranty document that bore its original name, the original name will appear in the warranty section. In other sections of the *Guide*, if one company purchases the assets of another, upon request NRCA simply moves the products of the acquired company under the name of the company that acquired it. In the warranty section, on the other hand, this may not be possible until warranty documents bearing the new corporate name are provided to NRCA. Until that time, the name of the entity must remain as it appears in the documents. An explanation of such situations is sometimes provided in a footnote in the warranty section in order to clarify an apparent discrepancy in corporate names.

By necessity, the warranty listings in the *Guide* present rather succinctly a great deal of information contained in the manufacturer's warranties, as well as the policies surrounding them. For this reason, the reader should obtain and examine the warranty document itself, discuss additional questions with a representative of the party issuing the warranty, and obtain professional advice from counsel when desired. A warranty has significant legal consequences; therefore, all parties should understand the document at the outset of a construction project to preclude subsequent misunderstandings.

The firm of Hendrick, Phillips, Schemm & Salzman, Atlanta, Ga., in cooperation with NRCA staff prepares the warranty section of the Steep-Slope Roofing Materials Guide.

## Understanding the Warranty Listing

Following are descriptions of the kind of data that is contained in the 20 categories of information included in each warranty listing.

**1. Identity of issuing entity:** This is the name of the legal entity that issues and is obligated to honor the warranty document. In most instances, this entity is the manufacturer of the product covered by the warranty (but see the explanation of Item 12 for information in this regard).

**2. Title, original publication date, and identifying symbol (if any):** The title listed is the title printed on the warranty document. The original publication date is the date that the manufacturer first promulgated the warranty form; the document may subsequently be reprinted in the exact same form. Some manufacturer's warranties contain an identifying symbol, or code, that is frequently a combination of numbers and letters, usually in the bottom right-hand or left-hand corner of the document. This identifying symbol indicates the precise document that was reviewed by NRCA. (For the reader to be certain that the warranty document he has in his possession is the same one listed in the *Guide*, the title of the document and the identifying symbol, if any, should match exactly.)

**3. Products covered:** This is an enumeration of the manufacturer's asphalt shingle products that are covered by the warranty. If properly updated by the manufacturer, the reader should be able to identify these products in the asphalt shingle section.

**4. Scope of coverage:** Information supplied in this category usually corresponds to the language used in the warranty document. Item 4a addresses whether the warranty provides coverage for defects in manufacture, as opposed to defects in application, which is covered in Item 4b. Virtually all asphalt shingle warranties provide coverage for leaks; others may provide coverage for other defects and conditions. This will be noted in item 4c. Few asphalt shingle warranties provide coverage for defects in other roofing work besides the shingles; if coverage is extended to flashings, metal work, or related application, this will be noted in 4d.

**5. Length of coverage:** This is the number of years for which the manufacturer will issue the warranty. The length of coverage will generally be stipulated to specific asphalt shingle products. Most coverage is prorated – that is, the coverage declines from the original cost of the shingles based on a formula related to the number of months elapsed in the warranty. Details on the prorating schedule are provide in items 5a, b, and c.

**6. Nature of remedy:** The heading states what action the manufacturer will take in the event that there is a problem with the shingles covered under the warranty. The language used in this category generally parallels that appearing in the warranty document. For most asphalt shingle warranties, the remedy provided is payment for the purchase, or cost to repair or replacement of the shingles, often on a prorated basis.

**7. Monetary limitations:** The information provided for this category indicates whether the warranty contains a monetary limitation of the manufacturer's obligation under its warranty. The phrase *none stated* indicates that there is no monetary limitation stated in the document, meaning that the manufacturer is obligated to spend whatever sum is necessary in order to honor its warranty.

**8. Specific exclusions from coverage:** Most roofing warranties state that leaks resulting from certain enumerated causes (e.g., natural disasters, tornadoes, abuse or misuse) will not be covered. A numeric code is used in this category to reference specific exclusions from coverage, a key for which is provided below. The list of specific exclusions is a compilation of those appearing in warranty documents submitted to NRCA; the language appearing in the index is not necessarily the exact language appearing in a specific warranty document, but it reflects the same exclusion.

The absence of a specific exclusion from coverage does not necessarily mean that a warranty will be applicable to a condition or occurrence not specifically excluded. The applicability of the warranty will generally be determined from the information contained under the category Scope of Coverage.

### Index of Specifically Enumerated Exclusions from Coverage

1. Natural disasters and acts of God (lightning, hurricanes, tornadoes, earthquakes)
2. Hail
3. Acts of negligence, abuse or misuse, accidents, vandalism
4. Damage by structural failure; settlement; movement; distortion; warpage; or buckling or cracking of roof deck, walls, or foundation
5. Failure of material and/or metal work not supplied by the manufacturer issuing the warranty
6. Changes, repairs, or alterations to roof or installation of equipment, fixtures, or utilities on or through roof after application
7. Defects in, failure or improper application of; roof insulation, roof deck, or any other underlying surface or material used as a base over which the shingles are applied.
8. Inadequate attic ventilation
9. Traffic or storage of materials on roof
10. Improper storage of shingles

11. Damage resulting from lack of positive, proper, or adequate drainage
12. Negligence or failure of owner to use reasonable care in maintenance of roof or failure to follow manufacturer's maintenance specifications
13. Variations in color caused by natural positioning of the granular surfacing material
14. Discoloration caused by algae, fungi, lichen, cyanobacteria, or environmental sooting
15. Repairs performed on materials furnished by others unless specifically authorized and approved by manufacturer; unauthorized repairs
16. Fire
17. Any cost incurred for repair or replacement not authorized by manufacturer
18. Contaminants that have not been approved first or accepted by manufacturer; exposure to or contact with damaging or deteriorating substances or agents
19. Defects or failure caused by misapplication of materials or by application not in strict adherence with manufacturer's specifications, application instructions, and approved practices
20. Application of shingles directly to insulation or an insulating deck without manufacturers' prior approval
21. Application of cleaning solutions, paint, or coatings
22. Infiltration or condensation of moisture in or through underlying areas; vapor condensation beneath the roof
23. Damages caused by falling objects
24. Damage to the shingles due to any cause other than manufacturing defects; acts of parties other than manufacturer
25. Appearance problems related to multi-layer installation, application over old shingles
26. Force majeure; conditions of use of circumstances beyond the manufacturer's control

**9. Wind coverage/exclusion:** The purpose of this category is to convey the manufacturer's policy in regard to whether blow-off of the shingles or damage to them is limited to specific wind speeds and/or other conditions. Some manufacturer's warranties list gales, strong gales, windstorms, and/or hurricanes and tornadoes as examples of natural disasters or acts of God that are specifically excluded from warranty coverage. In order to provide more specific, affirmative information regarding the manufacturer's policy concerning wind coverage, NRCA asks manufacturers to identify the wind speed that is covered by each of their warranties or to state that the warranty does not cover damage to the roof caused by wind regardless of speed – meaning that any damage resulting from wind, even at extremely low speeds, is excluded from warranty coverage.

If NRCA believes that the manufacturer's response is potentially inconsistent with the wind exclusions stated in the warranty or creates and ambiguity, the manufacturer's response is included in brackets. If the warranty document does not address the subject of wind, the information is based exclusively upon the manufacturer's response to the NRCA wind questions. If the manufacturer does not respond to the wind questions but the warranty addresses the subject of wind, the information is based exclusively on an examination of the warranty document. If the category remains blank, the warranty does not address the wind issue and the manufacturer did not respond to the wind questions.

**10. Notification requirements:** In this category is information concerning the action that an owner or other claimant is to take in order to make a warranty claim; of particular importance is the prescribed time period in which a leak or defect is to be reported to the manufacturer. If the warranty contains specific notification requirements, they are set forth here. Most warranties require that claimants provide the manufacturer with written notice of a warranty claim within 30 days of the discovery of a leak or purported defect. Some warranties require notice within 10 days and/or that written notice be sent by registered or certified mail.

**11. Determination of warranty applicability:** Some warranties state explicitly that the manufacturer has the right to determine whether a leak is covered or excluded from warranty coverage. The entry *manufacturer's determination* indicates that the manufacturer reserves to itself the right to determine whether a leak is covered or excluded from warranty coverage. Under these circumstances, the manufacturer's determination may be binding, even if it is erroneous and regardless of whether other parties disagree, provided that the manufacturer's determination was made in good faith.

If the entry in this category states *neutral (no provision)*, the manufacturer's warranty does not contain an explicit provision giving it the right to determine whether the warranty is or is not applicable to a problem. In the event of a dispute concerning the warranty's applicability, a neutral party would ultimately decide whether the warranty is applicable in this case.

**12. Issuing entity manufactures and/or sells products:** In this category is indicated whether the entity issuing the warranty is both the manufacturer and seller of the shingles covered under the warranty or whether the party issuing the warranty is only the seller.

**13. Specific conditions to make the warranty ineffective or void:** In addition to excluding warranty coverage for leaks resulting from specifically enumerated exclusions, manufacturers' warranties may provide that the entire warranty is ineffective or void

under certain conditions. Unlike the category Specific Exclusions from Coverage, Category 13 refers to those conditions stated in the warranty document that will make the warranty null and void or ineffective in its entirety, as opposed to simply not being responsive to a particular leak. For example, a warranty may indicate that repairs, alterations, or additions without the prior approval of the manufacturer make the warranty null and void; this differs from the statement that a leak resulting from a repair or alteration not previously approved by the manufacturer is excluded, or not covered, under the warranty.

An alphabetic code is used in this category to reference specific conditions to make a warranty ineffective or void, a key for which is provided below. The list of specific conditions is a compilation of conditions that appear in roof warranties submitted to NRCA; the language appearing in the various conditions is not necessarily the exact language appearing in a specific warranty document, but it reflects the intent.

#### **Index of Specific Conditions that Make a Warranty Ineffective or Void:**

- A. Shingles are not applied in accordance with manufacturer's application instructions or specifications
- B. Deck over which the shingles have been applied does not meet building code minimum requirements
- C. Roof structure is not properly vented; roof structure does not have through ventilation meeting building code minimum requirements; ventilation does not meet FHA minimum property standards
- D. Absence of underlayment in new construction or tear-off to deck
- E. Repairs or expenditures incurred prior to manufacturer's acknowledgement and acceptance of claim
- F. Shingles that are purchased or installed outside the United States or Canada
- G. Warranty registration form is not executed and submitted to manufacturer upon application of shingles
- H. Shingles are not installed by a roofing contractor certified by the manufacturer
- I. Lack of proper notification

**14. Inclusion of consequential damages:** The word *no* in this category indicates that the warranty does not cover consequential damages that may result from a roof leak, such as damage to the interior of the building. The majority of roof warranties expressly exclude consequential damages.

**15. Assignability:** Like other legal documents, warranties can generally be "assigned" or "transferred" by one party to another, unless there is a specific prohibition against such assignment. Some roofing

warranties contain such prohibitions, and some state specifically that no assignment or transfer will be allowed without the prior written permission of the manufacturer. The phrase *No restrictions stated* indicates that the warranty contains no provision barring, limiting, or conditioning the owner's rights to assign the warranty to a subsequent owner or party.

**16. Cost to obtain:** This is the amount, if any, that the manufacturer charges to obtain the warranty. The word *None* entered in this category means that there is no separate charge, apart from the cost of purchasing the materials, for the warranty. When there is a separate charge, it will generally be stated on a per-square (100 square feet) basis.

**17. Backed by insurance coverage:** This category indicates whether an insurance company is listed on the face of the warranty document and whether the manufacturer has insurance applicable to its warranty obligations. The entry of *No* indicates that no insurance company is named on the face of the warranty document, meaning that the owner or other claimant would not be entitled to assert a claim against an insurance company in the event that the manufacturer were unable to satisfy its warrant commitments.

NRCA also asks manufacturers if they carry insurance covering their warranty obligations and, if so, the type and amount of coverage. The manufacturer's response is included as part of the information provided in this category.

**18. Exclusive or additional remedy:** Under general legal principles, unless the warranty document specifically excludes other warranties and remedies that may be available to the owner and the owner agrees to be bound by the warranty terms, the rights and remedies set forth in the warranty document are in addition to those warranties, rights, and remedies that may be available to the owner or other claimant under state or statutory or common law. In addition to providing an owner with specific rights, warranty documents are frequently used as a liability-limiting device so that the liability of the party issuing the warranty is limited to what is prescribed in the warranty document. If the warranty states that it is an exclusive warranty and is issued in lieu of all other warranties, the claimant may not be entitled to seek recovery from the manufacturer based on the breach of any other warranties, express or implied.

The manufacturer's warranty may exclude or seek to exclude the implied and express warranties established by the Uniform Commercial Code (UCC). The UCC, as adopted in most states, provides that a warranty is implied in a contract for the sale of goods and that the goods shall be merchantable if the seller is a merchant of goods of that kind. To be merchantable, goods must be fit as least for the ordinary purposes for which such

goods are used, must conform to the promises or affirmations made on the container or label, and must pass without objection in the trade under the contract description. An implied warranty of fitness for particular purpose is created under the UCC when the seller at the time of contracting has reason to know any particular purpose for which the goods are required and that the buyer is relying on the seller's skill or judgment to select or furnish suitable goods.

subsequently arises as to whether the owner agreed to the terms and conditions in the warranty.

In addition to those implied warranties, the UCC provides that express warranties are created when the seller (1) makes an affirmation of fact or promise to the buyer that relates to the goods and becomes a part of the basis of the bargain; (2) gives a description of the goods that is made part of the basis of the bargain; (3) provides a sample or model of the goods that is made a part of the basis of the bargain.

UCC implied warranties may be excluded in accordance with the requirements set forth in the Uniform Commercial Code.

In addition to seeking to make the warranty an exclusive warranty, a manufacturer's warranty may seek to limit the other remedies that the law would otherwise make available to a claimant. A warranty that states that it is the owner's exclusive remedy might limit the claimant's right to the terms of the warranty and preclude a claim based on another legal theory of liability. Some warranty documents state that the remedy provided in the warranty is the owner's "sole and exclusive remedy" and is the manufacturer's sole liability and obligation in the event of a roof problem regardless of whether the owner might otherwise be entitled to pursue a legal claim for breach of contract, negligence, or another legal theory of recovery.

The purpose of the category Exclusive or Additional Remedy is to give the reader an indication as to how the manufacturer's warranty may impact other warranties and remedies that may be available to an owner. The phrase *exclude UCC warranties* in this category means that it appears that the warranty document complies with the UCC requirements to exclude warranties established under the Uniform Commercial Code.

**19. Special features/conditions:** In this category are relatively unique or unusual features, conditions, or limitations. This category is generally based on the warranty document itself, but sometimes may be based on information supplied by the manufacturer.

**20. Executed by owner:** This category indicates whether the manufacturer's warranty form states on its face that it is to be signed by the owner. Requiring the roofing warranty to be executed by the owner makes it more likely he will be bound to the terms and conditions set forth in the document in the event that a question

# Index to Asphalt Shingles

	Asphalt Shingles	Incomplete Data
<b>ATLAS ROOFING CORPORATION</b> 1775 The Exchange, #160 Atlanta, GA 30339 770/933-4478 FAX: 770/952-3170	24 56 88	
<b>CERTAINTED CORPORATION</b> ROOFING PRODUCTS GROUP P.O. Box 1100 1400 Union Meeting Street Blue Bell, PA 19422 800/322-3060 FAX: 610/341-6212	27 59	
<b>ELK</b> 14643 Dallas Parkway, Suite 1000 Dallas, TX 75240 972/851-0400 FAX: 972/851-0401  Web: www.elkcorp.com	33 65 88	
<b>GAF MATERIALS CORP.</b> 1361 Alps Road Wayne, NJ 07470 973/628-3000 FAX: 973/628-3356	34 67 90	
<b>GEORGIA-PACIFIC CORP.</b> 4300 Wildwood Parkway, Ste 300 Atlanta, GA 30339 770/221-2441 FAX: 770/221-8149	36 69 92	
<b>GLOBE BUILDING MATERIALS</b> 2230 Indianapolis Blvd. Whitting, IN 46394 219/473-4500 FAX: 219/473-4504	92	237

	Asphalt Shingles	Incomplete Data
<b>IKO MANUFACTURING</b> 120 Hay Road Wilmington, DE 19809 302/764-3100 FAX: 302/764-5852	38 69 96	
<b>MALARKEY ROOFING COMPANY</b> P.O. Box 17217 Portland, OR 97217 503/283-1191 FAX: 503/283-5405  Web: www.malarkey-rfg.com	43 75 94	
<b>OWENS CORNING</b> One Owens Corning Parkway Toledo, OH 43659 419/248-8000 FAX: 419/248-7354	45 77 98	
<b>PABCO ROOFING MANUFACTURER</b> 1718 Thorne Road Tacoma, WA 98421 253/272-0374 FAX: 253/572-4997 E-mail: pabcoroof@paccoast.com	49 81 100	
<b>TAMKO ROOFING PRODUCTS</b> P.O. Box 1404 220 W. 4th Street Joplin, MO 64801 417/624-6644 FAX: 417/624-8935 E-mail: www.tamko.com	50 83 102	

# Asphalt Shingles Part 1: General Information

1.	COMPANY NAME	ATLAS ROOFING CORPORATION	ATLAS ROOFING CORPORATION	ATLAS ROOFING CORPORATION
2.	PRODUCT NAME	PINNACLE 40	PINNACLE 30	PINNACLE 30
3.	PRODUCT DESCRIPTION			
	Felt Material (organic/fiberglass)	FIBERGLASS	FIBERGLASS	FIBERGLASS
	Construction (laminated/nonlaminated)	LAMINATED	LAMINATED	LAMINATED
	Granule Composition	CERAMIC	CERAMIC	CERAMIC
	Number of Colors Available (/ marks number by region)	10	10	7
	Color Availability (regional/national)	NATIONAL	NATIONAL	NATIONAL
4.	SHINGLE TYPE			
	Self-Sealing 3-Tab Strip			
	Self-Sealing 4-Tab Strip			
	Self-Sealing Random-Tab Strip			
	Self-Sealing No Cutout	X	X	X
	Individual Interlocking			
5.	AVAILABILITY RESTRICTED REGIONALLY (yes/no)	NO	NO	NO
6A.	DIMENSIONS AND COVERAGE: SIZE 1			
	Shingle Dimensions (inches x inches)	12 1/2 X 36 3/8	12 1/2 X 36 3/8	12 X 36
	Exposure (inches)	5 1/2	5 1/2	5
	Headlap (inches)	7	7	7
	Shingles Per Roof Square	72	72	80
	Bundles Per Square	4	3	4
	Weight Per Roof Square (pounds)			
6B.	DIMENSIONS AND COVERAGE: SIZE 2			
	Shingle Dimensions (inches x inches)	13 1/8 X 39 3/8	13 1/8 X 39 3/8	
	Exposure (inches)	5 5/8	5 5/8	
	Headlap (inches)	7 1/2	7 1/2	
	Shingles Per Roof Square	66	66	
	Bundles Per Square	4	3	
	Weight Per Roof Square (pounds)			
7.	HIP/RIDGE SHINGLE AVAILABLE (nationally, regionally, no)	NATIONALLY	NATIONALLY	NATIONALLY
8.	SLOPE/UNDERLAYMENT RECOMMENDATIONS			
	Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12	4:12
	Underlayment Recommended in Normal Application	15-LB. FELT	15-LB. FELT	15-LB. FELT
	Minimum Slope Recommended For Special Application (inches per foot)	2:12	2:12	2:12
	Underlayment Recommended in Special Application	2 15-LB. FELTS, STORM-MASTER DG OPTIONAL	2 15-LB. FELTS, STORM-MASTER DG OPTIONAL	2 15-LB. FELTS, STORM-MASTER DG OPTIONAL
9.	RECOMMENDED DECK MATERIAL			
	Plywood/Wood	X	X	X
	Oriented-Strand Board	X	X	X
	Waferboard	X	X	X
	Other (specify)	VENTED-R NAILBASE	VENTED-R NAILBASE	VENTED-R NAILBASE
10.	YEAR PRODUCT FIRST SOLD			
11.	NUMBER OF SQUARES INSTALLED			
12.	MANUFACTURERS PLANT LOCATIONS (CITY, STATE)	DANGERFIELD, TX FRANKLIN, OH	FRANKLIN, OH	MERIDIAN, MS DANGERFIELD, TX
13.	DISTRIBUTION			
	Distributors (number handling product or no)			
	Direct (number of regional service locations or no)			
14A.	FOR SALES INFORMATION, CONTACT:	ATLAS REGIONAL SALES OFFICES	ATLAS REGIONAL SALES OFFICES	ATLAS REGIONAL SALES OFFICES
14B.	FOR TECHNICAL INFORMATION, CONTACT:	770/933-4478	770/933-4478	770/933-4478
15.	SEE APPENDIX IF CHECKED	X	X	X

NA=not applicable

## Asphalt Shingles Part 1: General Information

ATLAS ROOFING CORPORATION	ATLAS ROOFING CORPORATION	ATLAS ROOFING CORPORATION	ATLAS ROOFING CORPORATION	ATLAS ROOFING CORPORATION	ATLAS ROOFING CORPORATION
STORMMASTER LM SBS MODIFIED	STORMMASTER ST SBS MODIFIED	GLASSMASTER 25	GLASS MASTER 25 ALPINE	GLASSMASTER 20	GLASSMASTER T-LOK
FIBERGLASS LAMINATED CERAMIC 6 NATIONAL	FIBERGLASS NONLAMINATED CERAMIC 6 NATIONAL	FIBERGLASS NONLAMINATED CERAMIC 8 NATIONAL	FIBERGLASS NONLAMINATED CERAMIC 5 NATIONAL	FIBERGLASS NONLAMINATED CERAMIC 11 REGIONAL	FIBERGLASS NONLAMINATED CERAMIC 2 REGIONAL
	X	X	X	X	
X					X
NO	NO	NO	NO	NO	NO
12 X 36 5 7 80 4	12 X 36 5 7 80 3	12 X 36 5 7 80 3	12 X 36 5 7 80 3	12 X 36 5 7 80 3	21 1/2 X 21 12 X 12-SHINGLE NA 99 3
NATIONALLY	NATIONALLY	NATIONALLY	NATIONALLY	NATIONALLY	REGIONALLY
4:12 15-LB. FELT	2:12 15-LB. FELT	4:12 15-LB. FELT	4:12 15-LB. FELT	4:12 15-LB. FELT	4:12 15-LB. FELT
4:12	2:12	2:12	2:12	2:12	
2 15-LB. FELTS, STORM-MASTER DG OPTIONAL	2 15-LB. FELTS, STORM-MASTER DG OPTIONAL	2 15-LB. FELTS, STORM-MASTER DG OPTIONAL	2 15-LB. FELTS, STORM-MASTER DG OPTIONAL	2 15-LB. FELT+H19S, STORM-MASTER DG OPTIONAL	STORMMASTER DG OPTIONAL
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
VENTED-R NAILBASE	VENTED-R NAILBASE	VENTED-R NAILBASE	VENTED-R NAILBASE	VENTED-R NAILBASE	VENTED-R NAILBASE
MERIDIAN, MS	MERIDIAN, MS	FRANKLIN, OH QUAKERTOWN, PA MERIDIAN, MS HAMPTON, CA ARDMORE, OK	ARDMORE, OK	FRANKLIN, OH QUAKERTOWN, PA MERIDIAN, MS HAMPTON, CA ARDMORE, OK	ARDMORE, OK
ATLAS REGIONAL SALES OFFICES 770/933-4478	ATLAS REGIONAL SALES OFFICES 770/933-4478	ATLAS REGIONAL SALES OFFICES 770/933-4478	ATLAS REGIONAL SALES OFFICES 770/933-4478	ATLAS REGIONAL SALES OFFICES 770/933-4478	ATLAS REGIONAL SALES OFFICES 770/933-4478
X	X	X	X	X	X

## Asphalt Shingles Part 1: General Information

1. COMPANY NAME	ATLAS ROOFING CORPORATION	ATLAS ROOFING CORPORATION	ATLAS ROOFING CORPORATION
2. PRODUCT NAME	WEATHERMASTER ST	CHALET	LEGEND
3. PRODUCT DESCRIPTION			
Felt Material (organic/fiberglass)	ORGANIC	FIBERGLASS	FIBERGLASS
Construction (laminated/nonlaminated)	NONLAMINATED	NONLAMINATED	NONLAMINATED
Granule Composition	CERAMIC	CERAMIC	CERAMIC
Number of Colors Available (/ marks number by region)	11	10	7
Color Availability (regional/national)	REGIONAL	NATIONAL	REGIONAL
4. SHINGLE TYPE			
Self-Sealing 3-Tab Strip	X	X	X
Self-Sealing 4-Tab Strip			
Self-Sealing Random-Tab Strip			
Self-Sealing No Cutout			
Individual Interlocking			
5. AVAILABILITY RESTRICTED REGIONALLY (yes/no)	YES	YES	YES
6A. DIMENSIONS AND COVERAGE: SIZE 1			
Shingle Dimensions (inches x inches)	12 X 36	12 X 36	12 X 36
Exposure (inches)	5	5 5/16	5
Headlap (inches)	7	7	7
Shingles Per Roof Square	80	78	80
Bundles Per Square	3	3	3
Weight Per Roof Square (pounds)			
6B. DIMENSIONS AND COVERAGE: SIZE 2			
Shingle Dimensions (inches x inches)			
Exposure (inches)			
Headlap (inches)			
Shingles Per Roof Square			
Bundles Per Square			
Weight Per Roof Square (pounds)			
7. HIP/RIDGE SHINGLE AVAILABLE (nationally, regionally, no)	NATIONALLY	REGIONALLY	REGIONALLY
8. SLOPE/UNDERLAYMENT RECOMMENDATIONS			
Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12	4:12
Underlayment Recommended in Normal Application	15-LB. FELT	15-LB. FELT	15-LB. FELT
Minimum Slope Recommended For Special Application (inches per foot)	2:12	2:12	2:12
Underlayment Recommended in Special Application	2 15-LB. FELTS, STORM-MASTER DG OPTIONAL	2 15-LB. FELTS, STORM-MASTER DG OPTIONAL	2 15-LB. FELTS, STORM-MASTER DG OPTIONAL
9. RECOMMENDED DECK MATERIAL			
Plywood/Wood	X	X	X
Oriented-Strand Board	X	X	X
Waferboard	X	X	X
Other (specify)	VENTED-R NAILBASE	VENTED-R NAILBASE	VENTED-R NAILBASE
10. YEAR PRODUCT FIRST SOLD			
11. NUMBER OF SQUARES INSTALLED			
12. MANUFACTURERS PLANT LOCATIONS (CITY, STATE)	ARDMORE, OK QUAKERTOWN, PA	HAMPTON, CA	ARDMORE, OK QUAKERTOWN, PA
13. DISTRIBUTION			
Distributors (number handling product or no)			
Direct (number of regional service locations or no)			
14A. FOR SALES INFORMATION, CONTACT:	ATLAS REGIONAL SALES OFFICES	ATLAS REGIONAL SALES OFFICES	ATLAS REGIONAL SALES OFFICES
14B. FOR TECHNICAL INFORMATION, CONTACT:	770/933-4478	770/933-4478	770/933-4478
15. SEE APPENDIX IF CHECKED	X	X	X

NA=not applicable

## Asphalt Shingles Part 1: General Information

CERTAINTEED CORP.	CERTAINTEED CORPORATION				
WOODSCAPE 40	WOODSCAPE 30	WOODSCAPE 25	SEAL KING 25	JET 25	GRAND MANOR SHANGLE
FIBERGLASS LAMINATED CERAMIC 8 REGIONAL	FIBERGLASS LAMINATED CERAMIC 8 REGIONAL	FIBERGLASS LAMINATED CERAMIC 8 REGIONAL	FIBERGLASS NONLAMINATED CERAMIC 14 REGIONAL	FIBERGLASS NONLAMINATED CERAMIC 7 REGIONAL	FIBERGLASS LAMINATED CERAMIC 8 NATIONAL
			X		
X	X	X		X	X
YES	YES	YES	YES	YES	NO
12 X 36 5 2 80 4 300	12 X 36 5 2 80 4 265	12 X 36 5 2 78 3 245	12 X 36 5 2 80 3 225	12 X 36 5 2 80 3 225	18 X 36 8 2 50 5 425
REGIONALLY	REGIONALLY	REGIONALLY	REGIONALLY	REGIONALLY	NATIONALLY
4:12	4:12	4:12	4:12	4:12	4:12
ROOFERS' SELECT	ROOFERS' SELECT	ROOFERS' SELECT	ROOFER'S SELECT	ROOFER'S SELECT	ROOFERS' SELECT
2:12	2:12	2:12	2:12	2:12	2:12
WINTERGUARD	WINTERGUARD	WINTERGUARD	WINTERGUARD	WINTERGUARD	WINTERGUARD
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
1994	1974	1987	1987	1987	1991
NORWOOD, MA	OXFORD, NC				
NO	NO	NO	NO	NO	NO
LOCAL OFFICE (SEE APPENDIX) 800/322-3060 (SEE APPENDIX)					
X	X	X	X	X	X

# Asphalt Shingles Part 1: General Information

1.	COMPANY NAME	CERTAINEED CORPORATION	CERTAINEED CORPORATION	CERTAINEED CORPORATION
2.	PRODUCT NAME	CARRIAGE HOUSE SHANGLE	HATTERAS	HALLMARK SHANGLE
3.	PRODUCT DESCRIPTION			
	Felt Material (organic/fiberglass)	FIBERGLASS	FIBERGLASS	ORGANIC
	Construction (laminated/nonlaminated)	LAMINATED	NONLAMINATED	LAMINATED
	Granule Composition	CERAMIC	CERAMIC	CERAMIC
	Number of Colors Available (/ marks number by region)	6	7	5
	Color Availability (regional/national)	NATIONAL	NATIONAL	REGIONAL
4.	SHINGLE TYPE			
	Self-Sealing 3-Tab Strip			
	Self-Sealing 4-Tab Strip	X	X	
	Self-Sealing Random-Tab Strip			X
	Self-Sealing No Cutout			
	Individual Interlocking			
5.	AVAILABILITY RESTRICTED REGIONALLY (yes/no)	NO	NO	YES
6A.	DIMENSIONS AND COVERAGE: SIZE 1			
	Shingle Dimensions (inches x inches)	18 X 36	18 X 36	12 X 36
	Exposure (inches)	8	8	5
	Headlap (inches)	2	2	2
	Shingles Per Roof Square	50	50	80
	Bundles Per Square	5	3	5
	Weight Per Roof Square (pounds)	355	235	330
6B.	DIMENSIONS AND COVERAGE: SIZE 2			
	Shingle Dimensions (inches x inches)			
	Exposure (inches)			
	Headlap (inches)			
	Shingles Per Roof Square			
	Bundles Per Square			
	Weight Per Roof Square (pounds)			
7.	HIP/RIDGE SHINGLE AVAILABLE (nationally, regionally, no)	NATIONALLY	NATIONALLY	REGIONALLY
8.	SLOPE/UNDERLAYMENT RECOMMENDATIONS			
	Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12	4:12
	Underlayment Recommended in Normal Application	ROOFERS' SELECT	ROOFERS' SELECT	ROOFERS' SELECT
	Minimum Slope Recommended For Special Application (inches per foot)	2:12	2:12	2:12
	Underlayment Recommended in Special Application	WINTERGUARD	WINTERGUARD	WINTERGUARD
9.	RECOMMENDED DECK MATERIAL			
	Plywood/Wood	X	X	X
	Oriented-Strand Board	X	X	X
	Waferboard	X	X	X
	Other (specify)			
10.	YEAR PRODUCT FIRST SOLD	1993	1998	1965
11.	NUMBER OF SQUARES INSTALLED			
12.	MANUFACTURERS PLANT LOCATIONS (CITY, STATE)	OXFORD, NC	OXFORD, NC	SHAKOPEE, MN
13.	DISTRIBUTION			
	Distributors (number handling product or no)			
	Direct (number of regional service locations or no)	NO	NO	NO
14A.	FOR SALES INFORMATION, CONTACT:	LOCAL OFFICE (SEE APPENDIX)	LOCAL OFFICE (SEE APPENDIX)	LOCAL OFFICE (SEE APPENDIX)
14B.	FOR TECHNICAL INFORMATION, CONTACT:	800/322-3060 (SEE APPENDIX)	800/322-3060 (SEE APPENDIX)	800/322-3060 (SEE APPENDIX)
15.	SEE APPENDIX IF CHECKED	X		X

NA=not applicable

## Asphalt Shingles Part 1: General Information

| CERTAINTEED CORPORATION                                    |
|--|--|--|--|--|--|
| INDEPENDENCE SHANGLE                                       | LANDMARK 40  | LANDMARK 30  | LANDMARK 25  | CLASSIC HORIZON SHANGLE                                    | NEW HORIZON SHANGLE  |
| FIBERGLASS LAMINATED CERAMIC 7/9/10 REGIONAL               | FIBERGLASS LAMINATED CERAMIC 9/8/6 REGIONAL                | FIBERGLASS LAMINATED CERAMIC 9/8/6 REGIONAL                | FIBERGLASS LAMINATED CERAMIC 36411 REGIONAL                | FIBERGLASS OVERLAY CERAMIC 8 REGIONAL                      | FIBERGLASS OVERLAY CERAMIC 9/6 REGIONAL                    |
|  |  |  |  | X  |  |
| X  |  |  |  |  |  |
|  | X  | X  | X  |  | X  |
| YES  | YES  | YES  | YES  | YES  | YES  |
| 12 X 36<br>5<br>2<br>80<br>4<br>300                        | 12 X 36<br>5<br>2<br>80<br>4<br>300                        | 12 X 36<br>5<br>2<br>80<br>4<br>265                        | 12 X 36<br>5<br>2<br>80<br>3<br>245/250                    | 12 X 36<br>5<br>2<br>80<br>3<br>240                        | 12 X 36<br>5<br>2<br>80<br>3<br>245/250                    |
|  | 13-1/4 X 39-3/8<br>5-58/<br>2<br>65<br>4<br>300            | 13-1/4 X 39-3/8<br>5-58/<br>2<br>65<br>4<br>265            | 13-1/4 X 39-3/8<br>5-58/<br>2<br>65<br>4<br>265            |  |  |
| REGIONALLY   | REGIONALLY   | REGIONALLY   | REGIONALLY   | REGIONALLY   | REGIONALLY   |
| 4:12   | 4:12   | 4:12   | 4:12   | 4:12   | 4:12   |
| ROOFERS' SELECT  |
2:12	2:12	2:12	2:12	2:12	2:12
WINTERGUARD	WINTERGUARD	WINTERGUARD	WINTERGUARD	WINTERGUARD	WINTERGUARD
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
1976	1996	1996	1997	1982	1996
OXFORD, NC SHAKOPEE, MN	AVERY, OH OXFORD, NC SHREVEPORT, LA NORWOOD, MA	AVERY, OH ENNIS, TX SHREVEPORT, LA	SHREVEPORT, LA	AVERY, OH OXFORD, NC SHAKOPEE, MN	OXFORD, NC
			YES		
NO	NO	NO	NO	NO	NO
LOCAL OFFICE (SEE APPENDIX) 800/322-3060 (SEE APPENDIX)					
X	X	X	X	X	X

# Asphalt Shingles Part 1: General Information

1.	COMPANY NAME	CERTAINEED CORPORATION	CERTAINEED CORPORATION	CERTAINEED CORPORATION
2.	PRODUCT NAME	HIGHLANDS-AR SHANGLE	HEARTHSTEAD	CUSTOM SEALDON 30
3.	PRODUCT DESCRIPTION			
	Felt Material (organic/fiberglass)	FIBERGLASS	ORGANIC	ORGANIC
	Construction (laminated/nonlaminated)	OVERLAY	NONLAMINATED	NONLAMINATED
	Granule Composition	CERAMIC	CERAMIC	CERAMIC
	Number of Colors Available (/ marks number by region)	9	6	11
	Color Availability (regional/national)	REGIONAL	REGIONAL	REGIONAL
4.	SHINGLE TYPE			
	Self-Sealing 3-Tab Strip			X
	Self-Sealing 4-Tab Strip		X	
	Self-Sealing Random-Tab Strip			
	Self-Sealing No Cutout	X		
	Individual Interlocking			
5.	AVAILABILITY RESTRICTED REGIONALLY (yes/no)	YES	YES	YES
6A.	DIMENSIONS AND COVERAGE: SIZE 1			
	Shingle Dimensions (inches x inches)	12 X 36	12 X 36	12 X 36
	Exposure (inches)	5	5	5
	Headlap (inches)	2	2	2
	Shingles Per Roof Square	80	80	80
	Bundles Per Square	3	3	3
	Weight Per Roof Square (pounds)	240	225	250
6B.	DIMENSIONS AND COVERAGE: SIZE 2			
	Shingle Dimensions (inches x inches)			
	Exposure (inches)			
	Headlap (inches)			
	Shingles Per Roof Square			
	Bundles Per Square			
	Weight Per Roof Square (pounds)			
7.	HIP/RIDGE SHINGLE AVAILABLE (nationally, regionally, no)	REGIONALLY	REGIONALLY	REGIONALLY
8.	SLOPE/UNDERLAYMENT RECOMMENDATIONS			
	Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12	4:12
	Underlayment Recommended in Normal Application	ROOFERS' SELECT	ROOFERS' SELECT	ROOFERS' SELECT
	Minimum Slope Recommended For Special Application (inches per foot)	2:12	2:12	2:12
	Underlayment Recommended in Special Application	WINTERGUARD	WINTERGUARD	WINTERGUARD
9.	RECOMMENDED DECK MATERIAL			
	Plywood/Wood	X	X	X
	Oriented-Strand Board	X	X	X
	Waferboard	X	X	X
	Other (specify)			
10.	YEAR PRODUCT FIRST SOLD	1997	1985	1991
11.	NUMBER OF SQUARES INSTALLED			
12.	MANUFACTURERS PLANT LOCATIONS (CITY, STATE)	OXFORD, NC	SHAKOPEE, MN	SHAKOPEE, MN
13.	DISTRIBUTION			
	Distributors (number handling product or no)			
	Direct (number of regional service locations or no)	NO	NO	NO
14A.	FOR SALES INFORMATION, CONTACT:	LOCAL OFFICE (SEE APPENDIX)	LOCAL OFFICE (SEE APPENDIX)	LOCAL OFFICE (SEE APPENDIX)
14B.	FOR TECHNICAL INFORMATION, CONTACT:	800/322-3060 (SEE APPENDIX)	800/322-3060 (SEE APPENDIX)	800/322-3060 (SEE APPENDIX)
15.	SEE APPENDIX IF CHECKED	X	X	X

NA=not applicable

## Asphalt Shingles Part 1: General Information

CERTAINTEED CORPORATION					
XT 30	XT 25	FUNGUSBUSTER 25	SEALDON 25	CT 20	CUSTOM LOK 25
FIBERGLASS NONLAMINATED CERAMIC 11/13/10 REGIONAL	FIBERGLASS NONLAMINATED CERAMIC 11/10/12 REGIONAL	FIBERGLASS NONLAMINATED CERAMIC 9 REGIONAL	ORGANIC NONLAMINATED CERAMIC 9 REGIONAL	FIBERGLASS NONLAMINATED CERAMIC 8 REGIONAL	ORGANIC NONLAMINATED CERAMIC 9 REGIONAL
X	X	X	X	X	
					X
YES	YES	YES	YES	YES	YES
12 X 36 5 2 80 3 250/245	12 X 36 5 2 80 3 230/225	12 X 36 5 2 80 3 225	12 X 36 5 2 80 3 225	12 X 36 5 2 80 3 200	20 13/16 X 21 1/2 14 2 99 3 250
REGIONALLY	REGIONALLY	REGIONALLY	REGIONALLY	REGIONALLY	REGIONALLY
4:12	4:12	4:12	4:12	4:12	4:12
ROOFERS' SELECT					
2:12	2:12	2:12	2:12	2:12	
WINTERGUARD	WINTERGUARD	WINTERGUARD	WINTERGUARD	WINTERGUARD	WINTERGUARD
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
1997	1985	1984	1950s	1970s	1960s
AVERY, OH OXFORD, NC SHAKOPEE, MN SHREVEPORT, LA	SHAKOPEE, MN	OXFORD, NC	SHAKOPEE, MN	OXFORD, NC SHREVEPORT, LA	SHAKOPEE, MN
NO	NO	NO	NO	NO	NO
LOCAL OFFICE (SEE APPENDIX) 800/322-3060 (SEE APPENDIX)					
X	X	X	X	X	X

# Asphalt Shingles Part 1: General Information

1.	COMPANY NAME	CERTAINEED CORPORATION	CERTAINEED CORPORATION	CERTAINEED CORPORATION
2.	PRODUCT NAME	ARCHITECT 80/ ESTATE	FIRE-HALT	FIRE-HALT 2000
3.	PRODUCT DESCRIPTION			
	Felt Material (organic/fiberglass)	FIBERGLASS	FIBERGLASS	FIBERGLASS
	Construction (laminated/nonlaminated)	LAMINATED	LAMINATED	LAMINATED
	Granule Composition	CERAMIC	CERAMIC	CERAMIC
	Number of Colors Available (/ marks number by region)	9/7	9/7/8	9/7/8
	Color Availability (regional/national)	REGIONAL	REGIONAL	REGIONAL
4.	SHINGLE TYPE			
	Self-Sealing 3-Tab Strip			
	Self-Sealing 4-Tab Strip			
	Self-Sealing Random-Tab Strip			
	Self-Sealing No Cutout	X	X	X
	Individual Interlocking			
5.	AVAILABILITY RESTRICTED REGIONALLY (yes/no)	YES	YES	YES
6A.	DIMENSIONS AND COVERAGE: SIZE 1			
	Shingle Dimensions (inches x inches)			
	Exposure (inches)			
	Headlap (inches)			
	Shingles Per Roof Square			
	Bundles Per Square			
	Weight Per Roof Square (pounds)			
6B.	DIMENSIONS AND COVERAGE: SIZE 2			
	Shingle Dimensions (inches x inches)	13 1/4 X 39 3/8	13 1/4 X 39 3/8	13 1/4 X 39 3/8
	Exposure (inches)	5 5/8	5 5/8	5 5/8
	Headlap (inches)	2	2	2
	Shingles Per Roof Square	64	64	64
	Bundles Per Square	4	3	3
	Weight Per Roof Square (pounds)	300	240	260
7.	HIP/RIDGE SHINGLE AVAILABLE (nationally, regionally, no)	REGIONALLY	REGIONALLY	REGIONALLY
8.	SLOPE/UNDERLAYMENT RECOMMENDATIONS			
	Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12	0.175
	Underlayment Recommended in Normal Application	ROOFERS' SELECT	ROOFERS' SELECT	ROOFERS' SELECT
	Minimum Slope Recommended For Special Application (inches per foot)	2:12	2:12	2:12
	Underlayment Recommended in Special Application	WINTERGUARD	WINTERGUARD	WINTERGUARD
9.	RECOMMENDED DECK MATERIAL			
	Plywood/Wood	X	X	X
	Oriented-Strand Board	X	X	X
	Waferboard	X	X	X
	Other (specify)			
10.	YEAR PRODUCT FIRST SOLD	1971	1988	1998
11.	NUMBER OF SQUARES INSTALLED			
12.	MANUFACTURERS PLANT LOCATIONS (CITY, STATE)	PEACHTREE CITY, GA PORTLAND, OR WILMINGTON, CA	ENNIS, TX PEACHTREE CITY, GA PORTLAND, OR WILMINGTON, CA	PORTLAND, OR
13.	DISTRIBUTION			
	Distributors (number handling product or no)			
	Direct (number of regional service locations or no)	NO	NO	NO
14A.	FOR SALES INFORMATION, CONTACT:	LOCAL OFFICE (SEE APPENDIX)	LOCAL OFFICE (SEE APPENDIX)	LOCAL OFFICE (SEE APPENDIX)
14B.	FOR TECHNICAL INFORMATION, CONTACT:	800/322-3060 (SEE APPENDIX)	800/322-3060 (SEE APPENDIX)	800/322-3060 (SEE APPENDIX)
15.	SEE APPENDIX IF CHECKED	X	X	X

NA=not applicable

## Asphalt Shingles Part 1: General Information

CERTAINTEED CORPORATION	CERTAINTEED CORPORATION	CERTAINTEED CORPORATION	ELK	ELK	ELK
FIRESCREEN	FIRESCREEN PLUS 2000	HIGH SIERRA	PRESTIQUE PLUS HIGH DEFINITION	PRESTIQUE I HIGH DEFINITION	PRESTIQUE II RAISED PROFILE
FIBERGLASS NONLAMINATED CERAMIC 14/8/13 REGIONAL	FIBERGLASS NONLAMINATED CERAMIC 13/14 REGIONAL	FIBERGLASS LAMINATED CERAMIC 11/6 REGIONAL	FIBERGLASS LAMINATED CERAMIC 7/8/8 REGIONAL	FIBERGLASS LAMINATED CERAMIC 8/8/9 REGIONAL	FIBERGLASS LAMINATED CERAMIC 8/8/9 REGIONAL
X	X				
		X	X	X	X
YES	YES	YES	NO	NO	NO
12 X 36 5 2 80 3 200	12 X 36 5 2 80 3 200	13 1/4 X 39 3/8 5 5/8 7.625 64 3 200	13 1/4 X 39 3/8 5 5/8 64 4 360	13 1/4 X 39 3/8 5 5/8 64 4 300	13 1/4 X 38 3/4 5 5/8 66 3 >240
13 1/4 X 39 3/8 5 5/8 7.625 64 3 200	13 1/4 X 39 3/8 5 5/8 7.625 64 3 230	13 1/4 X 39 3/8 5 5/8 2 64 4 330			
REGIONALLY	REGIONALLY	REGIONALLY	REGIONALLY	REGIONALLY	REGIONALLY
4:12	4:12	4:12	4:12	4:12	4:12
ROOFERS' SELECT	ROOFERS' SELECT	ROOFERS' SELECT	15-LB. FELT	15-LB. FELT	15-LB. FELT
2:12	2:12	2:12	2:12	2:12	2:12
WINTERGUARD	WINTERGUARD	WINTERGUARD	2 15-LB. FELTS	2 15-LB. FELTS	2 15-LB. FELTS
X X X	X X X	X X X	X X	X X	X X
1967	1997	1987	CHIPBOARD 1985	CHIPBOARD 1978	CHIPBOARD 1982
CHARLESTON, SC PORTLAND, OR SHREVEPORT, LA SOUTH GATE, CA	CHARLESTON, SC PORTLAND, OR SOUTH GATE, CA	ENNIS, TX PEACHTREE CITY, GA PORTLAND, OR WILMINGTON, CA	ENNIS, TX SHAFTER, CA TUSCALOOSA, AL	ENNIS, TX SHAFTER, CA TUSCALOOSA, AL	ENNIS, TX SHAFTER, CA TUSCALOOSA, AL
			500+	500+	500+
NO	NO	NO	NO	NO	NO
LOCAL OFFICE (SEE APPENDIX) 800/322-3060 (SEE APPENDIX)	LOCAL OFFICE (SEE APPENDIX) 800/322-3060 (SEE APPENDIX)	LOCAL OFFICE (SEE APPENDIX) 800/322-3060 (SEE APPENDIX)	REG. SALES OFFICE TX: 800/289-9876 CA: 800/355-4968	REG. SALES OFFICE TX: 800/289-9876 CA: 800/355-4968	REG. SALES OFFICE TX: 800/289-9876 CA: 800/355-4968
X	X	X	X	X	X

# Asphalt Shingles Part 1: General Information

1.	COMPANY NAME	ELK	ELK	GAF MATERIALS CORPORATION
2.	PRODUCT NAME	PRESTIGUE II MD	CAPSTONE	GRAND SEQUOIA
3.	PRODUCT DESCRIPTION			
	Felt Material (organic/fiberglass)	FIBERGLASS	FIBERGLASS	FIBERGLASS
	Construction (laminated/nonlaminated)	LAMINATED	LAMINATED	LAMINATED
	Granule Composition	CERAMIC	CERAMIC	CERAMIC COATED
	Number of Colors Available (/ marks number by region)	4	3	6
	Color Availability (regional/national)	REGIONAL	REGIONAL	REGIONAL
4.	SHINGLE TYPE			
	Self-Sealing 3-Tab Strip			
	Self-Sealing 4-Tab Strip			
	Self-Sealing Random-Tab Strip	X	X	X
	Self-Sealing No Cutout			
	Individual Interlocking			
5.	AVAILABILITY RESTRICTED REGIONALLY (yes/no)	YES	NO	YES
6A.	DIMENSIONS AND COVERAGE: SIZE 1			
	Shingle Dimensions (inches x inches)	13 1/4 X 38 3/4	12 1/8 X 39 1/2	40 X 17
	Exposure (inches)	5 5/8	5	5
	Headlap (inches)	7.62		7
	Shingles Per Roof Square	66	72	72
	Bundles Per Square	3	4	5
	Weight Per Roof Square (pounds)	264	300	
6B.	DIMENSIONS AND COVERAGE: SIZE 2			
	Shingle Dimensions (inches x inches)			
	Exposure (inches)			
	Headlap (inches)			
	Shingles Per Roof Square			
	Bundles Per Square			
	Weight Per Roof Square (pounds)			
7.	HIP/RIDGE SHINGLE AVAILABLE (nationally, regionally, no)	REGIONALLY	REGIONALLY	REGIONALLY
8.	SLOPE/UNDERLAYMENT RECOMMENDATIONS			
	Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12	4:12
	Underlayment Recommended in Normal Application	15-LB. FELT	15-LB. FELT	SHINGLE MATE OR 15-LB. FELT
	Minimum Slope Recommended For Special Application (inches per foot)	2:12	2:12	2:12-4:12
	Underlayment Recommended in Special Application	2 15-LB. FELTS	2 15-LB. FELTS	2 SHINGLE MATE OR 2 15-LB. FELTS
9.	RECOMMENDED DECK MATERIAL			
	Plywood/Wood	X	X	X
	Oriented-Strand Board	X	X	X
	Waferboard			
	Other (specify)	CHIPBOARD	CHIPBOARD	
10.	YEAR PRODUCT FIRST SOLD	1998	1992	1996
11.	NUMBER OF SQUARES INSTALLED			
12.	MANUFACTURERS PLANT LOCATIONS (CITY, STATE)	TUSCALOOSA, AL	TUSCALOOSA, AL	FONTANA, CA
13.	DISTRIBUTION			
	Distributors (number handling product or no)	100+	500+	
	Direct (number of regional service locations or no)	NO	NO	
14A.	FOR SALES INFORMATION, CONTACT:	REG. SALES OFFICE	REG. SALES OFFICE	GAF REGIONAL OFFICE
14B.	FOR TECHNICAL INFORMATION, CONTACT:	TX: 800/289-9876 CA: 800/355-4968	TX: 800/289-9876 CA: 800/355-4968	800/ROOF-411
15.	SEE APPENDIX IF CHECKED	X	X	X

NA=not applicable

## Asphalt Shingles Part 1: General Information

GAF MATERIALS CORPORATION	GAF MATERIALS CORPORATION	GAF MATERIALS CORPORATION	GAF MATERIALS CORPORATION	GAF MATERIALS CORPORATION	GAF MATERIALS CORPORATION
MARQUIS WEATHER MAX	ROYAL SOVEREIGN	SENTINEL	SLATELINE	ORIGINAL TIMBERLINE	TIMBERLINE COUNTRY MANSION
FIBERGLASS NONLAMINATED CERAMIC COATED	FIBERGLASS NONLAMINATED CERAMIC COATED	FIBERGLASS NONLAMINATED CERAMIC COATED	FIBERGLASS NONLAMINATED CERAMIC COATED	FIBERGLASS LAMINATED CERAMIC COATED	FIBERGLASS LAMINATED CERAMIC COATED
5/7 REGIONAL	6/11 REGIONAL	6/10 REGIONAL	6 REGIONAL	8/11 REGIONAL	5
X	X	X			
			X		
				X	X
YES	NO	NO	YES	NO	NO
12 X 36	12 X 36	12 X 36	17 X 40	12 X 36	17 X 40
5	5	5	7 1/2	5	7 1/2
2	2	2	2	2	2
80	80	80	48	80	48
3	3	3	4	4	6
	13 1/4 X 39 3/8	13 1/4 X 39 3/8		13 1/4 X 39 3/8	
	5 5/8	5 5/8		5 5/8	
	2	2		2	
	65	65		64	
	3	3		4	
NO	NO	NO	REGIONALLY	NATIONALLY	NATIONALLY
4:12	4:12	4:12	4:12	4:12	4:12
SHINGLE MATE OR 15-LB. FELT	SHINGLE MATE OR 15-LB. FELT	SHINGLE MATE OR 15-LB. FELT	SHINGLE MATE OR 15-LB. FELT	SHINGLE MATE OR 15-LB. FELT	SHINGLE MATE OR 15-LB. FELT
2:12-4:12	2:12-4:12	2:12-4:12	2:12-4:12	2:12-4:12	2:12-4:12
2 SHINGLE MATE OR 2 15-LB. FELTS	2 SHINGLE MATE OR 2 15-LB. FELTS	2 SHINGLE MATE OR 2 15-LB. FELTS	2 SHINGLE MATE OR 2 15-LB. FELTS	2 SHINGLE MATE OR 2 15-LB. FELTS	2 SHINGLE MATE OR 2 15-LB. FELTS
X	X	X	X	X	X
X	X	X	X	X	X
1991	1984	1980	1988	1980	1998
MINNEAPOLIS, MN MILLIS SAVANNAH, GA	BALTIMORE, MD DALLAS, TX; ERIE, PA FONTANA, CA GOLDSBORO, MILLIS, MINNEAPOLIS, MN MOBILE, AL MT VERNON, SAVANNAH,GA TAMPA, FL	BALTIMORE, MD DALLAS, TX; ERIE, PA FONTANA, CA GOLDSBORO, MILLIS, MINNEAPOLIS, MN MOBILE, AL MT VERNON, SAVANNAH,GA TAMPA, FL	MT. VERNON	BALTIMORE, MD DALLAS, TX FONTANA, CA GOLDSBORO, MINNEAPOLIS, MN MOBILE, AL TAMPA, FL	MT. VERNON
GAF REGIONAL OFFICE 800/ROOF-411	GAF REGIONAL OFFICE 800/ROOF-411	GAF REGIONAL OFFICE 800/ROOF-411	GAF REGIONAL OFFICE 800/ROOF-411	GAF REGIONAL OFFICE 800/ROOF-411	GAF REGIONAL OFFICE 800/ROOF-411
X	X	X	X	X	X

# Asphalt Shingles Part 1: General Information

1. COMPANY NAME	GAF MATERIALS CORPORATION	GAF MATERIALS CORPORATION	GEORGIA PACIFIC
2. PRODUCT NAME	TIMBERLINE ULTRA	TIMBERLINE 25	ASPHALT 20
3. PRODUCT DESCRIPTION			
Felt Material (organic/fiberglass)	FIBERGLASS	FIBERGLASS	ORGANIC
Construction (laminated/nonlaminated)	LAMINATED	LAMINATED	NONLAMINATED
Granule Composition	CERAMIC COATED	CERAMIC COATED	CERAMIC
Number of Colors Available (/ marks number by region)	8/11	8/11	7
Color Availability (regional/national)	REGIONAL	REGIONAL	REGIONAL
4. SHINGLE TYPE			
Self-Sealing 3-Tab Strip			X
Self-Sealing 4-Tab Strip			
Self-Sealing Random-Tab Strip			
Self-Sealing No Cutout	X	X	
Individual Interlocking			
5. AVAILABILITY RESTRICTED REGIONALLY (yes/no)	NO	NO	YES
6A. DIMENSIONS AND COVERAGE: SIZE 1			
Shingle Dimensions (inches x inches)	12 X 36	12 X 36 15/16	12 X 36
Exposure (inches)	5	5	5
Headlap (inches)	2	2	7
Shingles Per Roof Square	80	78	80
Bundles Per Square	4	3	3
Weight Per Roof Square (pounds)			
6B. DIMENSIONS AND COVERAGE: SIZE 2			
Shingle Dimensions (inches x inches)	13 1/4 X 39 3/8	13 1/4 X 39 3/8	
Exposure (inches)	5 5/8	5 5/8	
Headlap (inches)	2	2	
Shingles Per Roof Square	64	64	
Bundles Per Square	4	3	
Weight Per Roof Square (pounds)			
7. HIP/RIDGE SHINGLE AVAILABLE (nationally, regionally, no)	NATIONALLY	NATIONALLY	REGIONALLY
8. SLOPE/UNDERLAYMENT RECOMMENDATIONS			
Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12	4:12
Underlayment Recommended in Normal Application	SHINGLE MATE OR 15-LB. FELT	SHINGLE MATE OR 15-LB. FELT	TYPE-15 FELT
Minimum Slope Recommended For Special Application (inches per foot)	2:12-4:12	2:12-4:12	2:12
Underlayment Recommended in Special Application	2 SHINGLE MATE OR 2 15-LB. FELTS	2 SHINGLE MATE OR 2 15-LB. FELTS	2 TYPE-15 FELTS OR ICE & WATER SHIELD OPTION
9. RECOMMENDED DECK MATERIAL			
Plywood/Wood	X	X	X
Oriented-Strand Board	X	X	X
Waferboard			X
Other (specify)			
10. YEAR PRODUCT FIRST SOLD	1990	1995	1978
11. NUMBER OF SQUARES INSTALLED			
12. MANUFACTURERS PLANT LOCATIONS (CITY, STATE)	BALTIMORE, MD DALLAS, TX FONTANA, CA GOLDSBORO, NC MILLIS, MA MOBILE, AL TAMPA, FL	BALTIMORE, MD DALLAS, TX FONTANA, CAL GOLDSBORO, NC MINNEAPOLIS, MN MOBILE, AL TAMPA, FL	ARDMORE, OK QUAKERTOWN, PA
13. DISTRIBUTION			
Distributors (number handling product or no)			
Direct (number of regional service locations or no)			128
14A. FOR SALES INFORMATION, CONTACT:	GAF REGIONAL OFFICE	GAF REGIONAL OFFICE	800/839-2588
14B. FOR TECHNICAL INFORMATION, CONTACT:	800/ROOF-411	800/ROOF-411	770/933-4478
15. SEE APPENDIX IF CHECKED	X	X	

NA=not applicable

## Asphalt Shingles Part 1: General Information

GEORGIA PACIFIC	GEORGIA PACIFIC	GEORGIA PACIFIC	GEORGIA PACIFIC	GEORGIA PACIFIC	GEORGIA PACIFIC
PREMIUM 25	SUMMIT	SUMMIT III	TOUGH-GLASS	TOUGH-GLASS PLUS	TOUGH-GLASS T-LOCK
FIBERGLASS NONLAMINATED CERAMIC	FIBERGLASS LAMINATED CERAMIC	FIBERGLASS LAMINATED CERAMIC	FIBERGLASS NONLAMINATED CERAMIC	FIBERGLASS NONLAMINATED CERAMIC	FIBERGLASS NONLAMINATED CERAMIC
11 REGIONAL	8 NATIONAL	8 NATIONAL	11 REGIONAL	8 REGIONAL	2 REGIONAL
X			X	X	
					X
YES	NO	NO	YES	YES	YES
12 X 36	12 1/2 X 36 3/8	12 1/2 X 36 3/8	12 X 36	12 X 36	21 X 21 1/2
5	5 1/2	5 1/2	5	5	12 X 12 SHINGLE
7	7	7	7	7	NA
80	72	72	80	80	99
3	3	4	3	3	3
	13 1/8 X 39 3/8	13 1/8 X 39 3/8			
	5 5/8	5 5/8			
	7 1/2	7 1/2			
	66	66			
	3	4			
NATIONALLY	NATIONALLY	NATIONALLY	NATIONALLY	NATIONALLY	REGIONALLY
4:12	4:12	4:12	4:12	4:12	4:12
TYPE-15 FELT	TYPE-15 FELT	TYPE-15 FELT	TYPE-15 FELT	TYPE-15 FELT	TYPE-15 FELT
2:12	2:12	2:12	2:12	2:12	2:12
2 TYPE-15 FELTS OR ICE & WATER SHIELD OPTION	2 TYPE-15 FELTS OR ICE & WATER SHIELD OPTION	2 TYPE-15 FELTS OR ICE & WATER SHIELD OPTION	2 TYPE-15 FELTS OR ICE & WATER SHIELD OPTION	2 TYPE-15 FELTS OR ICE & WATER SHIELD OPTION	2 TYPE-15 FELTS OR ICE & WATER SHIELD OPTION
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
1987	1986	1986	1979	1985	1981
QUAKERTOWN, PA	FRANKLIN, OH DANGERFIELD, TX MERIDIAN, MS	DANGERFIELD, TX FRANKLIN, OH	ARDMORE, OK QUAKERTOWN, PA MERIDIAN, MS HAMPTON, CA	ARDMORE, OK QUAKERTOWN, PA MERIDIAN, MS HAMPTON, CA	ARDMORE, OK
128	128	128	128	128	128
800/839-2588	800/839-2588	800/839-2588	800/839-2588	800/839-2588	800/839-2588
770/933-4478	770/933-4478	770/933-4478	770/933-4478	770/933-4478	770/933-4478

## Asphalt Shingles Part 1: General Information

1.	COMPANY NAME	IKO MANUFACTURING INC.	IKO MANUFACTURING INC.	IKO MANUFACTURING INC.
2.	PRODUCT NAME	ARISTOCRAT 25	ARMOUR LOCK 20	ARMOUR PLUS 20
3.	PRODUCT DESCRIPTION			
	Felt Material (organic/fiberglass)	ORGANIC	ORGANIC	ORGANIC
	Construction (laminated/nonlaminated)	NONLAMINATED	NONLAMINATED	NONLAMINATED
	Granule Composition	CERAMIC	CERAMIC	CERAMIC
	Number of Colors Available (/ marks number by region)	13	7	8
	Color Availability (regional/national)	REGIONAL	REGIONAL	REGIONAL
4.	SHINGLE TYPE			
	Self-Sealing 3-Tab Strip	X		X
	Self-Sealing 4-Tab Strip			
	Self-Sealing Random-Tab Strip			
	Self-Sealing No Cutout			
	Individual Interlocking		X	
5.	AVAILABILITY RESTRICTED REGIONALLY (yes/no)	YES	YES	YES
6A.	DIMENSIONS AND COVERAGE: SIZE 1			
	Shingle Dimensions (inches x inches)	13 1/4 X 39 3/8	20 7/8 X 23 7/8	13 1/4 X 39 3/8
	Exposure (inches)	5 5/8	16	5 5/8
	Headlap (inches)	2	2	2
	Shingles Per Roof Square	65	86	65
	Bundles Per Square	3	3	3
	Weight Per Roof Square (pounds)	238	228	213
6B.	DIMENSIONS AND COVERAGE: SIZE 2			
	Shingle Dimensions (inches x inches)	12 1/4 X 36		
	Exposure (inches)	5 1/8		
	Headlap (inches)	2		
	Shingles Per Roof Square	78		
	Bundles Per Square	3		
	Weight Per Roof Square (pounds)	231		
7.	HIP/RIDGE SHINGLE AVAILABLE (nationally, regionally, no)	REGIONALLY	REGIONALLY	REGIONALLY
8.	SLOPE/UNDERLAYMENT RECOMMENDATIONS			
	Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12	4:12
	Underlayment Recommended in Normal Application	NA	NA	NA
	Minimum Slope Recommended For Special Application (inches per foot)	2:12		2:12
	Underlayment Recommended in Special Application	2 NO.-15 FELTS OR ICE & WATER PROTECTOR		2 NO.-15 FELTS OR ICE & WATER PROTECTOR
9.	RECOMMENDED DECK MATERIAL			
	Plywood/Wood	X	X	X
	Oriented-Strand Board	X	X	X
	Waferboard			
	Other (specify)			
10.	YEAR PRODUCT FIRST SOLD	1967	1959	1979
11.	NUMBER OF SQUARES INSTALLED	NA	NA	NA
12.	MANUFACTURERS PLANT LOCATIONS (CITY, STATE)	A, B, C, D, E, G SEE APPENDIX	B SEE APPENDIX	A, B, C, D,E SEE APPENDIX
13.	DISTRIBUTION			
	Distributors (number handling product or no)			
	Direct (number of regional service locations or no)	NO	NO	NO
14A.	FOR SALES INFORMATION, CONTACT:	800/323-7171	800/323-7171	800/323-7171
14B.	FOR TECHNICAL INFORMATION, CONTACT:	800/323-7171 800/387-2318	800/323-7171 800/387-2318	800/323-7171 800/387-2318
15.	SEE APPENDIX IF CHECKED	X	X	X

NA=not applicable

## Asphalt Shingles Part 1: General Information

IKO MANUFACTURING INC.	IKO MANUFACTURING INC.	IKO MANUFACTURING INC.	IKO MANUFACTURING INC.	IKO MANUFACTURING INC.	IKO MANUFACTURING INC.
CAMBRIDGE 25	CAMBRIDGE 30	CATHEDRAL	CHATEAU	CROWNE 30	DYNASTY
FIBERGLASS LAMINATED CERAMIC 9 NATIONAL	FIBERGLASS LAMINATED CERAMIC 6 REGIONAL	FIBERGLASS NONLAMINATED CERAMIC 5 REGIONAL	ORGANIC LAMINATED CERAMIC 7 REGIONAL	ORGANIC NONLAMINATED CERAMIC 4/5 REGIONAL	FIBERGLASS LAMINATED CERAMIC 6 NATIONAL
				X	
X	X	X	X		X
NO	YES		YES	YES	NO
14 1/4 X 39 3/16 6 1/8 2 60 3 249	13 7/8 X 40 7/8 5 7/8 2 56 4 70	12 1/4 X 36 5 1/8 2 78 3 235	14 3/8 X 39 3/16 6 1/8 2 60 4 300	13 1/4 X 39 3/8 5 5/8 2 65 3 252	13 3/8 X 40 5 3 72 4 280
13 7/8 X 40 7/8 5.875 2 60 3 247			13 7/8 X 40 7/8 5 7/8 2 60 4 300	12 1/4 X 36 5 1/8 2 78 3 254	
NATIONALLY	REGIONAL	REGIONALLY	REGIONALLY	REGIONALLY	NATIONALLY
4:12	4:12	4:12	4:12	4:12	4:12
NO.-15 FELT	NO.-15 FELT	NO.-15 FELT	NO. 15 FELT	NA	NO.-15 FELT
		2:12		2:12	2:12
		2 NO.-15 FELTS OR ICE & WATER PROTECTOR		2 NO. 15 FELTS OR ICE & WATER PROTECTOR	2 NO. 15 FELTS OR ICE & WATER PROTECTOR
X	X	X	X	X	X
X	X	X	X	X	X
1994	1998	1996	1978	1995	1995
NA	NA	NA	NA	NA	NA
B, C, F, H, I SEE APPENDIX	B, I SEE APPENDIX	F SEE APPENDIX	B, C SEE APPENDIX	E, G SEE APPENDIX	H SEE APPENDIX
NO	NO	NO	NO	NO	NO
800/323-7171	800/323-7171	800/323-7171	800/323-7171	800/323-7171	800/323-7171
800/323-7171 800/387-2318	800/323-7171 800/387-2318	800/323-7171 800/387-2318	800/323-7171 800/387-2318	800/323-7171 800/387-2318	800/323-7171 800/387-2318
X	X	X	X	X	X

# Asphalt Shingles Part 1: General Information

1.	COMPANY NAME	IKO MANUFACTURING INC.	IKO MANUFACTURING INC.	IKO MANUFACTURING INC.
2.	PRODUCT NAME	IMPERIAL GENTRY 25	IMPERIAL GLASS	IMPERIAL SEAL
3.	PRODUCT DESCRIPTION			
	Felt Material (organic/fiberglass)	FIBERGLASS	FIBERGLASS	ORGANIC
	Construction (laminated/nonlaminated)	NONLAMINATED	NONLAMINATED	NONLAMINATED
	Granule Composition	CERAMIC	CERAMIC	CERAMIC
	Number of Colors Available (/ marks number by region)	12	6	6
	Color Availability (regional/national)	REGIONAL	REGIONAL	REGIONAL
4.	SHINGLE TYPE			
	Self-Sealing 3-Tab Strip	X	X	X
	Self-Sealing 4-Tab Strip			
	Self-Sealing Random-Tab Strip			
	Self-Sealing No Cutout			
	Individual Interlocking			
5.	AVAILABILITY RESTRICTED REGIONALLY (yes/no)	YES	YES	YES
6A.	DIMENSIONS AND COVERAGE: SIZE 1			
	Shingle Dimensions (inches x inches)	12 1/4 X 36	12 1/4 X 36	12 1/4 X 36
	Exposure (inches)	5 1/8	5 1/8	5 1/8
	Headlap (inches)	2	2	2
	Shingles Per Roof Square	78	78	78
	Bundles Per Square	3	3	3
	Weight Per Roof Square (pounds)	235	207	216
6B.	DIMENSIONS AND COVERAGE: SIZE 2			
	Shingle Dimensions (inches x inches)			
	Exposure (inches)			
	Headlap (inches)			
	Shingles Per Roof Square			
	Bundles Per Square			
	Weight Per Roof Square (pounds)			
7.	HIP/RIDGE SHINGLE AVAILABLE (nationally, regionally, no)	REGIONALLY	REGIONALLY	REGIONALLY
8.	SLOPE/UNDERLAYMENT RECOMMENDATIONS			
	Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12	4:12
	Underlayment Recommended in Normal Application	15-LB. FELT	15-LB. FELT	NA
	Minimum Slope Recommended For Special Application (inches per foot)	2:12	2:12	2:12
	Underlayment Recommended in Special Application	2 NO.-15 FELTS OR ICE & WATER PROTECTOR	2 NO.-15 FELTS OR ICE & WATER PROTECTOR	2 NO.-15 FELTS OR ICE & WATER PROTECTOR
9.	RECOMMENDED DECK MATERIAL			
	Plywood/Wood	X	X	X
	Oriented-Strand Board	X	X	X
	Waferboard			
	Other (specify)			
10.	YEAR PRODUCT FIRST SOLD	1987	1987	1987
11.	NUMBER OF SQUARES INSTALLED	NA	NA	NA
12.	MANUFACTURERS PLANT LOCATIONS (CITY, STATE)	F, G SEE APPENDIX	F, G SEE APPENDIX	G SEE APPENDIX
13.	DISTRIBUTION			
	Distributors (number handling product or no)			
	Direct (number of regional service locations or no)	NO	NO	NO
14A.	FOR SALES INFORMATION, CONTACT:	800/323-7171	800/323-7171	800/323-7171
14B.	FOR TECHNICAL INFORMATION, CONTACT:	800/323-7171 800/387-2318	800/323-7171 800/387-2318	800/323-7171 800/387-2318
15.	SEE APPENDIX IF CHECKED	X	X	X

NA=not applicable

## Asphalt Shingles Part 1: General Information

IKO MANUFACTURING INC.	IKO MANUFACTURING INC.	IKO MANUFACTURING INC.	IKO MANUFACTURING INC.	IKO MANUFACTURING INC.	IKO MANUFACTURING INC.
NEW ENGLANDER 25	RENAISSANCE XL	ROYAL VICTORIAN	SKYLINE 25	STORMTITE 25	ULTRA LOCK 25
ORGANIC NONLAMINATED CERAMIC	ORGANIC NONLAMINATED CERAMIC	ORGANIC NONLAMINATED CERAMIC	ORGANIC NONLAMINATED CERAMIC	FIBERGLASS NONLAMINATED CERAMIC	ORGANIC NONLAMINATED CERAMIC
4	8	6	5	5	5
REGIONAL	REGIONAL	REGIONAL	REGIONAL	REGIONAL	REGIONAL
	X				
X		X	X	X	X
YES	YES	YES	YES	YES	YES
13 1/4 X 39 3/8	20 7/8 X 23 7/8	23 7/8 X 20 7/8			
5 5/8	5 5/8	5 5/8	5 5/8	16	16
2	2	2	2	2	2
65	65	65	65	84	86
3	3	3	3	3	3
239	238	240	247	250	250
					21 1/2 X 21 1/2
					14
					2
					98
					3
					243
REGIONALLY	REGIONALLY	REGIONALLY	REGIONALLY	REGIONALLY	REGIONALLY
4:12	4:12	4:12	4:12	4:12	4:12
NA	NA	NA	NA	NO. 15 FELT	NA
2:12	2:12	2:12	2:12		
2 NO.-15 FELTS OR ICE & WATER PROTECTOR	2 NO.-15 FELTS OR ICE & WATER PROTECTOR	2 NO.-15 FELTS OR ICE & WATER PROTECTOR	2 NO.-15 FELTS OR ICE & WATER PROTECTOR		
X	X	X	X	X	X
X	X	X	X	X	X
1982	1992	1992	1978	1998	1990
NA	NA	NA	NA	NA	NA
C	E	E	A, B	B	B
SEE APPENDIX	SEE APPENDIX	SEE APPENDIX	SEE APPENDIX	SEE APPENDIX	SEE APPENDIX
NO	NO	NO	NO	NO	NO
800/323-7171	800/323-7171	800/323-7171	800/323-7171	800/323-7171	800/323-7171
800/323-7171 800/387-2318	800/323-7171 800/387-2318	800/323-7171 800/387-2318	800/323-7171 800/387-2318	800/323-7171 800/387-2318	800/323-7171 800/387-2318
X	X	X	X	X	X

## Asphalt Shingles Part 1: General Information

1.	COMPANY NAME	IKO MANUFACTURING INC.	IKO MANUFACTURING INC.	IKO MANUFACTURING INC.
2.	PRODUCT NAME	MARATHON 20	MARATHON 25	MARATHON 30
3.	PRODUCT DESCRIPTION			
	Felt Material (organic/fiberglass)	FIBERGLASS	FIBERGLASS	FIBERGLASS
	Construction (laminated/nonlaminated)	NONLAMINATED	NONLAMINATED	NONLAMINATED
	Granule Composition	CERAMIC	CERAMIC	CERAMIC
	Number of Colors Available (/ marks number by region)	6	11	5
	Color Availability (regional/national)	REGIONAL	NATIONAL	REGIONAL
4.	SHINGLE TYPE			
	Self-Sealing 3-Tab Strip	X	X	X
	Self-Sealing 4-Tab Strip			
	Self-Sealing Random-Tab Strip			
	Self-Sealing No Cutout			
	Individual Interlocking			
5.	AVAILABILITY RESTRICTED REGIONALLY (yes/no)	YES	NO	YES
6A.	DIMENSIONS AND COVERAGE: SIZE 1			
	Shingle Dimensions (inches x inches)	13 1/4 X 39 3/8	13 1/4 X 39 3/8	13 1/4 X 39 3/8
	Exposure (inches)	5 5/8	5 5/8	5 5/8
	Headlap (inches)	2	2	2
	Shingles Per Roof Square	65	65	65
	Bundles Per Square	3	3	3
	Weight Per Roof Square (pounds)	207	235	243
6B.	DIMENSIONS AND COVERAGE: SIZE 2			
	Shingle Dimensions (inches x inches)			
	Exposure (inches)			
	Headlap (inches)			
	Shingles Per Roof Square			
	Bundles Per Square			
	Weight Per Roof Square (pounds)			
7.	HIP/RIDGE SHINGLE AVAILABLE (nationally, regionally, no)	REGIONALLY	NATIONALLY	REGIONALLY
8.	SLOPE/UNDERLAYMENT RECOMMENDATIONS			
	Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12	4:12
	Underlayment Recommended in Normal Application	NO. 15 FELT	NO. 15 FELT	NO. 15 FELT
	Minimum Slope Recommended For Special Application (inches per foot)	2:12	2:12	2:12
	Underlayment Recommended in Special Application	2 NO. 15 FELTS OR ICE & WATER PROTECTOR	2 NO. 15 FELTS OR ICE & WATER PROTECTOR	2 NO. 15 FELTS OR ICE & WATER PROTECTOR
9.	RECOMMENDED DECK MATERIAL			
	Plywood/Wood	X	X	X
	Oriented-Strand Board	X	X	X
	Waferboard			
	Other (specify)			
10.	YEAR PRODUCT FIRST SOLD	1999	1993	1999
11.	NUMBER OF SQUARES INSTALLED	NA	NA	NA
12.	MANUFACTURERS PLANT LOCATIONS (CITY, STATE)	I SEE APPENDIX	A, I SEE APPENDIX	A SEE APPENDIX
13.	DISTRIBUTION			
	Distributors (number handling product or no)			
	Direct (number of regional service locations or no)	NO	NO	NO
14A.	FOR SALES INFORMATION, CONTACT:	800/323-7171	800/323-7171	800/323-7171
14B.	FOR TECHNICAL INFORMATION, CONTACT:	800/323-7171 800/387-2318	800/323-7171 800/387-2318	800/323-7171 800/387-2318
15.	SEE APPENDIX IF CHECKED	X	X	X

NA=not applicable

# Asphalt Shingles Part 1: General Information

IKO MANUFACTURING INC.	IKO MANUFACTURING INC.	IKO MANUFACTURING INC.	MALARKEY ROOFING COMPANY	MALARKEY ROOFING COMPANY	MALARKEY ROOFING COMPANY
CATHEDRAL XL	HIP & RIDGE	CAMBRIDGE 40	#202 DURA-SEAL	#204 DURA-SEAL	#230 ALASKAN SBS MODIFIED
ORGANIC NONLAMINATED CERAMIC 5 NATIONAL	FIBERGLASS NONLAMINATED CERAMIC 11 REGIONAL	FIBERGLASS LAMINATED CERAMIC 6 NATIONAL	FIBERGLASS NONLAMINATED CERAMIC 7 REGIONAL	FIBERGLASS NONLAMINATED CERAMIC 9 REGIONAL	POLYGLASS NONLAMINATED CERAMIC 9 REGIONAL
XL	X	X	X	X	X
NO	YES	NO	NO	NO	NO
13 1/4 X 39 3/8 5 5/8 2 65 3 238	13 1/4 X 39 3/8 5 5/8 2 NA NA 235	14 1/4 X 39 3/16 6 1/8 2 60 3 300	13 1/4 X 39 3/8 5 5/8 7 5/8 66 3 205	13 1/4 X 39 3/8 5 5/8 7 5/8 66 3 235	13 1/4 X 39 3/8 5 5/8 7 5/8 66 3 235
		13 7/8 X 40 7/8 5 7/8 2 60 3 300			
NO	REGIONAL	NATIONAL	NATIONALLY	NATIONALLY	NATIONALLY
4:12 NO. 15 FELT 2:12	NA NA	4:12 NO. 15 FELT	4:12 15- OR 30-LB. FELT #501 UDL 2:12	4:12 15- OR 30-LB. FELT #501 UDL 2:12	4:12 15- OR 30-LB. FELT #501 UDL 2:12
2 NO. 15 FELTS OR ICE & WATER PROTECTOR			2 15-LB. FELTS OR 2 #501 UDL	2 15-LB. FELTS OR 2 #501 UDL	2 15-LB. FELTS OR 2 #501 UDL
	X X	X X	X	X	X
1998 NA	1998 NA	1998 NA	1977	1978	1986
A SEE APPENDIX	I SEE APPENDIX	F, I SEE APPENDIX	PORTLAND, OR	PORTLAND, OR	PORTLAND, OR
			200+	200+	200+
NO 800/323-7171	NO 800/323-7171	NO 800/323-7171	G. MALARKEY 800/545-1191	G. MALARKEY 800/545-1191	G. MALARKEY 800/545-1191
800/323-7171 800/387-2318	800/323-7171 800/387-2318	800/323-7171 800/387-2318	J. DECHANDT M. MALARKEY	J. DECHANDT M. MALARKEY	J. DECHANDT M. MALARKEY
X	X	X			

## Asphalt Shingles Part 1: General Information

1.	COMPANY NAME	MALARKEY ROOFING COMPANY	MALARKEY ROOFING COMPANY	MALARKEY ROOFING COMPANY
2.	PRODUCT NAME	#240 HURRICANE SBS MODIFIED ALGAE RESISTANT	#271 HIGHLANDER 25	#272 LEGACY 35 SBS MODIFIED
3.	PRODUCT DESCRIPTION			
	Felt Material (organic/fiberglass)	POLYGLASS	FIBERGLASS	POLYGLASS
	Construction (laminated/nonlaminated)	NONLAMINATED	LAMINATED	LAMINATED
	Granule Composition	CERAMIC & COPPER	CERAMIC	CERAMIC
	Number of Colors Available (/ marks number by region)	7	6	8
	Color Availability (regional/national)	REGIONAL	NATIONAL	NATIONAL
4.	SHINGLE TYPE			
	Self-Sealing 3-Tab Strip	X		
	Self-Sealing 4-Tab Strip			
	Self-Sealing Random-Tab Strip			
	Self-Sealing No Cutout		X	X
	Individual Interlocking			
5.	AVAILABILITY RESTRICTED REGIONALLY (yes/no)	NO	NO	NO
6A.	DIMENSIONS AND COVERAGE: SIZE 1			
	Shingle Dimensions (inches x inches)	13 1/4 X 39 3/8	13 1/4 X 39	13 1/4 X 40
	Exposure (inches)	5 5/8	5 5/8	5 5/8
	Headlap (inches)	7 5/8	7 5/8	7 5/8
	Shingles Per Roof Square	66	64	64
	Bundles Per Square	3	4	4
	Weight Per Roof Square (pounds)	235	245	275
6B.	DIMENSIONS AND COVERAGE: SIZE 2			
	Shingle Dimensions (inches x inches)			
	Exposure (inches)			
	Headlap (inches)			
	Shingles Per Roof Square			
	Bundles Per Square			
	Weight Per Roof Square (pounds)			
7.	HIP/RIDGE SHINGLE AVAILABLE (nationally, regionally, no)	NATIONALLY	NATIONALLY	NATIONALLY
8.	SLOPE/UNDERLAYMENT RECOMMENDATIONS			
	Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12	4:12
	Underlayment Recommended in Normal Application	15- OR 30-LB. FELT #501 UDL	15- OR 30-LB. FELT #501 UDL	15- OR 30-LB. FELT #501 UDL
	Minimum Slope Recommended For Special Application (inches per foot)	2:12	2:12	2:12
	Underlayment Recommended in Special Application	2 15-LB. FELTS OR 2 #501 UDL	2 15-LB. FELTS OR 2 #501 UDL	2 15-LB. FELTS OR 2 #501 UDL
9.	RECOMMENDED DECK MATERIAL			
	Plywood/Wood	X	X	X
	Oriented-Strand Board			
	Waferboard			
	Other (specify)			
10.	YEAR PRODUCT FIRST SOLD	1993	1997	1997
11.	NUMBER OF SQUARES INSTALLED			
12.	MANUFACTURERS PLANT LOCATIONS (CITY, STATE)	PORTLAND, OR	PORTLAND, OR	PORTLAND, OR
13.	DISTRIBUTION			
	Distributors (number handling product or no)	200+	200+	200+
	Direct (number of regional service locations or no)			
14A.	FOR SALES INFORMATION, CONTACT:	G. MALARKEY 800/545-1191	G. MALARKEY 800/545-1191	G. MALARKEY 800/545-1191
14B.	FOR TECHNICAL INFORMATION, CONTACT:	J. DECHANDT M. MALARKEY	J. DECHANDT M. MALARKEY	J. DECHANDT M. MALARKEY
15.	SEE APPENDIX IF CHECKED			

NA=not applicable

## Asphalt Shingles Part 1: General Information

MALARKEY ROOFING COMPANY	OWENS CORNING	OWENS CORNING	OWENS CORNING	OWENS CORNING	OWENS CORNING
#272 LEGACY-35 SBS MODIFIED ALGAE RESISTANT	OAKRIDGE 40 DEEP SHADOW ARCHITECTURAL	OAKRIDGE 40 AR DEEP SHADOW ARCHITECTURAL	OAKRIDGE 30 SHADOW ARCHITECTURAL	OAKRIDGE 30 AR SHADOW ARCHITECTURAL	OAKRIDGE 25 ARCHITECTURAL
POLYGLASS LAMINATED CERAMIC & COPPER	FIBERGLASS LAMINATED CERAMIC	FIBERGLASS LAMINATED CERAMIC	FIBERGLASS LAMINATED CERAMIC	FIBERGLASS LAMINATED CERAMIC	FIBERGLASS LAMINATED CERAMIC
8 NATIONAL	9 REGIONAL	6 REGIONAL	10 REGIONAL	6 REGIONAL	10 REGIONAL
X	X	X	X	X	X
NO	NO	YES	NO	YES	NO
13 1/4 X 40 5 5/8 7 5/8 64 4 275	13 1/4 X 39 3/8 5 5/8 7 5/8 64 4	13 1/4 X 39 3/8 5 5/8 7 5/8 64 4	13 1/4 X 39 3/8 5 5/8 7 5/8 64 4	13 1/4 X 39 3/8 5 5/8 7 5/8 64 4	13 1/4 X 38 3/4 5 5/8 7 5/8 66 3
NATIONALLY	NATIONALLY	REGIONALLY	NATIONALLY	REGIONALLY	NATIONALLY
4:12	4:12	4:12	4:12	4:12	4:12
15- OR 30-LB. FELT #501 UDL	NO.-15 FELT; WEATHER- LOCK OPT AT EAVES	NO.-15 FELT; WEATHER- LOCK OPT AT EAVES	NO.-15 FELT; WEATHER- LOCK OPT AT EAVES	NO.-15 FELT; WEATHER- LOCK OPT AT EAVES	NO.-15 FELT; WEATHER- LOCK OPT AT EAVES
2:12	2:12	2:12	2:12	2:12	2:12
2 15-LB. FELTS OR 2 #501 UDL	2 NO.-15 FELTS AND WEATHERLOCK	2 NO.-15 FELTS AND WEATHERLOCK	2 NO.-15 FELTS AND WEATHERLOCK	2 NO.-15 FELTS AND WEATHERLOCK	2 NO.-15 FELTS AND WEATHERLOCK
X	X	X	X	X	X
1997	1987	1987	1987	1987	1987
	MILLIONS		MILLIONS		MILLIONS
PORTLAND, OR	BROOKVILLE, IN COMPTON, CA HOUSTON, TX KEARNY, NJ MEDINA, OH DENVER, CO	SAVANNAH, GA HOUSTON, TX	BROOKVILLE, IN COMPTON, CA HOUSTON, TX KEARNY, NJ MEDINA, OH DENVER, CO	SAVANNAH, GA HOUSTON, TX	BROOKVILLE, IN COMPTON, CA HOUSTON, TX KEARNY, NJ MEDINA, OH PORTLAND, OR DENVER, CO
200+					
G. MALARKEY 800/545-1191 J. DECHANDT M. MALARKEY	800/GET-PINK	800/GET-PINK	800/GET-PINK	800/GET-PINK	800/GET-PINK
	800/GET-PINK	800/GET-PINK	800/GET-PINK	800/GET-PINK	800/GET-PINK
	X	X	X	X	X

## Asphalt Shingles Part 1: General Information

1.	COMPANY NAME	OWENS CORNING	OWENS CORNING	OWENS CORNING
2.	PRODUCT NAME	OAKRIDGE 25 AR ARCHITECTURAL	PROMINENCE 30 YEAR PERFORMANCE	PROMINENCE AR 30 YEAR PERFORMANCE
3.	PRODUCT DESCRIPTION			
	Felt Material (organic/fiberglass)	FIBERGLASS	FIBERGLASS	FIBERGLASS
	Construction (laminated/nonlaminated)	LAMINATED	NONLAMINATED	NONLAMINATED
	Granule Composition	CERAMIC	CERAMIC	CERAMIC
	Number of Colors Available (/ marks number by region)	7	12	8
	Color Availability (regional/national)	REGIONAL	REGIONAL	REGIONAL
4.	SHINGLE TYPE			
	Self-Sealing 3-Tab Strip		X	X
	Self-Sealing 4-Tab Strip			
	Self-Sealing Random-Tab Strip	X		
	Self-Sealing No Cutout			
	Individual Interlocking			
5.	AVAILABILITY RESTRICTED REGIONALLY (yes/no)	YES	NO	YES
6A.	DIMENSIONS AND COVERAGE: SIZE 1			
	Shingle Dimensions (inches x inches)	13 1/4 X 38 3/4	12 X 36	12 X 36
	Exposure (inches)	5 5/8	5	5
	Headlap (inches)	7 5/8	7	7
	Shingles Per Roof Square	66	80	80
	Bundles Per Square	3	3	3
	Weight Per Roof Square (pounds)			
6B.	DIMENSIONS AND COVERAGE: SIZE 2			
	Shingle Dimensions (inches x inches)			
	Exposure (inches)			
	Headlap (inches)			
	Shingles Per Roof Square			
	Bundles Per Square			
	Weight Per Roof Square (pounds)			
7.	HIP/RIDGE SHINGLE AVAILABLE (nationally, regionally, no)	REGIONALLY	NO	
8.	SLOPE/UNDERLAYMENT RECOMMENDATIONS			
	Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12	4:12
	Underlayment Recommended in Normal Application	NO.-15 FELT; WEATHER-LOCK OPT AT EAVES	NO.-15 FELT; WEATHER-LOCK OPT AT EAVES	NO.-15 FELT; WEATHER-LOCK OPT AT EAVES
	Minimum Slope Recommended For Special Application (inches per foot)	2:12	2:12	2:12
	Underlayment Recommended in Special Application	2 NO.-15 FELTS AND WEATHERLOCK	2 NO.-15 FELTS AND WEATHERLOCK	2 NO.-15 FELTS AND WEATHERLOCK
9.	RECOMMENDED DECK MATERIAL			
	Plywood/Wood	X	X	X
	Oriented-Strand Board			
	Waferboard			
	Other (specify)			
10.	YEAR PRODUCT FIRST SOLD	1987	1995	1995
11.	NUMBER OF SQUARES INSTALLED		MILLIONS	
12.	MANUFACTURERS PLANT LOCATIONS (CITY, STATE)	SAVANNAH, GA HOUSTON, TX	MEDINA, OH MINNEAPOLIS, MN	ATLANTA, GA
13.	DISTRIBUTION			
	Distributors (number handling product or no)			
	Direct (number of regional service locations or no)			
14A.	FOR SALES INFORMATION, CONTACT:	800/GET-PINK	800/GET-PINK	800/GET-PINK
14B.	FOR TECHNICAL INFORMATION, CONTACT:	800/GET-PINK	800/GET-PINK	800/GET-PINK
15.	SEE APPENDIX IF CHECKED	X	X	X

NA=not applicable

# Asphalt Shingles Part 1: General Information

OWENS CORNING	OWENS CORNING	OWENS CORNING	OWENS CORNING	OWENS CORNING	OWENS CORNING
SUPREME 30 30 YEAR PERFORMANCE	SUPREME 30 AR 30 YEAR PERFORMANCE	SUPREME 25 YEAR TRADITIONAL	SUPREME AR 25 YEAR TRADITIONAL	SUPREME (METRIC) 25 YEAR TRADITIONAL	CLASSIC 20 YEAR TRADITIONAL
FIBERGLASS NONLAMINATED CERAMIC 8 REGIONAL	FIBERGLASS NONLAMINATED CERAMIC 6 REGIONAL	FIBERGLASS NONLAMINATED CERAMIC 29 REGIONAL	FIBERGLASS NONLAMINATED CERAMIC 9 REGIONAL	FIBERGLASS NONLAMINATED CERAMIC 10 REGIONAL	FIBERGLASS NONLAMINATED CERAMIC 29 REGIONAL
X	X	X	X	X	X
YES	YES	NO	YES	YES	NO
12 X 36 5 7 80 3	12 X 36 5 7 80 3	12 X 36 5 7 80 3	12 X 36 5 7 80 3	13 1/4 X 39 3/8 5 5/8 7 5/8 65 3	12 X 36 5 7 80 3
NO	NO	NO	NO	REGIONALLY	NO
4:12	4:12	4:12	4:12	4:12	4:12
NO.-15 FELT; WEATHER- LOCK OPT AT EAVES 2:12 2 NO.-15 FELTS AND WEATHERLOCK	NO.-15 FELT; WEATHER- LOCK OPT AT EAVES 2:12 2 NO.-15 FELTS AND WEATHERLOCK	NO.-15 FELT; WEATHER- LOCK OPT AT EAVES 2:12 2 NO.-15 FELTS AND WEATHERLOCK	NO.-15 FELT; WEATHER- LOCK OPT AT EAVES 2:12 2 NO.-15 FELTS AND WEATHERLOCK	NO.-15 FELT; WEATHER- LOCK OPT AT EAVES 2:12 2 NO.-15 FELTS AND WEATHERLOCK	NO.-15 FELT; WEATHER- LOCK OPT AT EAVES 2:12 2 NO.-15 FELTS AND WEATHERLOCK
X	X	X	X	X	X
1998	1998	1978	1986	1986	1959
MEDINA, OH MINNEAPOLIS, MN	JESSUP, MD	MILLIONS BROOKVILLE, IN COMPTON, CA DENVER, CO IRVING, TX JESSUP, MD KEARNY, NJ MEDINA, OH MINNEAPOLIS, MN SUMMIT, IL	ATLANTA, GA JACKSONVILLE, FL JESSUP, MD MEMPHIS, TN	MILLIONS COMPTON, CA PORTLAND, OR	MILLIONS ATLANTA, GA BROOKVILLE, IN COMPTON, CA DENVER, CO IRVING, TX JACKSONVILLE, FL JESSUP, MD MINNEAPOLIS, MN SUMMIT, IL MEMPHIS, TN
800/GET-PINK	800/GET-PINK	800/GET-PINK	800/GET-PINK	800/GET-PINK	800/GET-PINK
800/GET-PINK	800/GET-PINK	800/GET-PINK	800/GET-PINK	800/GET-PINK	800/GET-PINK
	X	X	X	X	X

# Asphalt Shingles Part 1: General Information

1.	COMPANY NAME	OWENS CORNING	OWENS CORNING	OWENS CORNING
2.	PRODUCT NAME	CLASSIC AR 20 YEAR TRADITIONAL	CLASSIC (METRIC) 20 YEAR TRADITIONAL	GLASLOCK 25 YEAR INTERLOCKING
3.	PRODUCT DESCRIPTION			
	Felt Material (organic/fiberglass)	FIBERGLASS	FIBERGLASS	FIBERGLASS
	Construction (laminated/nonlaminated)	NONLAMINATED	NONLAMINATED	NONLAMINATED
	Granule Composition	CERAMIC	CERAMIC	CERAMIC
	Number of Colors Available (/ marks number by region)	8	11	8
	Color Availability (regional/national)	REGIONAL	REGIONAL	REGIONAL
4.	SHINGLE TYPE			
	Self-Sealing 3-Tab Strip	X	X	
	Self-Sealing 4-Tab Strip			
	Self-Sealing Random-Tab Strip			
	Self-Sealing No Cutout			
	Individual Interlocking			X
5.	AVAILABILITY RESTRICTED REGIONALLY (yes/no)	YES	YES	YES
6A.	DIMENSIONS AND COVERAGE: SIZE 1			
	Shingle Dimensions (inches x inches)	12 X 36	13 1/4 X 39 3/8	21 1/16 X 21 9/16
	Exposure (inches)	5	5 5/8	
	Headlap (inches)	7	7 5/8	
	Shingles Per Roof Square	80	65	96
	Bundles Per Square	3	3	3
	Weight Per Roof Square (pounds)			
6B.	DIMENSIONS AND COVERAGE: SIZE 2			
	Shingle Dimensions (inches x inches)			
	Exposure (inches)			
	Headlap (inches)			
	Shingles Per Roof Square			
	Bundles Per Square			
	Weight Per Roof Square (pounds)			
7.	HIP/RIDGE SHINGLE AVAILABLE (nationally, regionally, no)	NO	REGIONALLY	NO
8.	SLOPE/UNDERLAYMENT RECOMMENDATIONS			
	Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12	4:12
	Underlayment Recommended in Normal Application	NO.-15 FELT; WEATHER- LOCK OPT AT EAVES	NO.-15 FELT; WEATHER- LOCK OPT AT EAVES	NO.-15 FELT; WEATHER- LOCK OPT AT EAVES
	Minimum Slope Recommended For Special Application (inches per foot)	2:12	2:12	4:12
	Underlayment Recommended in Special Application	2 NO.-15 FELTS AND WEATHERLOCK	2 NO.-15 FELTS AND WEATHERLOCK	2 NO.-15 FELTS AND WEATHERLOCK
9.	RECOMMENDED DECK MATERIAL			
	Plywood/Wood	X	X	X
	Oriented-Strand Board			
	Waferboard			
	Other (specify)			
10.	YEAR PRODUCT FIRST SOLD	1986	1987	1977
11.	NUMBER OF SQUARES INSTALLED		MILLIONS	MILLIONS
12.	MANUFACTURERS PLANT LOCATIONS (CITY, STATE)	JACKSONVILLE, FL	COMPTON, CA PORTLAND, OR	DENVER, CO
13.	DISTRIBUTION			
	Distributors (number handling product or no)			
	Direct (number of regional service locations or no)			
14A.	FOR SALES INFORMATION, CONTACT:	800/GET-PINK	800/GET-PINK	800/GET-PINK
14B.	FOR TECHNICAL INFORMATION, CONTACT:	800/GET-PINK	800/GET-PINK	800/GET-PINK
15.	SEE APPENDIX IF CHECKED	X	X	X

NA=not applicable

## Asphalt Shingles Part 1: General Information

PABCO ROOFING PRODUCTS	PABCO ROOFING PRODUCTS	PABCO ROOFING PRODUCTS	PABCO ROOFING PRODUCTS	PABCO ROOFING PRODUCTS	PABCO ROOFING PRODUCTS
PREMIER ADVANTAGE	PREMIER 25 ALGAE BLACK	PREMIER 30 ALGAE BLOCK	PABCO PREMIER 25 YEAR	PABCO PREMIER 30 YEAR	PABCO PREMIER 40 YEAR
FIBERGLASS LAMINATED CERAMIC 5 REGIONAL	FIBERGLASS LAMINATED CERAMIC 6 REGIONAL	FIBERGLASS LAMINATED CERAMIC 6 REGIONAL	FIBERGLASS LAMINATED CERAMIC 10 REGIONAL	FIBERGLASS LAMINATED CERAMIC 10 REGIONAL	FIBERGLASS LAMINATED CERAMIC 10 REGIONAL
X	X	X	X	X	X
NO			NO	NO	NO
13 1/4 X 40 5 5/8 7 5/8 64 5 1/3 400	13 1/4 X 40 5 5/8 7 5/8 64 4 255	13 1/4 X 40 5 5/8 7 5/8 64 4 290	13 1/4 X 40 5 5/8 7 5/8 64 4 255	13 1/4 X 40 5 5/8 7 5/8 64 4 290	13 1/4 X 40 5 5/8 7 5/8 64 4 320
REGIONALLY	REGIONALLY	REGIONALLY	REGIONALLY	REGIONALLY	REGIONALLY
4:12 15-LB. FELT					
2:12 2 15-LB. FELTS					
X X X	X X X	X X X	X X X	X X X	X X X
1999 10,000 TACOMA, WA	1995 500,000 TACOMA, WA	1997 500,000 TACOMA, WA	1991 6 MILLION TACOMA, WA	1991 1.5 MILLION TACOMA, WA	1991 1.5 MILLION TACOMA, WA
100 NO R. VANDENBERG 253/272-0374 S. DINWIDDIE 606/858-3266					

## Asphalt Shingles Part 1: General Information

1. COMPANY NAME	PABCO ROOFING PRODUCTS	PABCO ROOFING PRODUCTS	TAMKO ROOFING PRODUCTS
2. PRODUCT NAME	PABCO SG-25	PABCO GG-20	GLASS-SEAL
3. PRODUCT DESCRIPTION			
Felt Material (organic/fiberglass)	FIBERGLASS	FIBERGLASS	FIBERGLASS
Construction (laminated/nonlaminated)	NONLAMINATED	NONLAMINATED	NONLAMINATED
Granule Composition	CERAMIC	CERAMIC	CERAMIC
Number of Colors Available (/ marks number by region)	11	6	16
Color Availability (regional/national)	REGIONAL	REGIONAL	REGIONAL
4. SHINGLE TYPE			
Self-Sealing 3-Tab Strip	X	X	X
Self-Sealing 4-Tab Strip			
Self-Sealing Random-Tab Strip			
Self-Sealing No Cutout			
Individual Interlocking			
5. AVAILABILITY RESTRICTED REGIONALLY (yes/no)	NO	NO	NO
6A. DIMENSIONS AND COVERAGE: SIZE 1			
Shingle Dimensions (inches x inches)	13 1/4 X 39 3/8	13 1/4 X 39 3/8	12 X 36
Exposure (inches)	5 5/8	5 5/8	5
Headlap (inches)	7 5/8	7 5/8	2
Shingles Per Roof Square	65	65	80
Bundles Per Square	3	3	3
Weight Per Roof Square (pounds)	230	205	
6B. DIMENSIONS AND COVERAGE: SIZE 2			
Shingle Dimensions (inches x inches)			
Exposure (inches)			
Headlap (inches)			
Shingles Per Roof Square			
Bundles Per Square			
Weight Per Roof Square (pounds)			
7. HIP/RIDGE SHINGLE AVAILABLE (nationally, regionally, no)	REGIONALLY	REGIONALLY	REGIONALLY
8. SLOPE/UNDERLAYMENT RECOMMENDATIONS			
Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12	4:12
Underlayment Recommended in Normal Application	15-LB. FELT	15-LB. FELT	NO.-15 FELT
Minimum Slope Recommended For Special Application (inches per foot)	2:12	2:12	2:12
Underlayment Recommended in Special Application	2 15-LB. FELTS	2 15-LB. FELTS	2 NO.-15 FELTS, MOISTURE GUARD PLUS OPTIONAL
9. RECOMMENDED DECK MATERIAL			
Plywood/Wood	X	X	X
Oriented-Strand Board	X	X	
Waferboard	X	X	
Other (specify)			
10. YEAR PRODUCT FIRST SOLD	1984	1984	1979
11. NUMBER OF SQUARES INSTALLED	6 MILLION	6 MILLION	
12. MANUFACTURERS PLANT LOCATIONS (CITY, STATE)	TACOMA, WA	TACOMA, WA	DALLAS, TX JOPLIN, MO TUSCALOOSA, AL FREDERICK, MD PHILLIPSBURG, KS
13. DISTRIBUTION			
Distributors (number handling product or no)	100	100	>6,000
Direct (number of regional service locations or no)	NO	NO	NO
14A. FOR SALES INFORMATION, CONTACT:	R. VANDENBERG 253/272-0374	R. VANDENBERG 253/272-0374	DISTRICT OFFICE
14B. FOR TECHNICAL INFORMATION, CONTACT:	S. DINWIDDIE 606/858-3266	S. DINWIDDIE 606/858-3266	TECHNICAL SERVICE 417/624-6644
15. SEE APPENDIX IF CHECKED			

NA=not applicable

## Asphalt Shingles Part 1: General Information

TAMKO ROOFING PRODUCTS	TAMKO ROOFING PRODUCTS	TAMKO ROOFING PRODUCTS	TAMKO ROOFING PRODUCTS	TAMKO ROOFING PRODUCTS	TAMKO ROOFING PRODUCTS
GLASS-SEAL AR	ELITE GLASS SEAL	ELITE GLASS SEAL AR	TAM-LOC GLASS	HERITAGE 25	HERITAGE 25 AR
FIBERGLASS NONLAMINATED COPPER/CERAMIC	FIBERGLASS NONLAMINATED CERAMIC	FIBERGLASS NONLAMINATED COPPER/CERAMIC	FIBERGLASS NONLAMINATED CERAMIC	FIBERGLASS LAMINATED CERAMIC	FIBERGLASS LAMINATED COPPER/CERAMIC
6 REGIONAL	17 REGIONAL	13 REGIONAL	13 REGIONAL	9 NATIONAL	6 REGIONAL
X	X	X			
				X	X
			X		
YES	NO	YES	YES	NO	YES
12 X 36	12 X 36	12 X 36	21 X 21 1/2	12 X 36 15/16	12 X 36 15/16
5	5	5		5	5
2	2	2		2	2
80	80	80	99	78	78
3	3	3	3	3	3
NO	REGIONALLY	NO	REGIONALLY	REGIONALLY	NO
4:12	4:12	4:12	4:12	4:12	4:12
NO.-15 FELT	NO.-15 FELT	NO.-15 FELT	NO.-15 FELT	NO.-15 FELT	NO.-15 FELT
2:12	2:12	2:12		2:12	2:12
2 NO.-15 FELTS, MOISTURE GUARD PLUS OPTIONAL	2 NO.-15 FELTS, MOISTURE GUARD PLUS OPTIONAL	2 NO.-15 FELTS, MOISTURE GUARD PLUS OPTIONAL		2 NO.-15 FELTS, MOISTURE GUARD PLUS OPTIONAL	2 NO.-15 FELTS, MOISTURE GUARD PLUS OPTIONAL
X	X	X	X	X	X
1983	1984	1985	1984	1985	1992
TUSCALOOSA, AL	DALLAS, TX JOPLIN, MO TUSCALOOSA, AL FREDERICK, MD PHILLIPSBURG, KS	TUSCALOOSA, AL	PHILLIPSBURG, KS	DALLAS, TX JOPLIN, MO TUSCALOOSA, AL FREDERICK, MD PHILLIPSBURG, KS	TUSCALOOSA, AL
>2,000 NO	>6,000 NO	>2,000 NO	>3,000 NO	>6,000 NO	>2,000 NO
DISTRICT OFFICE	DISTRICT OFFICE	DISTRICT OFFICE	DISTRICT OFFICE	DISTRICT OFFICE	DISTRICT OFFICE
TECHNICAL SERVICE 417/624-6644	TECHNICAL SERVICE 417/624-6644	TECHNICAL SERVICE 417/624-6644	TECHNICAL SERVICE 417/624-6644	TECHNICAL SERVICE 417/624-6644	TECHNICAL SERVICE 417/624-6644

## Asphalt Shingles Part 1: General Information

1. COMPANY NAME	TAMKO ROOFING PRODUCTS	TAMKO ROOFING PRODUCTS	TAMKO ROOFING PRODUCTS
2. PRODUCT NAME	HERITAGE 30	HERITAGE 30 AR	HERITAGE 40
3. PRODUCT DESCRIPTION			
Felt Material (organic/fiberglass)	FIBERGLASS	FIBERGLASS	FIBERGLASS
Construction (laminated/nonlaminated)	LAMINATED	LAMINATED	LAMINATED
Granule Composition	CERAMIC	COPPER/CERAMIC	CERAMIC
Number of Colors Available (/ marks number by region)	7	7	7
Color Availability (regional/national)	NATIONAL	REGIONAL	REGIONAL
4. SHINGLE TYPE			
Self-Sealing 3-Tab Strip			
Self-Sealing 4-Tab Strip			
Self-Sealing Random-Tab Strip	X	X	X
Self-Sealing No Cutout			
Individual Interlocking			
5. AVAILABILITY RESTRICTED REGIONALLY (yes/no)	NO	YES	NO
6A. DIMENSIONS AND COVERAGE: SIZE 1			
Shingle Dimensions (inches x inches)	12 X 36	12 X 36	12 X 36
Exposure (inches)	5	5	5
Headlap (inches)	2	2	2
Shingles Per Roof Square	80	80	80
Bundles Per Square	4	4	4
Weight Per Roof Square (pounds)			
6B. DIMENSIONS AND COVERAGE: SIZE 2			
Shingle Dimensions (inches x inches)			
Exposure (inches)			
Headlap (inches)			
Shingles Per Roof Square			
Bundles Per Square			
Weight Per Roof Square (pounds)			
7. HIP/RIDGE SHINGLE AVAILABLE (nationally, regionally, no)	REGIONALLY	NO	REGIONALLY
8. SLOPE/UNDERLAYMENT RECOMMENDATIONS			
Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12	4:12
Underlayment Recommended in Normal Application	NO.-15 FELT	NO.-15 FELT	NO.-15 FELT
Minimum Slope Recommended For Special Application (inches per foot)	2:12	2:12	2:12
Underlayment Recommended in Special Application	2 NO.-15 FELTS, MOISTURE GUARD PLUS OPTIONAL	2 NO.-15 FELTS, MOISTURE GUARD PLUS OPTIONAL	2 NO.-15 FELTS, MOISTURE GUARD PLUS OPTIONAL
9. RECOMMENDED DECK MATERIAL			
Plywood/Wood	X	X	X
Oriented-Strand Board			
Waferboard			
Other (specify)			
10. YEAR PRODUCT FIRST SOLD	1989	1992	1992
11. NUMBER OF SQUARES INSTALLED			
12. MANUFACTURERS PLANT LOCATIONS (CITY, STATE)	DALLAS, TX TUSCALOOSA, AL FREDERICK, MD PHILLIPSBURG, KS	TUSCALOOSA, AL	DALLAS, TX TUSCALOOSA, AL FREDERICK, MKD PHILLIPSBURG, KS
13. DISTRIBUTION			
Distributors (number handling product or no)	>6,000	>2,000	3,000
Direct (number of regional service locations or no)	NO	NO	NO
14A. FOR SALES INFORMATION, CONTACT:	DISTRICT OFFICE	DISTRICT OFFICE	DISTRICT OFFICE
14B. FOR TECHNICAL INFORMATION, CONTACT:	TECHNICAL SERVICE 417/624-6644	TECHNICAL SERVICE 417/624-6644	TECHNICAL SERVICE 417/624-6644
15. SEE APPENDIX IF CHECKED			

NA=not applicable

## Asphalt Shingles Part 1: General Information

TAMKO ROOFING PRODUCTS	TAMKO ROOFING PRODUCTS	TAMKO ROOFING PRODUCTS	TAMKO ROOFING PRODUCTS	TAMKO ROOFING PRODUCTS	TAMKO ROOFING PRODUCTS
HERITAGE 40 AR	HERITAGE M25	HERITAGE M30	HERITAGE M40	RELIANCE 25	RELIANCE 30
FIBERGLASS LAMINATED CERAMIC 4 REGIONAL	FIBERGLASS LAMINATED CERAMIC 8 REGIONAL	FIBERGLASS LAMINATED CERAMIC 8 REGIONAL	FIBERGLASS LAMINATED CERAMIC 8 REGIONAL	ORGANIC NONLAMINATED CERAMIC 12 REGIONAL	ORGANIC NONLAMINATED CERAMIC 12 REGIONAL
				X	X
X	X	X	X		
YES	YES	YES	YES	YES	YES
12 X 36 5 2 80 4	38 3/4 X 13 1/4 5 5/8 2 1/4 66 3	39 3/8 X 13 1/4 5 5/8 2 1/4 64 4	39 3/8 X 13 1/4 5 5/8 2 1/4 64 4	12 X 36 5 2 80 3	12 X 36 5 2 80 3
REGIONALLY	REGIONALLY	REGIONALLY	REGIONALLY	REGIONALLY	REGIONALLY
4:12	4:12	4:12	4:12	4:12	4:12
NO.-15 FELT	NO.-15 FELT				
2:12	2:12	2:12	2:12	2:12	2:12
2 NO.-15 FELTS, MOISTURE GUARD PLUS OPTIONAL	2 NO.-15 FELTS, MOISTURE GUARD PLUS OPTIONAL				
X	X	X	X	X	X
1988	1995	1995	1995	1998	1998
TUSCALOOSA, AL	DALLAS, TX	DALLAS, TX	DALLAS, TX	JOPLIN, MO PHILLIPSBURG, KS	JOPLIN, MO PHILLIPSBURG, KS
3,000 NO	700 NO	400 NO	400 NO	>6,000 NO	>6,000 NO
DISTRICT OFFICE	DISTRICT OFFICE				
TECHNICAL SERVICE 417/624-6644	TECHNICAL SERVICE 417/624-6644				

## Asphalt Shingles Part 1: General Information

1. COMPANY NAME	TAMKO ROOFING PRODUCTS	TAMKO ROOFING PRODUCTS	TAMKO ROOFING PRODUCTS
2. PRODUCT NAME	ASTM AR HERITAGE 25	ASTM HERITAGE 25	HERITAGE STORMFIGHTER AR
3. PRODUCT DESCRIPTION			
Felt Material (organic/fiberglass)	FIBERGLASS	FIBERGLASS	FIBERGLASS
Construction (laminated/nonlaminated)	LAMINATED	LAMINATED	LAMINATED
Granule Composition	COPPER/CERAMIC	CERAMIC	COPPER/CERAMIC
Number of Colors Available (/ marks number by region)	6	9	4
Color Availability (regional/national)	REGIONAL	REGIONAL	REGIONAL
4. SHINGLE TYPE			
Self-Sealing 3-Tab Strip			
Self-Sealing 4-Tab Strip			
Self-Sealing Random-Tab Strip	X	X	X
Self-Sealing No Cutout			
Individual Interlocking			
5. AVAILABILITY RESTRICTED REGIONALLY (yes/no)	YES	YES	YES
6A. DIMENSIONS AND COVERAGE: SIZE 1			
Shingle Dimensions (inches x inches)	12 X 36 15/16	12 X 36 15/16	12 X 36
Exposure (inches)	5	5	5
Headlap (inches)	2	2	2
Shingles Per Roof Square	78	78	80
Bundles Per Square	3	3	4
Weight Per Roof Square (pounds)			
6B. DIMENSIONS AND COVERAGE: SIZE 2			
Shingle Dimensions (inches x inches)			
Exposure (inches)			
Headlap (inches)			
Shingles Per Roof Square			
Bundles Per Square			
Weight Per Roof Square (pounds)			
7. HIP/RIDGE SHINGLE AVAILABLE (nationally, regionally, no)	REGIONALLY	REGIONALLY	REGIONALLY
8. SLOPE/UNDERLAYMENT RECOMMENDATIONS			
Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12	4:12
Underlayment Recommended in Normal Application	NO. 15 FELT	NO. 15 FELT	NO. 15 FELT
Minimum Slope Recommended For Special Application (inches per foot)	2:12	2:12	2:12
Underlayment Recommended in Special Application	2 NO. 15 FELTS, MOISTURE GUARD PLUS OPTIONAL	2 NO. 15 FELTS, MOISTURE GUARD PLUS OPTIONAL	2 NO. 15 FELTS, MOISTURE GUARD PLUS OPTIONAL
9. RECOMMENDED DECK MATERIAL			
Plywood/Wood	X	X	X
Oriented-Strand Board			
Waferboard			
Other (specify)			
10. YEAR PRODUCT FIRST SOLD	1998	1998	1998
11. NUMBER OF SQUARES INSTALLED			
12. MANUFACTURERS PLANT LOCATIONS (CITY, STATE)	TUSCALOOSA, AL	FREDERICK, MD	TUSCALOOSA, AL
13. DISTRIBUTION			
Distributors (number handling product or no)	100	100	100
Direct (number of regional service locations or no)	NO	NO	NO
14A. FOR SALES INFORMATION, CONTACT:	DISTRICT OFFICE	DISTRICT OFFICE	DISTRICT OFFICE
14B. FOR TECHNICAL INFORMATION, CONTACT:	TECHNICAL SERVICE 417/624-6644	TECHNICAL SERVICE 417/624-6644	TECHNICAL SERVICE 417/624-6644
15. SEE APPENDIX IF CHECKED			

NA=not applicable

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# Asphalt Shingles Part 2: Technical Data

1. COMPANY NAME		ATLAS ROOFING CORPORATION
2. PRODUCT NAME		PINNACLE 40
3. PRODUCT DESCRIPTION Reinforcing (organic/fiberglass/polyglass)		FIBERGLASS
4. COMPLIES WITH:		
4A. ASTM D 225-95 <i>Standard Specification for Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules</i> (indicate type or NA)		
Type I -- Uniform or nonuniform thickness shingles of any style		
Type II -- Thick butt, square tab, strip shingles		
Type III -- Uniform or nonuniform thickness shingles of any style		
4B. ASTM D 3018-90 <i>Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules</i> (indicate type or NA)		
Type I -- Self-sealing		X
Type II -- Non-self-sealing		
4C. ASTM D 3462-97 <i>Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules</i> (YES/NO/NA)		YES
5A. MASSES OF ASPHALT SHINGLES: ORGANIC SHINGLES		
Average net mass per unit area, min, lb/100 ft <sup>2</sup>	Type I: 95.0; Type II: 95.0; Type III: 89.7	
Net mass of weather-exposed portion (ea. bundle) min, lb/100 ft <sup>2</sup>	Type I: 91.0; Type II: 110.0; Type III: 85.7	
Net mass of upper portion (ea bundle), min, lb/100 ft <sup>2</sup>	Type I: NA; Type II: 72.0; Type III: NA	
Mass of desaturated, moisture-free felt, min, lb/100 ft <sup>2</sup>	Type I: 11.0; Type II: 11.0; Type III: 9.0	
Mass of asphalt saturant based on the mass of the dry felt, min %	165	
Mass of weather-side coating on the weather-exposed portion, min, lb/100 ft <sup>2</sup>	Type I: 23.0; Type II: 30.0; Type III: 23.0	
Mass of weather-side coating on the upper portion, min lb/100ft <sup>2</sup>	Type I: 23.0; Type II: 15.0; Type III: 23.0	
Mass of reverse-side coating, min, lb/100 ft <sup>2</sup>	3.0	
Ash of the desaturated felt, max %	Type I: NA; Type II: 10.0; Type III: 10	
Mass of weather-side mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, min, lb/100 ft <sup>2</sup>	18.5	
Mass of weather-side mineral matter retained on a No. 20 sieve, based on the mass passing a No. 6 sieve and retained on a No. 70 sieve, min, %	55.0	
Mass of weather-side mineral matter passing a No. 40 sieve, based on the mass of passing a No. 6 sieve, and retained on a No. 70 sieve, max %	5.0	
Mass of weather-side mineral matter passing a No. 70 sieve, based on the mass of the weather-side coating asphalt and the mineral matter passing the No. 70 sieve, max %	60.0	
Mass of total mineral matter including surfacing and stabilizer on both sides, based on the net mass of the finished product, min %	Type I: NA; Type II: 35.0; Type III: NA	
5B. MASSES OF ASPHALT SHINGLES: FIBERGLASS SHINGLES		
Minimum net mass per area of shingles (individual bundle), lb/100 ft <sup>2</sup> , min.	70.0	70
Average net mass per area of shingles (total sample), lb/100 ft <sup>2</sup> , min.	73.0	73
Mass per area of mat, lb/100 ft <sup>2</sup> , min.	1.35	1.35
Mass per area of asphalt, lb/100 ft <sup>2</sup> , min.	15.0	15
Mass per area of mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, lb/100 ft <sup>2</sup> , min	25.0	25
Mass percent of mineral matter passing a No. 70 sieve based on the total asphalt and mineral matter passing the No. 70 sieve, max.	70.0	70
6. PHYSICAL REQUIREMENTS: FIBERGLASS SHINGLES		
Behavior on heating		
Loss of volatile matter, % max.	1.5	1.5
Sliding of granular surfacing, in. min.	1/16	1/16
Tear strength, g min.	1700	1700
Fastener pull-through resistance at 73 ±4 F, lbf, min	20	20
Fastener pull-through resistance at 32 ±4 F, lbf, min	23	23
Penetration of asphalt, 0.1mm (tested w/o mineral stabilizer)	15	15
Asphalt softening point, F (tested w/o mineral stabilizer) min/max	235 max; 190 min.	230
Weight of displaced granules, max.	1.0 g	1.0
7. FIRE/WIND/IMPACT RESISTANCE		
Fire resistance, UL 790 or ASTM E 108 (Class A, B, or C)		CLASS A
Wind resistance, UL 997 or ASTM D3161 (pass/fail, or not tested)		PASS
Wind resistance (max. wind speed)		60
Impact resistance, UL 2218 (Class 1, 2, 3, or 4)		N/A
8. CODE ACCEPTANCE		
BOCA Evaluation Service, Inc. (report number)		
ICBO Evaluation Service, Inc. (report number)		
SBCCI Public Safety Testing & Evaluation Service, Inc. (report number)		
National Evaluation Service, Inc. (report number)		
Other agencies (agency & report identification number)		
7. SEE MEMBRANE APPENDIX IF CHECKED		



# Asphalt Shingles Part 2: Technical Data

1. COMPANY NAME		ATLAS ROOFING CORPORATION
2. PRODUCT NAME		CHALET
3. PRODUCT DESCRIPTION Reinforcing (organic/fiberglass/polyglass)		FIBERGLASS
4. COMPLIES WITH:		
4A. ASTM D 225-95 <i>Standard Specification for Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules</i> (indicate type or NA)		
Type I -- Uniform or nonuniform thickness shingles of any style		
Type II -- Thick butt, square tab, strip shingles		
Type III -- Uniform or nonuniform thickness shingles of any style		
4B. ASTM D 3018-90 <i>Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules</i> (indicate type or NA)		
Type I -- Self-sealing		X
Type II -- Non-self-sealing		
4C. ASTM D 3462-97 <i>Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules</i> (YES/NO/NA)		YES
5A. MASSES OF ASPHALT SHINGLES: ORGANIC SHINGLES		
Average net mass per unit area, min, lb/100 ft <sup>2</sup>	Type I: 95.0; Type II: 95.0; Type III: 89.7	
Net mass of weather-exposed portion (ea. bundle) min, lb/100 ft <sup>2</sup>	Type I: 91.0; Type II: 110.0; Type III: 85.7	
Net mass of upper portion (ea bundle), min, lb/100 ft <sup>2</sup>	Type I: NA; Type II: 72.0; Type III: NA	
Mass of desaturated, moisture-free felt, min, lb/100 ft <sup>2</sup>	Type I: 11.0; Type II: 11.0; Type III: 9.0	
Mass of asphalt saturant based on the mass of the dry felt, min %	165	
Mass of weather-side coating on the weather-exposed portion, min, lb/100 ft <sup>2</sup>	Type I: 23.0; Type II: 30.0; Type III: 23.0	
Mass of weather-side coating on the upper portion, min lb/100ft <sup>2</sup>	Type I: 23.0; Type II: 15.0; Type III: 23.0	
Mass of reverse-side coating, min, lb/100 ft <sup>2</sup>	3.0	
Ash of the desaturated felt, max %	Type I: NA; Type II: 10.0; Type III: 10	
Mass of weather-side mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, min, lb/100 ft <sup>2</sup>	18.5	
Mass of weather-side mineral matter retained on a No. 20 sieve, based on the mass passing a No. 6 sieve and retained on a No. 70 sieve, min, %	55.0	
Mass of weather-side mineral matter passing a No. 40 sieve, based on the mass of passing a No. 6 sieve, and retained on a No. 70 sieve, max %	5.0	
Mass of weather-side mineral matter passing a No. 70 sieve, based on the mass of the weather-side coating asphalt and the mineral matter passing the No. 70 sieve, max %	60.0	
Mass of total mineral matter including surfacing and stabilizer on both sides, based on the net mass of the finished product, min %	Type I: NA; Type II: 35.0; Type III: NA	
5B. MASSES OF ASPHALT SHINGLES: FIBERGLASS SHINGLES		
Minimum net mass per area of shingles (individual bundle), lb/100 ft <sup>2</sup> , min.	70.0	70
Average net mass per area of shingles (total sample), lb/100 ft <sup>2</sup> , min.	73.0	73
Mass per area of mat, lb/100 ft <sup>2</sup> , min.	1.35	1.35
Mass per area of asphalt, lb/100 ft <sup>2</sup> , min.	15.0	15
Mass per area of mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, lb/100 ft <sup>2</sup> , min	25.0	25
Mass percent of mineral matter passing a No. 70 sieve based on the total asphalt and mineral matter passing the No. 70 sieve, max.	70.0	70
6. PHYSICAL REQUIREMENTS: FIBERGLASS SHINGLES		
Behavior on heating		
Loss of volatile matter, % max.	1.5	1.5
Sliding of granular surfacing, in. min.	1/16	1/16
Tear strength, g min.	1700	1700
Fastener pull-through resistance at 73 ±4 F, lbf, min	20	20
Fastener pull-through resistance at 32 ±4 F, lbf, min	23	23
Penetration of asphalt, 0.1mm (tested w/o mineral stabilizer)	15	15
Asphalt softening point, F (tested w/o mineral stabilizer) min/max	235 max; 190 min.	200
Weight of displaced granules, max.	1.0 g	1.0
7. FIRE/WIND/IMPACT RESISTANCE		
Fire resistance, UL 790 or ASTM E 108 (Class A, B, or C)		CLASS A
Wind resistance, UL 997 or ASTM D3161 (pass/fail, or not tested)		PASS
Wind resistance (max. wind speed)		110
Impact resistance, UL 2218 (Class 1, 2, 3, or 4)		NA
8. CODE ACCEPTANCE		
BOCA Evaluation Service, Inc. (report number)		
ICBO Evaluation Service, Inc. (report number)		
SBCCI Public Safety Testing & Evaluation Service, Inc. (report number)		
National Evaluation Service, Inc. (report number)		
Other agencies (agency & report identification number)		
7. SEE MEMBRANE APPENDIX IF CHECKED		

## Asphalt Shingles Part 2: Technical Data

ATLAS ROOFING CORPORATION	CERTAINTEED CORPORATION						
LEGEND	GRAND MANOR SHANGLE	CARRIAGE HOUSE SHANGLE	HATTERAS	HALLMARK SHANGLE	INDEPENDENCE SHANGLE	LANDMARK 40	LANDMARK 30
FIBERGLASS	FIBERGLASS	FIBERGLASS	FIBERGLASS	ORGANIC	FIBERGLASS	FIBERGLASS	FIBERGLASS
				X			
X	X	X	X		X	X	X
YES	YES	YES	YES		YES	YES	YES
				NA			
				165			
				3.0			
				18.5			
				55			
				5.0			
				60			
				NA			
70	70	70	70		70	70	70
73	73	73	73		73	73	73
1.35	1.35	1.35	1.35		1.35	1.35	1.35
15	15	15	15		15	15	15
25	25	25	25		25	25	25
70	70	70	70		70	70	70
1.5	1.5	1.5	1.5		1.5	1.5	1.5
1/16	1/16	1/16	1/16		1/16	1/16	1/16
1700	1700	1700	1700		1700	1700	1700
20	20	20	20		20	20	20
23	23	23	23		23	23	23
15	15	15	15		15	15	15
200	190-235	190-235	190-235		190-235	190-235	190-235
1.0	1.0	1.0	1.0		1.0	1.0	1.0
CLASS A	CLASS A	CLASS A	CLASS A		CLASS A	CLASS A	CLASS A
PASS	PASS	PASS	PASS		PASS	PASS	PASS
60	60	60	110		60	60	60
NA							
	MIAMI-DADE 98-0424.01	MIAMI-DADE 98-0424.01	MIAMI-DADE 98-0424.09	WISC DILHR			
	X	X	X	X	X	X	X

# Asphalt Shingles Part 2: Technical Data

1. COMPANY NAME	CERTAINTeed CORPORATION
2. PRODUCT NAME	LANDMARK 25
3. PRODUCT DESCRIPTION Reinforcing (organic/fiberglass/polyglass)	FIBERGLASS
4. COMPLIES WITH:	
4A. ASTM D 225-95 <i>Standard Specification for Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules</i> (indicate type or NA) Type I -- Uniform or nonuniform thickness shingles of any style Type II -- Thick butt, square tab, strip shingles Type III -- Uniform or nonuniform thickness shingles of any style	
4B. ASTM D 3018-90 <i>Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules</i> (indicate type or NA) Type I -- Self-sealing Type II -- Non-self-sealing	X
4C. ASTM D 3462-97 <i>Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules</i> (YES/NO/NA)	YES
5A. MASSES OF ASPHALT SHINGLES: ORGANIC SHINGLES	
Average net mass per unit area, min, lb/100 ft <sup>2</sup>	Type I: 95.0; Type II: 95.0; Type III: 89.7
Net mass of weather-exposed portion (ea. bundle) min, lb/100 ft <sup>2</sup>	Type I: 91.0; Type II: 110.0; Type III: 85.7
Net mass of upper portion (ea bundle), min, lb/100 ft <sup>2</sup>	Type I: NA; Type II: 72.0; Type III: NA
Mass of desaturated, moisture-free felt, min, lb/100 ft <sup>2</sup>	Type I: 11.0; Type II: 11.0; Type III: 9.0
Mass of asphalt saturant based on the mass of the dry felt, min %	165
Mass of weather-side coating on the weather-exposed portion, min, lb/100 ft <sup>2</sup>	Type I: 23.0; Type II: 30.0; Type III: 23.0
Mass of weather-side coating on the upper portion, min lb/100ft <sup>2</sup>	Type I: 23.0; Type II: 15.0; Type III: 23.0
Mass of reverse-side coating, min, lb/100 ft <sup>2</sup>	3.0
Ash of the desaturated felt, max %	Type I: NA; Type II: 10.0; Type III: 10
Mass of weather-side mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, min, lb/100 ft <sup>2</sup>	18.5
Mass of weather-side mineral matter retained on a No. 20 sieve, based on the mass passing a No. 6 sieve and retained on a No. 70 sieve, min, %	55.0
Mass of weather-side mineral matter passing a No. 40 sieve, based on the mass of passing a No. 6 sieve, and retained on a No. 70 sieve, max %	5.0
Mass of weather-side mineral matter passing a No. 70 sieve, based on the mass of the weather-side coating asphalt and the mineral matter passing the No. 70 sieve, max %	60.0
Mass of total mineral matter including surfacing and stabilizer on both sides, based on the net mass of the finished product, min %	Type I: NA; Type II: 35.0; Type III: NA
5B. MASSES OF ASPHALT SHINGLES: FIBERGLASS SHINGLES	
Minimum net mass per area of shingles (individual bundle), lb/100 ft <sup>2</sup> , min.	70.0      70
Average net mass per area of shingles (total sample), lb/100 ft <sup>2</sup> , min.	73.0      73
Mass per area of mat, lb/100 ft <sup>2</sup> , min.	1.35      1.35
Mass per area of asphalt, lb/100 ft <sup>2</sup> , min.	15.0      15
Mass per area of mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, lb/100 ft <sup>2</sup> , min	25.0      25
Mass percent of mineral matter passing a No. 70 sieve based on the total asphalt and mineral matter passing the No. 70 sieve, max.	70.0      70
6. PHYSICAL REQUIREMENTS: FIBERGLASS SHINGLES	
Behavior on heating	
Loss of volatile matter, % max.	1.5      1.5
Sliding of granular surfacing, in. min.	1/16      1/16
Tear strength, g min.	1700      1700
Fastener pull-through resistance at 73 ±4 F, lbf, min	20      20
Fastener pull-through resistance at 32 ±4 F, lbf, min	23      23
Penetration of asphalt, 0.1mm (tested w/o mineral stabilizer)	15      15
Asphalt softening point, F (tested w/o mineral stabilizer) min/max	235 max; 190 min.      190-235
Weight of displaced granules, max.	1.0 g      1.0
7. FIRE/WIND/IMPACT RESISTANCE	
Fire resistance, UL 790 or ASTM E 108 (Class A, B, or C)	CLASS A
Wind resistance, UL 997 or ASTM D3161 (pass/fail, or not tested)	PASS
Wind resistance (max. wind speed)	60
Impact resistance, UL 2218 (Class 1, 2, 3, or 4)	
8. CODE ACCEPTANCE	
BOCA Evaluation Service, Inc. (report number)	
ICBO Evaluation Service, Inc. (report number)	
SBCCI Public Safety Testing & Evaluation Service, Inc. (report number)	
National Evaluation Service, Inc. (report number)	
Other agencies (agency & report identification number)	
7. SEE MEMBRANE APPENDIX IF CHECKED	X

## Asphalt Shingles Part 2: Technical Data

CERTAINEED CORPORATION	CERTAINEED CORPORATION	CERTAINEED CORPORATION	CERTAINEED CORPORATION	CERTAINEED CORPORATION	CERTAINEED CORPORATION	CERTAINEED CORPORATION	CERTAINEED CORPORATION
XT 25	CLASSIC HORIZON SHANGLE	NEW HORIZON SHANGLE	FUNGUS-BUSTER 25	CUSTOM SEALDON 30	SEALDON 25	HIGHLANDS-AR SHANGLE	HEARTHSTEAD
FIBERGLASS	FIBERGLASS	FIBERGLASS	FIBERGLASS	ORGANIC	ORGANIC	FIBERGLASS	ORGANIC
				X			
					X		X
X	X	X	X			X	
YES	YES	YES	YES			YES	
				165	165		165
				3.0	3.0		3.0
				NA			
				18.5	18.5		18.5
				55	55		55
				5.0	5.0		5.0
				5.0	60.0		60.0
				NA	NA		NA
						0	
70	70	70	70			70	
73	73	73	73			73	
1.35	1.35	1.35	1.35			1.35	
15	15	15	15			15	
25	25	25	25			25	
70	70	70	70			70	
1.5	1.5	1.5	1.5			1.5	
1/16	1/16	1/16	1/16			1/16	
1700	1700	1700	1700			1700	
20	20	20	20			20	
23	23	23	23			23	
15	15	15	15			15	
190-235	190-235	190-235	190-235			190-235	
1.0	1.0	1.0	1.0			1.0	
CLASS A	CLASS A	CLASS A	CLASS A	CLASS C	CLASS C	CLASS C	CLASS C
PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
60	60	60	60	60	60	60	60
						MIAMI-DADE 98-0424.02	
X	X	X	X	X	X	X	X

# Asphalt Shingles Part 2: Technical Data

1.	COMPANY NAME	CERTAINTEED CORPORATION
2.	PRODUCT NAME	CERTAINTEED XT 30
3.	PRODUCT DESCRIPTION Reinforcing (organic/fiberglass/polyglass)	FIBERGLASS
4.	COMPLIES WITH:	
4A.	ASTM D 225-95 <i>Standard Specification for Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules</i> (indicate type or NA) Type I -- Uniform or nonuniform thickness shingles of any style Type II -- Thick butt, square tab, strip shingles Type III -- Uniform or nonuniform thickness shingles of any style	
4B.	ASTM D 3018-90 <i>Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules</i> (indicate type or NA) Type I -- Self-sealing Type II -- Non-self-sealing	X
4C.	ASTM D 3462-97 <i>Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules</i> (YES/NO/NA)	YES
5A.	MASSES OF ASPHALT SHINGLES: ORGANIC SHINGLES	
	Average net mass per unit area, min, lb/100 ft <sup>2</sup>	Type I: 95.0; Type II: 95.0; Type III: 89.7
	Net mass of weather-exposed portion (ea. bundle) min, lb/100 ft <sup>2</sup>	Type I: 91.0; Type II: 110.0; Type III: 85.7
	Net mass of upper portion (ea bundle), min, lb/100 ft <sup>2</sup>	Type I: NA; Type II: 72.0; Type III: NA
	Mass of desaturated, moisture-free felt, min, lb/100 ft <sup>2</sup>	Type I: 11.0; Type II: 11.0; Type III: 9.0
	Mass of asphalt saturant based on the mass of the dry felt, min %	165
	Mass of weather-side coating on the weather-exposed portion, min, lb/100 ft <sup>2</sup>	Type I: 23.0; Type II: 30.0; Type III: 23.0
	Mass of weather-side coating on the upper portion, min lb/100ft <sup>2</sup>	Type I: 23.0; Type II: 15.0; Type III: 23.0
	Mass of reverse-side coating, min, lb/100 ft <sup>2</sup>	3.0
	Ash of the desaturated felt, max %	Type I: NA; Type II: 10.0; Type III: 10
	Mass of weather-side mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, min, lb/100 ft <sup>2</sup>	18.5
	Mass of weather-side mineral matter retained on a No. 20 sieve, based on the mass passing a No. 6 sieve and retained on a No. 70 sieve, min, %	55.0
	Mass of weather-side mineral matter passing a No. 40 sieve, based on the mass of passing a No. 6 sieve, and retained on a No. 70 sieve, max %	5.0
	Mass of weather-side mineral matter passing a No. 70 sieve, based on the mass of the weather-side coating asphalt and the mineral matter passing the No. 70 sieve, max %	60.0
	Mass of total mineral matter including surfacing and stabilizer on both sides, based on the net mass of the finished product, min %	Type I: NA; Type II: 35.0; Type III: NA
5B.	MASSES OF ASPHALT SHINGLES: FIBERGLASS SHINGLES	
	Minimum net mass per area of shingles (individual bundle), lb/100 ft <sup>2</sup> , min.	70.0 70
	Average net mass per area of shingles (total sample), lb/100 ft <sup>2</sup> , min.	73.0 73
	Mass per area of mat, lb/100 ft <sup>2</sup> , min.	1.35 1.35
	Mass per area of asphalt, lb/100 ft <sup>2</sup> , min.	15.0 15
	Mass per area of mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, lb/100 ft <sup>2</sup> , min	25.0 25
	Mass percent of mineral matter passing a No. 70 sieve based on the total asphalt and mineral matter passing the No. 70 sieve, max.	70.0 70
6.	PHYSICAL REQUIREMENTS: FIBERGLASS SHINGLES	
	Behavior on heating	
	Loss of volatile matter, % max.	1.5 1.5
	Sliding of granular surfacing, in. min.	1/16 1/16
	Tear strength, g min.	1700 1700
	Fastener pull-through resistance at 73 ±4 F, lbf, min	20 20
	Fastener pull-through resistance at 32 ±4 F, lbf, min	23 23
	Penetration of asphalt, 0.1mm (tested w/o mineral stabilizer)	15 15
	Asphalt softening point, F (tested w/o mineral stabilizer) min/max	235 max; 190 min. 190-235
	Weight of displaced granules, max.	1.0 g 1.0
7.	FIRE/WIND/IMPACT RESISTANCE	
	Fire resistance, UL 790 or ASTM E 108 (Class A, B, or C)	CLASS A
	Wind resistance, UL 997 or ASTM D3161 (pass/fail, or not tested)	PASS
	Wind resistance (max. wind speed)	60
	Impact resistance, UL 2218 (Class 1, 2, 3, or 4)	
8.	CODE ACCEPTANCE	
	BOCA Evaluation Service, Inc. (report number)	
	ICBO Evaluation Service, Inc. (report number)	
	SBCCI Public Safety Testing & Evaluation Service, Inc. (report number)	
	National Evaluation Service, Inc. (report number)	
	Other agencies (agency & report identification number)	MIAMI-DADE 98.0424.03
7.	SEE MEMBRANE APPENDIX IF CHECKED	X

## Asphalt Shingles Part 2: Technical Data

CERTAINEED CORPORATION	CERTAINEED CORPORATION	CERTAINEED CORPORATION	CERTAINEED CORPORATION	CERTAINEED CORPORATION	CERTAINEED CORPORATION	CERTAINEED CORPORATION	CERTAINEED CORPORATION
CERTAINEED CT 20	CUSTOM LOK 25	ARCHITECT 80 / ESTATE	FIRE-HALT	FIRE-HALT 2000	FIRESCREEN	FIRESCREEN PLUS 2000	HIGH SIERRA
FIBERGLASS	ORGANIC	FIBERGLASS	FIBERGLASS	FIBERGLASS	FIBERGLASS	FIBERGLASS	FIBERGLASS
	X						
X		X	X	X	X	X	X
YES		YES	NO	YES	SOME	YES	YES
	165						
	3.0						
	18.5						
	55						
	5.0						
	60.0						
	NA						
70		70	70	70	70	70	70
73		73	73	73	73	73	73
1.35		1.35	1.35	1.35	1.35	1.35	1.35
15		15	15	15	15	15	15
25		25	25	25	25	25	25
70		70	70	70	70	70	70
1.5		1.5	1.5	1.5	1.5	1.5	1.5
1/16		1/16	1/16	1/16	1/16	1/16	1/16
1700		1700	<1700	<1700	1700	1700	1700
20		20	20	20	20	20	20
23		23	23	23	23	23	23
15		15	15	15	15	15	15
190-235		190-235	190-235	190-235	190-235	190-235	190-235
1.0		1.0	1.0	1.0	1.0	1.0	1.0
CLASS A	CLASS C	CLASS A	CLASS A	CLASS A	CLASS A	CLASS A	CLASS A
PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
60	60	60	60	60	60	60	60
		ER-5429				ER-5429	ER-5429
MIAMI-DADE 98.0424.04 BMEC 97-12- 221		MIAMI-DADE 97-0715.06				MIAMI-DADE 97-1202.02	
X		X	X	X	X	X	X

# Asphalt Shingles Part 2: Technical Data

1. COMPANY NAME	CERTAINTeed CORPORATION	
2. PRODUCT NAME	WOODSCAPE 40	
3. PRODUCT DESCRIPTION Reinforcing (organic/fiberglass/polyglass)	FIBERGLASS	
4. COMPLIES WITH:		
4A. ASTM D 225-95 <i>Standard Specification for Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules</i> (indicate type or NA)		
Type I -- Uniform or nonuniform thickness shingles of any style		
Type II -- Thick butt, square tab, strip shingles		
Type III -- Uniform or nonuniform thickness shingles of any style		
4B. ASTM D 3018-90 <i>Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules</i> (indicate type or NA)		
Type I -- Self-sealing	X	
Type II -- Non-self-sealing		
4C. ASTM D 3462-97 <i>Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules</i> (YES/NO/NA)	YES	
5A. MASSES OF ASPHALT SHINGLES: ORGANIC SHINGLES		
Average net mass per unit area, min, lb/100 ft <sup>2</sup>	Type I: 95.0; Type II: 95.0; Type III: 89.7	
Net mass of weather-exposed portion (ea. bundle) min, lb/100 ft <sup>2</sup>	Type I: 91.0; Type II: 110.0; Type III: 85.7	
Net mass of upper portion (ea bundle), min, lb/100 ft <sup>2</sup>	Type I: NA; Type II: 72.0; Type III: NA	
Mass of desaturated, moisture-free felt, min, lb/100 ft <sup>2</sup>	Type I: 11.0; Type II: 11.0; Type III: 9.0	
Mass of asphalt saturant based on the mass of the dry felt, min %	165	
Mass of weather-side coating on the weather-exposed portion, min, lb/100 ft <sup>2</sup>	Type I: 23.0; Type II: 30.0; Type III: 23.0	
Mass of weather-side coating on the upper portion, min lb/100ft <sup>2</sup>	Type I: 23.0; Type II: 15.0; Type III: 23.0	
Mass of reverse-side coating, min, lb/100 ft <sup>2</sup>	3.0	
Ash of the desaturated felt, max %	Type I: NA; Type II: 10.0; Type III: 10	
Mass of weather-side mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, min, lb/100 ft <sup>2</sup>	18.5	
Mass of weather-side mineral matter retained on a No. 20 sieve, based on the mass passing a No. 6 sieve and retained on a No. 70 sieve, min, %	55.0	
Mass of weather-side mineral matter passing a No. 40 sieve, based on the mass of passing a No. 6 sieve, and retained on a No. 70 sieve, max %	5.0	
Mass of weather-side mineral matter passing a No. 70 sieve, based on the mass of the weather-side coating asphalt and the mineral matter passing the No. 70 sieve, max %	60.0	
Mass of total mineral matter including surfacing and stabilizer on both sides, based on the net mass of the finished product, min %	Type I: NA; Type II: 35.0; Type III: NA	
5B. MASSES OF ASPHALT SHINGLES: FIBERGLASS SHINGLES		
Minimum net mass per area of shingles (individual bundle), lb/100 ft <sup>2</sup> , min.	70.0	70
Average net mass per area of shingles (total sample), lb/100 ft <sup>2</sup> , min.	73.0	73
Mass per area of mat, lb/100 ft <sup>2</sup> , min.	1.35	1.35
Mass per area of asphalt, lb/100 ft <sup>2</sup> , min.	15.0	15
Mass per area of mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, lb/100 ft <sup>2</sup> , min	25.0	25
Mass percent of mineral matter passing a No. 70 sieve based on the total asphalt and mineral matter passing the No. 70 sieve, max.	70.0	70
6. PHYSICAL REQUIREMENTS: FIBERGLASS SHINGLES		
Behavior on heating		
Loss of volatile matter, % max.	1.5	1.5
Sliding of granular surfacing, in. min.	1/16	1/16
Tear strength, g min.	1700	1700
Fastener pull-through resistance at 73 ±4 F, lbf, min	20	20
Fastener pull-through resistance at 32 ±4 F, lbf, min	23	23
Penetration of asphalt, 0.1mm (tested w/o mineral stabilizer)	15	15
Asphalt softening point, F (tested w/o mineral stabilizer) min/max	235 max; 190 min.	190-235
Weight of displaced granules, max.	1.0 g	1.0
7. FIRE/WIND/IMPACT RESISTANCE		
Fire resistance, UL 790 or ASTM E 108 (Class A, B, or C)	CLASS A	
Wind resistance, UL 997 or ASTM D3161 (pass/fail, or not tested)	PASS	
Wind resistance (max. wind speed)	60	
Impact resistance, UL 2218 (Class 1, 2, 3, or 4)		
8. CODE ACCEPTANCE		
BOCA Evaluation Service, Inc. (report number)		
ICBO Evaluation Service, Inc. (report number)		
SBCCI Public Safety Testing & Evaluation Service, Inc. (report number)		
National Evaluation Service, Inc. (report number)		
Other agencies (agency & report identification number)		
7. SEE MEMBRANE APPENDIX IF CHECKED	X	



## Asphalt Shingles Part 2: Technical Data

1. COMPANY NAME		ELK
2. PRODUCT NAME		CAPSTONE
3. PRODUCT DESCRIPTION Reinforcing (organic/fiberglass/polyglass)		FIBERGLASS
4. COMPLIES WITH:		
4A. ASTM D 225-95 <i>Standard Specification for Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules</i> (indicate type or NA) Type I -- Uniform or nonuniform thickness shingles of any style Type II -- Thick butt, square tab, strip shingles Type III -- Uniform or nonuniform thickness shingles of any style		
4B. ASTM D 3018-90 <i>Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules</i> (indicate type or NA) Type I -- Self-sealing Type II -- Non-self-sealing		X
4C. ASTM D 3462-97 <i>Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules</i> (YES/NO/NA)		YES
5A. MASSES OF ASPHALT SHINGLES: ORGANIC SHINGLES		
Average net mass per unit area, min, lb/100 ft <sup>2</sup>	Type I: 95.0; Type II: 95.0; Type III: 89.7	
Net mass of weather-exposed portion (ea. bundle) min, lb/100 ft <sup>2</sup>	Type I: 91.0; Type II: 110.0; Type III: 85.7	
Net mass of upper portion (ea bundle), min, lb/100 ft <sup>2</sup>	Type I: NA; Type II: 72.0; Type III: NA	
Mass of desaturated, moisture-free felt, min, lb/100 ft <sup>2</sup>	Type I: 11.0; Type II: 11.0; Type III: 9.0	
Mass of asphalt saturant based on the mass of the dry felt, min %	165	
Mass of weather-side coating on the weather-exposed portion, min, lb/100 ft <sup>2</sup>	Type I: 23.0; Type II: 30.0; Type III: 23.0	
Mass of weather-side coating on the upper portion, min lb/100ft <sup>2</sup>	Type I: 23.0; Type II: 15.0; Type III: 23.0	
Mass of reverse-side coating, min, lb/100 ft <sup>2</sup>	3.0	
Ash of the desaturated felt, max %	Type I: NA; Type II: 10.0; Type III: 10	
Mass of weather-side mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, min, lb/100 ft <sup>2</sup>	18.5	
Mass of weather-side mineral matter retained on a No. 20 sieve, based on the mass passing a No. 6 sieve and retained on a No. 70 sieve, min, %	55.0	
Mass of weather-side mineral matter passing a No. 40 sieve, based on the mass of passing a No. 6 sieve, and retained on a No. 70 sieve, max %	5.0	
Mass of weather-side mineral matter passing a No. 70 sieve, based on the mass of the weather-side coating asphalt and the mineral matter passing the No. 70 sieve, max %	60.0	
Mass of total mineral matter including surfacing and stabilizer on both sides, based on the net mass of the finished product, min %	Type I: NA; Type II: 35.0; Type III: NA	
5B. MASSES OF ASPHALT SHINGLES: FIBERGLASS SHINGLES		
Minimum net mass per area of shingles (individual bundle), lb/100 ft <sup>2</sup> , min.	70.0	70
Average net mass per area of shingles (total sample), lb/100 ft <sup>2</sup> , min.	73.0	73
Mass per area of mat, lb/100 ft <sup>2</sup> , min.	1.35	1.35
Mass per area of asphalt, lb/100 ft <sup>2</sup> , min.	15.0	15
Mass per area of mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, lb/100 ft <sup>2</sup> , min	25.0	25
Mass percent of mineral matter passing a No. 70 sieve based on the total asphalt and mineral matter passing the No. 70 sieve, max.	70.0	70
6. PHYSICAL REQUIREMENTS: FIBERGLASS SHINGLES		
Behavior on heating		
Loss of volatile matter, % max.	1.5	1.5
Sliding of granular surfacing, in. min.	1/16	1/16
Tear strength, g min.	1700	1700
Fastener pull-through resistance at 73 ±4 F, lbf, min	20	20
Fastener pull-through resistance at 32 ±4 F, lbf, min	23	23
Penetration of asphalt, 0.1mm (tested w/o mineral stabilizer)	15	15
Asphalt softening point, F (tested w/o mineral stabilizer) min/max	235 max; 190 min.	190-235
Weight of displaced granules, max.	1.0 g	1.0
7. FIRE/WIND/IMPACT RESISTANCE		
Fire resistance, UL 790 or ASTM E 108 (Class A, B, or C)		CLASS A
Wind resistance, UL 997 or ASTM D3161 (pass/fail, or not tested)		PASS
Wind resistance (max. wind speed)		60
Impact resistance, UL 2218 (Class 1, 2, 3, or 4)		
8. CODE ACCEPTANCE		
BOCA Evaluation Service, Inc. (report number)		
ICBO Evaluation Service, Inc. (report number)		ER-5414
SBCCI Public Safety Testing & Evaluation Service, Inc. (report number)		
National Evaluation Service, Inc. (report number)		
Other agencies (agency & report identification number)		METRO-DADE 97-0910.08 97-0429.02
7. SEE MEMBRANE APPENDIX IF CHECKED		X



# Asphalt Shingles Part 2: Technical Data

1. COMPANY NAME	GAF MATERIALS CORPORATION	
2. PRODUCT NAME	TIMBERLINE 25	
3. PRODUCT DESCRIPTION Reinforcing (organic/fiberglass/polyglass)	FIBERGLASS	
4. COMPLIES WITH:		
4A. ASTM D 225-95 <i>Standard Specification for Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules</i> (indicate type or NA)		
Type I -- Uniform or nonuniform thickness shingles of any style		
Type II -- Thick butt, square tab, strip shingles		
Type III -- Uniform or nonuniform thickness shingles of any style		
4B. ASTM D 3018-90 <i>Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules</i> (indicate type or NA)		
Type I -- Self-sealing	X	
Type II -- Non-self-sealing		
4C. ASTM D 3462-97 <i>Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules</i> (YES/NO/NA)		
5A. MASSES OF ASPHALT SHINGLES: ORGANIC SHINGLES		
Average net mass per unit area, min, lb/100 ft <sup>2</sup>	Type I: 95.0; Type II: 95.0; Type III: 89.7	
Net mass of weather-exposed portion (ea. bundle) min, lb/100 ft <sup>2</sup>	Type I: 91.0; Type II: 110.0; Type III: 85.7	
Net mass of upper portion (ea bundle), min, lb/100 ft <sup>2</sup>	Type I: NA; Type II: 72.0; Type III: NA	
Mass of desaturated, moisture-free felt, min, lb/100 ft <sup>2</sup>	Type I: 11.0; Type II: 11.0; Type III: 9.0	
Mass of asphalt saturant based on the mass of the dry felt, min %		165
Mass of weather-side coating on the weather-exposed portion, min, lb/100 ft <sup>2</sup>	Type I: 23.0; Type II: 30.0; Type III: 23.0	
Mass of weather-side coating on the upper portion, min lb/100ft <sup>2</sup>	Type I: 23.0; Type II: 15.0; Type III: 23.0	
Mass of reverse-side coating, min, lb/100 ft <sup>2</sup>		3.0
Ash of the desaturated felt, max %	Type I: NA; Type II: 10.0; Type III: 10	
Mass of weather-side mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, min, lb/100 ft <sup>2</sup>		18.5
Mass of weather-side mineral matter retained on a No. 20 sieve, based on the mass passing a No. 6 sieve and retained on a No. 70 sieve, min, %		55.0
Mass of weather-side mineral matter passing a No. 40 sieve, based on the mass of passing a No. 6 sieve, and retained on a No. 70 sieve, max %		5.0
Mass of weather-side mineral matter passing a No. 70 sieve, based on the mass of the weather-side coating asphalt and the mineral matter passing the No. 70 sieve, max %		60.0
Mass of total mineral matter including surfacing and stabilizer on both sides, based on the net mass of the finished product, min %	Type I: NA; Type II: 35.0; Type III: NA	
5B. MASSES OF ASPHALT SHINGLES: FIBERGLASS SHINGLES		
Minimum net mass per area of shingles (individual bundle), lb/100 ft <sup>2</sup> , min.	70.0	70
Average net mass per area of shingles (total sample), lb/100 ft <sup>2</sup> , min.	73.0	73
Mass per area of mat, lb/100 ft <sup>2</sup> , min.	1.35	1.35
Mass per area of asphalt, lb/100 ft <sup>2</sup> , min.	15.0	15
Mass per area of mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, lb/100 ft <sup>2</sup> , min	25.0	25
Mass percent of mineral matter passing a No. 70 sieve based on the total asphalt and mineral matter passing the No. 70 sieve, max.	70.0	70
6. PHYSICAL REQUIREMENTS: FIBERGLASS SHINGLES		
Behavior on heating		
Loss of volatile matter, % max.	1.5	1.5
Sliding of granular surfacing, in. min.	1/16	1/16
Tear strength, g min.	1700	1700
Fastener pull-through resistance at 73 ±4 F, lbf, min	20	20
Fastener pull-through resistance at 32 ±4 F, lbf, min	23	23
Penetration of asphalt, 0.1mm (tested w/o mineral stabilizer)	15	15
Asphalt softening point, F (tested w/o mineral stabilizer) min/max	235 max; 190 min.	190-235
Weight of displaced granules, max.	1.0 g	1.0
7. FIRE/WIND/IMPACT RESISTANCE		
Fire resistance, UL 790 or ASTM E 108 (Class A, B, or C)	CLASS A	
Wind resistance, UL 997 or ASTM D3161 (pass/fail, or not tested)	PASS	
Wind resistance (max. wind speed)		
Impact resistance, UL 2218 (Class 1, 2, 3, or 4)		
8. CODE ACCEPTANCE		
BOCA Evaluation Service, Inc. (report number)		
ICBO Evaluation Service, Inc. (report number)		
SBCCI Public Safety Testing & Evaluation Service, Inc. (report number)		
National Evaluation Service, Inc. (report number)		
Other agencies (agency & report identification number)		
7. SEE MEMBRANE APPENDIX IF CHECKED		



# Asphalt Shingles Part 2: Technical Data

1. COMPANY NAME		IKO MFG. INC.
2. PRODUCT NAME		ARMOUR LOCK 20
3. PRODUCT DESCRIPTION Reinforcing (organic/fiberglass/polyglass)		ORGANIC
4. COMPLIES WITH:		
4A. ASTM D 225-95 <i>Standard Specification for Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules</i> (indicate type or NA)		
Type I -- Uniform or nonuniform thickness shingles of any style		
Type II -- Thick butt, square tab, strip shingles		
Type III -- Uniform or nonuniform thickness shingles of any style		
4B. ASTM D 3018-90 <i>Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules</i> (indicate type or NA)		
Type I -- Self-sealing		
Type II -- Non-self-sealing		
4C. ASTM D 3462-97 <i>Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules</i> (YES/NO/NA)		
5A. MASSES OF ASPHALT SHINGLES: ORGANIC SHINGLES		
Average net mass per unit area, min, lb/100 ft <sup>2</sup>	Type I: 95.0; Type II: 95.0; Type III: 89.7	>89.7
Net mass of weather-exposed portion (ea. bundle) min, lb/100 ft <sup>2</sup>	Type I: 91.0; Type II: 110.0; Type III: 85.7	>85.7
Net mass of upper portion (ea bundle), min, lb/100 ft <sup>2</sup>	Type I: NA; Type II: 72.0; Type III: NA	NA
Mass of desaturated, moisture-free felt, min, lb/100 ft <sup>2</sup>	Type I: 11.0; Type II: 11.0; Type III: 9.0	>9.0
Mass of asphalt saturant based on the mass of the dry felt, min %		165
Mass of weather-side coating on the weather-exposed portion, min, lb/100 ft <sup>2</sup>	Type I: 23.0; Type II: 30.0; Type III: 23.0	>23
Mass of weather-side coating on the upper portion, min lb/100ft <sup>2</sup>	Type I: 23.0; Type II: 15.0; Type III: 23.0	>23
Mass of reverse-side coating, min, lb/100 ft <sup>2</sup>		3.0
Ash of the desaturated felt, max %	Type I: NA; Type II: 10.0; Type III: 10	<10
Mass of weather-side mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, min, lb/100 ft <sup>2</sup>		18.5
Mass of weather-side mineral matter retained on a No. 20 sieve, based on the mass passing a No. 6 sieve and retained on a No. 70 sieve, min, %		55.0
Mass of weather-side mineral matter passing a No. 40 sieve, based on the mass of passing a No. 6 sieve, and retained on a No. 70 sieve, max %		5.0
Mass of weather-side mineral matter passing a No. 70 sieve, based on the mass of the weather-side coating asphalt and the mineral matter passing the No. 70 sieve, max %		60.0
Mass of total mineral matter including surfacing and stabilizer on both sides, based on the net mass of the finished product, min %	Type I: NA; Type II: 35.0; Type III: NA	NA
5B. MASSES OF ASPHALT SHINGLES: FIBERGLASS SHINGLES		
Minimum net mass per area of shingles (individual bundle), lb/100 ft <sup>2</sup> , min.		70.0
Average net mass per area of shingles (total sample), lb/100 ft <sup>2</sup> , min.		73.0
Mass per area of mat, lb/100 ft <sup>2</sup> , min.		1.35
Mass per area of asphalt, lb/100 ft <sup>2</sup> , min.		15.0
Mass per area of mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, lb/100 ft <sup>2</sup> , min		25.0
Mass percent of mineral matter passing a No. 70 sieve based on the total asphalt and mineral matter passing the No. 70 sieve, max.		70.0
6. PHYSICAL REQUIREMENTS: FIBERGLASS SHINGLES		
Behavior on heating		
Loss of volatile matter, % max.		1.5
Sliding of granular surfacing, in. min.		1/16
Tear strength, g min.		1700
Fastener pull-through resistance at 73 ±4 F, lbf, min		20
Fastener pull-through resistance at 32 ±4 F, lbf, min		23
Penetration of asphalt, 0.1mm (tested w/o mineral stabilizer)		15
Asphalt softening point, F (tested w/o mineral stabilizer) min/max		235 max; 190 min.
Weight of displaced granules, max.		1.0 g
7. FIRE/WIND/IMPACT RESISTANCE		
Fire resistance, UL 790 or ASTM E 108 (Class A, B, or C)		CLASS C
Wind resistance, UL 997 or ASTM D3161 (pass/fail, or not tested)		PASS
Wind resistance (max. wind speed)		
Impact resistance, UL 2218 (Class 1, 2, 3, or 4)		
8. CODE ACCEPTANCE		
BOCA Evaluation Service, Inc. (report number)		
ICBO Evaluation Service, Inc. (report number)		
SBCCI Public Safety Testing & Evaluation Service, Inc. (report number)		
National Evaluation Service, Inc. (report number)		
Other agencies (agency & report identification number)		
7. SEE MEMBRANE APPENDIX IF CHECKED		



# Asphalt Shingles Part 2: Technical Data

1. COMPANY NAME		IKO MFG. INC.
2. PRODUCT NAME		IMPERIAL GLASS / 20
3. PRODUCT DESCRIPTION Reinforcing (organic/fiberglass/polyglass)		FIBERGLASS
4. COMPLIES WITH:		
4A. ASTM D 225-95 <i>Standard Specification for Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules</i> (indicate type or NA)		
Type I -- Uniform or nonuniform thickness shingles of any style		
Type II -- Thick butt, square tab, strip shingles		
Type III -- Uniform or nonuniform thickness shingles of any style		
4B. ASTM D 3018-90 <i>Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules</i> (indicate type or NA)		
Type I -- Self-sealing	X	
Type II -- Non-self-sealing		
4C. ASTM D 3462-97 <i>Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules</i> (YES/NO/NA)		YES
5A. MASSES OF ASPHALT SHINGLES: ORGANIC SHINGLES		
Average net mass per unit area, min, lb/100 ft <sup>2</sup>	Type I: 95.0; Type II: 95.0; Type III: 89.7	
Net mass of weather-exposed portion (ea. bundle) min, lb/100 ft <sup>2</sup>	Type I: 91.0; Type II: 110.0; Type III: 85.7	
Net mass of upper portion (ea bundle), min, lb/100 ft <sup>2</sup>	Type I: NA; Type II: 72.0; Type III: NA	
Mass of desaturated, moisture-free felt, min, lb/100 ft <sup>2</sup>	Type I: 11.0; Type II: 11.0; Type III: 9.0	
Mass of asphalt saturant based on the mass of the dry felt, min %	165	
Mass of weather-side coating on the weather-exposed portion, min, lb/100 ft <sup>2</sup>	Type I: 23.0; Type II: 30.0; Type III: 23.0	
Mass of weather-side coating on the upper portion, min lb/100ft <sup>2</sup>	Type I: 23.0; Type II: 15.0; Type III: 23.0	
Mass of reverse-side coating, min, lb/100 ft <sup>2</sup>	3.0	
Ash of the desaturated felt, max %	Type I: NA; Type II: 10.0; Type III: 10	
Mass of weather-side mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, min, lb/100 ft <sup>2</sup>	18.5	
Mass of weather-side mineral matter retained on a No. 20 sieve, based on the mass passing a No. 6 sieve and retained on a No. 70 sieve, min, %	55.0	
Mass of weather-side mineral matter passing a No. 40 sieve, based on the mass of passing a No. 6 sieve, and retained on a No. 70 sieve, max %	5.0	
Mass of weather-side mineral matter passing a No. 70 sieve, based on the mass of the weather-side coating asphalt and the mineral matter passing the No. 70 sieve, max %	60.0	
Mass of total mineral matter including surfacing and stabilizer on both sides, based on the net mass of the finished product, min %	Type I: NA; Type II: 35.0; Type III: NA	
5B. MASSES OF ASPHALT SHINGLES: FIBERGLASS SHINGLES		
Minimum net mass per area of shingles (individual bundle), lb/100 ft <sup>2</sup> , min.	70.0	>70
Average net mass per area of shingles (total sample), lb/100 ft <sup>2</sup> , min.	73.0	>73
Mass per area of mat, lb/100 ft <sup>2</sup> , min.	1.35	>1.35
Mass per area of asphalt, lb/100 ft <sup>2</sup> , min.	15.0	>15
Mass per area of mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, lb/100 ft <sup>2</sup> , min	25.0	>25
Mass percent of mineral matter passing a No. 70 sieve based on the total asphalt and mineral matter passing the No. 70 sieve, max.	70.0	<70
6. PHYSICAL REQUIREMENTS: FIBERGLASS SHINGLES		
Behavior on heating		
Loss of volatile matter, % max.	1.5	<1.0
Sliding of granular surfacing, in. min.	1/16	<1/16
Tear strength, g min.	1700	>1700
Fastener pull-through resistance at 73 ±4 F, lbf, min	20	>20
Fastener pull-through resistance at 32 ±4 F, lbf, min	23	>23
Penetration of asphalt, 0.1mm (tested w/o mineral stabilizer)	15	>15
Asphalt softening point, F (tested w/o mineral stabilizer) min/max	235 max; 190 min.	200-215
Weight of displaced granules, max.	1.0 g	<1.0
7. FIRE/WIND/IMPACT RESISTANCE		
Fire resistance, UL 790 or ASTM E 108 (Class A, B, or C)		CLASS A
Wind resistance, UL 997 or ASTM D3161 (pass/fail, or not tested)		PASS
Wind resistance (max. wind speed)		
Impact resistance, UL 2218 (Class 1, 2, 3, or 4)		
8. CODE ACCEPTANCE		
BOCA Evaluation Service, Inc. (report number)		
ICBO Evaluation Service, Inc. (report number)		
SBCCI Public Safety Testing & Evaluation Service, Inc. (report number)		
National Evaluation Service, Inc. (report number)		
Other agencies (agency & report identification number)		
7. SEE MEMBRANE APPENDIX IF CHECKED		



## Asphalt Shingles Part 2: Technical Data

1.	COMPANY NAME		IKO MFG. INC.
2.	PRODUCT NAME		MARATHON 25
3.	PRODUCT DESCRIPTION Reinforcing (organic/fiberglass/polyglass)		FIBERGLASS
4.	COMPLIES WITH:		
4A.	ASTM D 225-95 <i>Standard Specification for Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules</i> (indicate type or NA) Type I -- Uniform or nonuniform thickness shingles of any style Type II -- Thick butt, square tab, strip shingles Type III -- Uniform or nonuniform thickness shingles of any style		
4B.	ASTM D 3018-90 <i>Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules</i> (indicate type or NA) Type I -- Self-sealing Type II -- Non-self-sealing		X
4C.	ASTM D 3462-97 <i>Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules</i> (YES/NO/NA)		YES
5A.	MASSES OF ASPHALT SHINGLES: ORGANIC SHINGLES		
	Average net mass per unit area, min, lb/100 ft <sup>2</sup>	Type I: 95.0; Type II: 95.0; Type III: 89.7	
	Net mass of weather-exposed portion (ea. bundle) min, lb/100 ft <sup>2</sup>	Type I: 91.0; Type II: 110.0; Type III: 85.7	
	Net mass of upper portion (ea bundle), min, lb/100 ft <sup>2</sup>	Type I: NA; Type II: 72.0; Type III: NA	
	Mass of desaturated, moisture-free felt, min, lb/100 ft <sup>2</sup>	Type I: 11.0; Type II: 11.0; Type III: 9.0	
	Mass of asphalt saturant based on the mass of the dry felt, min %	165	
	Mass of weather-side coating on the weather-exposed portion, min, lb/100 ft <sup>2</sup>	Type I: 23.0; Type II: 30.0; Type III: 23.0	
	Mass of weather-side coating on the upper portion, min lb/100ft <sup>2</sup>	Type I: 23.0; Type II: 15.0; Type III: 23.0	
	Mass of reverse-side coating, min, lb/100 ft <sup>2</sup>	3.0	
	Ash of the desaturated felt, max %	Type I: NA; Type II: 10.0; Type III: 10	
	Mass of weather-side mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, min, lb/100 ft <sup>2</sup>	18.5	
	Mass of weather-side mineral matter retained on a No. 20 sieve, based on the mass passing a No. 6 sieve and retained on a No. 70 sieve, min, %	55.0	
	Mass of weather-side mineral matter passing a No. 40 sieve, based on the mass of passing a No. 6 sieve, and retained on a No. 70 sieve, max %	5.0	
	Mass of weather-side mineral matter passing a No. 70 sieve, based on the mass of the weather-side coating asphalt and the mineral matter passing the No. 70 sieve, max %	60.0	
	Mass of total mineral matter including surfacing and stabilizer on both sides, based on the net mass of the finished product, min %	Type I: NA; Type II: 35.0; Type III: NA	
5B.	MASSES OF ASPHALT SHINGLES: FIBERGLASS SHINGLES		
	Minimum net mass per area of shingles (individual bundle), lb/100 ft <sup>2</sup> , min.	70.0	>70
	Average net mass per area of shingles (total sample), lb/100 ft <sup>2</sup> , min.	73.0	>73
	Mass per area of mat, lb/100 ft <sup>2</sup> , min.	1.35	>1.35
	Mass per area of asphalt, lb/100 ft <sup>2</sup> , min.	15.0	>15
	Mass per area of mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, lb/100 ft <sup>2</sup> , min	25.0	>25
	Mass percent of mineral matter passing a No. 70 sieve based on the total asphalt and mineral matter passing the No. 70 sieve, max.	70.0	<70
6.	PHYSICAL REQUIREMENTS: FIBERGLASS SHINGLES		
	Behavior on heating		
	Loss of volatile matter, % max.	1.5	<1.0
	Sliding of granular surfacing, in. min.	1/16	<1/16
	Tear strength, g min.	1700	>1700
	Fastener pull-through resistance at 73 ±4 F, lbf, min	20	>20
	Fastener pull-through resistance at 32 ±4 F, lbf, min	23	>23
	Penetration of asphalt, 0.1mm (tested w/o mineral stabilizer)	15	>15
	Asphalt softening point, F (tested w/o mineral stabilizer) min/max	235 max; 190 min.	200-215
	Weight of displaced granules, max.	1.0 g	<1.0
7.	FIRE/WIND/IMPACT RESISTANCE		
	Fire resistance, UL 790 or ASTM E 108 (Class A, B, or C)		CLASS A
	Wind resistance, UL 997 or ASTM D3161 (pass/fail, or not tested)		PASS
	Wind resistance (max. wind speed)		
	Impact resistance, UL 2218 (Class 1, 2, 3, or 4)		
8.	CODE ACCEPTANCE		
	BOCA Evaluation Service, Inc. (report number)		
	ICBO Evaluation Service, Inc. (report number)		
	SBCCI Public Safety Testing & Evaluation Service, Inc. (report number)		
	National Evaluation Service, Inc. (report number)		
	Other agencies (agency & report identification number)		
7.	SEE MEMBRANE APPENDIX IF CHECKED		



# Asphalt Shingles Part 2: Technical Data

1. COMPANY NAME	MALARKEY ROOFING COMPANY
2. PRODUCT NAME	#271 HIGHLANDER 25
3. PRODUCT DESCRIPTION Reinforcing (organic/fiberglass/polyglass)	FIBERGLASS
4. COMPLIES WITH:	
4A. ASTM D 225-95 <i>Standard Specification for Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules</i> (indicate type or NA) Type I -- Uniform or nonuniform thickness shingles of any style Type II -- Thick butt, square tab, strip shingles Type III -- Uniform or nonuniform thickness shingles of any style	
4B. ASTM D 3018-90 <i>Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules</i> (indicate type or NA) Type I -- Self-sealing Type II -- Non-self-sealing	X
4C. ASTM D 3462-97 <i>Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules</i> (YES/NO/NA)	
5A. MASSES OF ASPHALT SHINGLES: ORGANIC SHINGLES	
Average net mass per unit area, min, lb/100 ft <sup>2</sup>	Type I: 95.0; Type II: 95.0; Type III: 89.7
Net mass of weather-exposed portion (ea. bundle) min, lb/100 ft <sup>2</sup>	Type I: 91.0; Type II: 110.0; Type III: 85.7
Net mass of upper portion (ea bundle), min, lb/100 ft <sup>2</sup>	Type I: NA; Type II: 72.0; Type III: NA
Mass of desaturated, moisture-free felt, min, lb/100 ft <sup>2</sup>	Type I: 11.0; Type II: 11.0; Type III: 9.0
Mass of asphalt saturant based on the mass of the dry felt, min %	165
Mass of weather-side coating on the weather-exposed portion, min, lb/100 ft <sup>2</sup>	Type I: 23.0; Type II: 30.0; Type III: 23.0
Mass of weather-side coating on the upper portion, min lb/100ft <sup>2</sup>	Type I: 23.0; Type II: 15.0; Type III: 23.0
Mass of reverse-side coating, min, lb/100 ft <sup>2</sup>	3.0
Ash of the desaturated felt, max %	Type I: NA; Type II: 10.0; Type III: 10
Mass of weather-side mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, min, lb/100 ft <sup>2</sup>	18.5
Mass of weather-side mineral matter retained on a No. 20 sieve, based on the mass passing a No. 6 sieve and retained on a No. 70 sieve, min, %	55.0
Mass of weather-side mineral matter passing a No. 40 sieve, based on the mass of passing a No. 6 sieve, and retained on a No. 70 sieve, max %	5.0
Mass of weather-side mineral matter passing a No. 70 sieve, based on the mass of the weather-side coating asphalt and the mineral matter passing the No. 70 sieve, max %	60.0
Mass of total mineral matter including surfacing and stabilizer on both sides, based on the net mass of the finished product, min %	Type I: NA; Type II: 35.0; Type III: NA
5B. MASSES OF ASPHALT SHINGLES: FIBERGLASS SHINGLES	
Minimum net mass per area of shingles (individual bundle), lb/100 ft <sup>2</sup> , min.	70.0
Average net mass per area of shingles (total sample), lb/100 ft <sup>2</sup> , min.	73.0
Mass per area of mat, lb/100 ft <sup>2</sup> , min.	1.35
Mass per area of asphalt, lb/100 ft <sup>2</sup> , min.	15.0
Mass per area of mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, lb/100 ft <sup>2</sup> , min	25.0
Mass percent of mineral matter passing a No. 70 sieve based on the total asphalt and mineral matter passing the No. 70 sieve, max.	70.0
6. PHYSICAL REQUIREMENTS: FIBERGLASS SHINGLES	
Behavior on heating	
Loss of volatile matter, % max.	1.5
Sliding of granular surfacing, in. min.	1/16
Tear strength, g min.	1700
Fastener pull-through resistance at 73 ±4 F, lbf, min	20
Fastener pull-through resistance at 32 ±4 F, lbf, min	23
Penetration of asphalt, 0.1mm (tested w/o mineral stabilizer)	15
Asphalt softening point, F (tested w/o mineral stabilizer) min/max	235 max; 190 min.
Weight of displaced granules, max.	1.0 g
7. FIRE/WIND/IMPACT RESISTANCE	
Fire resistance, UL 790 or ASTM E 108 (Class A, B, or C)	CLASS A
Wind resistance, UL 997 or ASTM D3161 (pass/fail, or not tested)	PASS
Wind resistance (max. wind speed)	60
Impact resistance, UL 2218 (Class 1, 2, 3, or 4)	
8. CODE ACCEPTANCE	
BOCA Evaluation Service, Inc. (report number)	
ICBO Evaluation Service, Inc. (report number)	
SBCCI Public Safety Testing & Evaluation Service, Inc. (report number)	
National Evaluation Service, Inc. (report number)	
Other agencies (agency & report identification number)	
7. SEE MEMBRANE APPENDIX IF CHECKED	



## Asphalt Shingles Part 2: Technical Data

1. COMPANY NAME		OWENS CORNING
2. PRODUCT NAME		PROMINENCE 30 YEAR PERFORMANCE
3. PRODUCT DESCRIPTION Reinforcing (organic/fiberglass/polyglass)		FIBERGLAS
4. COMPLIES WITH:		
4A. ASTM D 225-95 <i>Standard Specification for Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules</i> (indicate type or NA)		
Type I -- Uniform or nonuniform thickness shingles of any style		
Type II -- Thick butt, square tab, strip shingles		
Type III -- Uniform or nonuniform thickness shingles of any style		
4B. ASTM D 3018-90 <i>Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules</i> (indicate type or NA)		
Type I -- Self-sealing		X
Type II -- Non-self-sealing		
4C. ASTM D 3462-97 <i>Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules</i> (YES/NO/NA)		YES
5A. MASSES OF ASPHALT SHINGLES: ORGANIC SHINGLES		
Average net mass per unit area, min, lb/100 ft <sup>2</sup>	Type I: 95.0; Type II: 95.0; Type III: 89.7	
Net mass of weather-exposed portion (ea. bundle) min, lb/100 ft <sup>2</sup>	Type I: 91.0; Type II: 110.0; Type III: 85.7	
Net mass of upper portion (ea bundle), min, lb/100 ft <sup>2</sup>	Type I: NA; Type II: 72.0; Type III: NA	
Mass of desaturated, moisture-free felt, min, lb/100 ft <sup>2</sup>	Type I: 11.0; Type II: 11.0; Type III: 9.0	
Mass of asphalt saturant based on the mass of the dry felt, min %	165	
Mass of weather-side coating on the weather-exposed portion, min, lb/100 ft <sup>2</sup>	Type I: 23.0; Type II: 30.0; Type III: 23.0	
Mass of weather-side coating on the upper portion, min lb/100ft <sup>2</sup>	Type I: 23.0; Type II: 15.0; Type III: 23.0	
Mass of reverse-side coating, min, lb/100 ft <sup>2</sup>	3.0	
Ash of the desaturated felt, max %	Type I: NA; Type II: 10.0; Type III: 10	
Mass of weather-side mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, min, lb/100 ft <sup>2</sup>	18.5	
Mass of weather-side mineral matter retained on a No. 20 sieve, based on the mass passing a No. 6 sieve and retained on a No. 70 sieve, min, %	55.0	
Mass of weather-side mineral matter passing a No. 40 sieve, based on the mass of passing a No. 6 sieve, and retained on a No. 70 sieve, max %	5.0	
Mass of weather-side mineral matter passing a No. 70 sieve, based on the mass of the weather-side coating asphalt and the mineral matter passing the No. 70 sieve, max %	60.0	
Mass of total mineral matter including surfacing and stabilizer on both sides, based on the net mass of the finished product, min %	Type I: NA; Type II: 35.0; Type III: NA	
5B. MASSES OF ASPHALT SHINGLES: FIBERGLASS SHINGLES		
Minimum net mass per area of shingles (individual bundle), lb/100 ft <sup>2</sup> , min.	70.0	70
Average net mass per area of shingles (total sample), lb/100 ft <sup>2</sup> , min.	73.0	73
Mass per area of mat, lb/100 ft <sup>2</sup> , min.	1.35	1.35
Mass per area of asphalt, lb/100 ft <sup>2</sup> , min.	15.0	15
Mass per area of mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, lb/100 ft <sup>2</sup> , min	25.0	25
Mass percent of mineral matter passing a No. 70 sieve based on the total asphalt and mineral matter passing the No. 70 sieve, max.	70.0	70
6. PHYSICAL REQUIREMENTS: FIBERGLASS SHINGLES		
Behavior on heating		
Loss of volatile matter, % max.	1.5	1.5
Sliding of granular surfacing, in. min.	1/16	1/16
Tear strength, g min.	1700	1700
Fastener pull-through resistance at 73 ±4 F, lbf, min	20	20
Fastener pull-through resistance at 32 ±4 F, lbf, min	23	23
Penetration of asphalt, 0.1mm (tested w/o mineral stabilizer)	15	15
Asphalt softening point, F (tested w/o mineral stabilizer) min/max	235 max; 190 min.	235
Weight of displaced granules, max.	1.0 g	1.0
7. FIRE/WIND/IMPACT RESISTANCE		
Fire resistance, UL 790 or ASTM E 108 (Class A, B, or C)		CLASS A
Wind resistance, UL 997 or ASTM D3161 (pass/fail, or not tested)		PASS
Wind resistance (max. wind speed)		80
Impact resistance, UL 2218 (Class 1, 2, 3, or 4)		
8. CODE ACCEPTANCE		
BOCA Evaluation Service, Inc. (report number)		
ICBO Evaluation Service, Inc. (report number)		ER-5443
SBCCI Public Safety Testing & Evaluation Service, Inc. (report number)		
National Evaluation Service, Inc. (report number)		
Other agencies (agency & report identification number)		
7. SEE MEMBRANE APPENDIX IF CHECKED		X



## Asphalt Shingles Part 2: Technical Data

1. COMPANY NAME			OWENS CORNING
2. PRODUCT NAME			CLASSIC (METRIC) 20 YR TRADITIONAL
3. PRODUCT DESCRIPTION Reinforcing (organic/fiberglass/polyglass)			FIBERGLASS
4. COMPLIES WITH:			
4A. ASTM D 225-95 <i>Standard Specification for Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules</i> (indicate type or NA)			
Type I -- Uniform or nonuniform thickness shingles of any style			
Type II -- Thick butt, square tab, strip shingles			
Type III -- Uniform or nonuniform thickness shingles of any style			
4B. ASTM D 3018-90 <i>Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules</i> (indicate type or NA)			
Type I -- Self-sealing			X
Type II -- Non-self-sealing			
4C. ASTM D 3462-97 <i>Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules</i> (YES/NO/NA)			NO
5A. MASSES OF ASPHALT SHINGLES: ORGANIC SHINGLES			
Average net mass per unit area, min, lb/100 ft <sup>2</sup>	Type I: 95.0; Type II: 95.0; Type III: 89.7		
Net mass of weather-exposed portion (ea. bundle) min, lb/100 ft <sup>2</sup>	Type I: 91.0; Type II: 110.0; Type III: 85.7		
Net mass of upper portion (ea bundle), min, lb/100 ft <sup>2</sup>	Type I: NA; Type II: 72.0; Type III: NA		
Mass of desaturated, moisture-free felt, min, lb/100 ft <sup>2</sup>	Type I: 11.0; Type II: 11.0; Type III: 9.0		
Mass of asphalt saturant based on the mass of the dry felt, min %	165		
Mass of weather-side coating on the weather-exposed portion, min, lb/100 ft <sup>2</sup>	Type I: 23.0; Type II: 30.0; Type III: 23.0		
Mass of weather-side coating on the upper portion, min lb/100ft <sup>2</sup>	Type I: 23.0; Type II: 15.0; Type III: 23.0		
Mass of reverse-side coating, min, lb/100 ft <sup>2</sup>	3.0		
Ash of the desaturated felt, max %	Type I: NA; Type II: 10.0; Type III: 10		
Mass of weather-side mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, min, lb/100 ft <sup>2</sup>	18.5		
Mass of weather-side mineral matter retained on a No. 20 sieve, based on the mass passing a No. 6 sieve and retained on a No. 70 sieve, min, %	55.0		
Mass of weather-side mineral matter passing a No. 40 sieve, based on the mass of passing a No. 6 sieve, and retained on a No. 70 sieve, max %	5.0		
Mass of weather-side mineral matter passing a No. 70 sieve, based on the mass of the weather-side coating asphalt and the mineral matter passing the No. 70 sieve, max %	60.0		
Mass of total mineral matter including surfacing and stabilizer on both sides, based on the net mass of the finished product, min %	Type I: NA; Type II: 35.0; Type III: NA		
5B. MASSES OF ASPHALT SHINGLES: FIBERGLASS SHINGLES			
Minimum net mass per area of shingles (individual bundle), lb/100 ft <sup>2</sup> , min.	70.0	70	
Average net mass per area of shingles (total sample), lb/100 ft <sup>2</sup> , min.	73.0	73	
Mass per area of mat, lb/100 ft <sup>2</sup> , min.	1.35	1.35	
Mass per area of asphalt, lb/100 ft <sup>2</sup> , min.	15.0	15	
Mass per area of mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, lb/100 ft <sup>2</sup> , min	25.0	25	
Mass percent of mineral matter passing a No. 70 sieve based on the total asphalt and mineral matter passing the No. 70 sieve, max.	70.0	70	
6. PHYSICAL REQUIREMENTS: FIBERGLASS SHINGLES			
Behavior on heating			
Loss of volatile matter, % max.	1.5	1.5	
Sliding of granular surfacing, in. min.	1/16	1/16	
Tear strength, g min.	1700	1700	
Fastener pull-through resistance at 73 ±4 F, lbf, min	20	20	
Fastener pull-through resistance at 32 ±4 F, lbf, min	23	23	
Penetration of asphalt, 0.1mm (tested w/o mineral stabilizer)	15	15	
Asphalt softening point, F (tested w/o mineral stabilizer) min/max	235 max; 190 min.	235	
Weight of displaced granules, max.	1.0 g	1.0	
7. FIRE/WIND/IMPACT RESISTANCE			
Fire resistance, UL 790 or ASTM E 108 (Class A, B, or C)			CLASS A
Wind resistance, UL 997 or ASTM D3161 (pass/fail, or not tested)			PASS
Wind resistance (max. wind speed)			80
Impact resistance, UL 2218 (Class 1, 2, 3, or 4)			
8. CODE ACCEPTANCE			
BOCA Evaluation Service, Inc. (report number)			
ICBO Evaluation Service, Inc. (report number)			
SBCCI Public Safety Testing & Evaluation Service, Inc. (report number)			
National Evaluation Service, Inc. (report number)			
Other agencies (agency & report identification number)			
7. SEE MEMBRANE APPENDIX IF CHECKED			X



## Asphalt Shingles Part 2: Technical Data

1. COMPANY NAME	PABCO ROOFING COMPANY	
2. PRODUCT NAME	GG-20	
3. PRODUCT DESCRIPTION Reinforcing (organic/fiberglass/polyglass)	FIBERGLASS	
4. COMPLIES WITH:		
4A. ASTM D 225-95 <i>Standard Specification for Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules</i> (indicate type or NA)		
Type I -- Uniform or nonuniform thickness shingles of any style		
Type II -- Thick butt, square tab, strip shingles		
Type III -- Uniform or nonuniform thickness shingles of any style		
4B. ASTM D 3018-90 <i>Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules</i> (indicate type or NA)		
Type I -- Self-sealing	X	
Type II -- Non-self-sealing		
4C. ASTM D 3462-97 <i>Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules</i> (YES/NO/NA)	YES	
5A. MASSES OF ASPHALT SHINGLES: ORGANIC SHINGLES		
Average net mass per unit area, min, lb/100 ft <sup>2</sup>	Type I: 95.0; Type II: 95.0; Type III: 89.7	
Net mass of weather-exposed portion (ea. bundle) min, lb/100 ft <sup>2</sup>	Type I: 91.0; Type II: 110.0; Type III: 85.7	
Net mass of upper portion (ea bundle), min, lb/100 ft <sup>2</sup>	Type I: NA; Type II: 72.0; Type III: NA	
Mass of desaturated, moisture-free felt, min, lb/100 ft <sup>2</sup>	Type I: 11.0; Type II: 11.0; Type III: 9.0	
Mass of asphalt saturant based on the mass of the dry felt, min %	165	
Mass of weather-side coating on the weather-exposed portion, min, lb/100 ft <sup>2</sup>	Type I: 23.0; Type II: 30.0; Type III: 23.0	
Mass of weather-side coating on the upper portion, min lb/100ft <sup>2</sup>	Type I: 23.0; Type II: 15.0; Type III: 23.0	
Mass of reverse-side coating, min, lb/100 ft <sup>2</sup>	3.0	
Ash of the desaturated felt, max %	Type I: NA; Type II: 10.0; Type III: 10	
Mass of weather-side mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, min, lb/100 ft <sup>2</sup>	18.5	
Mass of weather-side mineral matter retained on a No. 20 sieve, based on the mass passing a No. 6 sieve and retained on a No. 70 sieve, min, %	55.0	
Mass of weather-side mineral matter passing a No. 40 sieve, based on the mass of passing a No. 6 sieve, and retained on a No. 70 sieve, max %	5.0	
Mass of weather-side mineral matter passing a No. 70 sieve, based on the mass of the weather-side coating asphalt and the mineral matter passing the No. 70 sieve, max %	60.0	
Mass of total mineral matter including surfacing and stabilizer on both sides, based on the net mass of the finished product, min %	Type I: NA; Type II: 35.0; Type III: NA	
5B. MASSES OF ASPHALT SHINGLES: FIBERGLASS SHINGLES		
Minimum net mass per area of shingles (individual bundle), lb/100 ft <sup>2</sup> , min.	70.0	82
Average net mass per area of shingles (total sample), lb/100 ft <sup>2</sup> , min.	73.0	87
Mass per area of mat, lb/100 ft <sup>2</sup> , min.	1.35	1.9
Mass per area of asphalt, lb/100 ft <sup>2</sup> , min.	15.0	16
Mass per area of mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, lb/100 ft <sup>2</sup> , min	25.0	32
Mass percent of mineral matter passing a No. 70 sieve based on the total asphalt and mineral matter passing the No. 70 sieve, max.	70.0	67
6. PHYSICAL REQUIREMENTS: FIBERGLASS SHINGLES		
Behavior on heating		
Loss of volatile matter, % max.	1.5	
Sliding of granular surfacing, in. min.	1/16	
Tear strength, g min.	1700	
Fastener pull-through resistance at 73 ±4 F, lbf, min	20	
Fastener pull-through resistance at 32 ±4 F, lbf, min	23	
Penetration of asphalt, 0.1mm (tested w/o mineral stabilizer)	15	
Asphalt softening point, F (tested w/o mineral stabilizer) min/max	235 max; 190 min.	
Weight of displaced granules, max.	1.0 g	
7. FIRE/WIND/IMPACT RESISTANCE		
Fire resistance, UL 790 or ASTM E 108 (Class A, B, or C)	CLASS A	
Wind resistance, UL 997 or ASTM D3161 (pass/fail, or not tested)	PASS	
Wind resistance (max. wind speed)	110	
Impact resistance, UL 2218 (Class 1, 2, 3, or 4)		
8. CODE ACCEPTANCE		
BOCA Evaluation Service, Inc. (report number)		
ICBO Evaluation Service, Inc. (report number)		
SBCCI Public Safety Testing & Evaluation Service, Inc. (report number)		
National Evaluation Service, Inc. (report number)		
Other agencies (agency & report identification number)		
7. SEE MEMBRANE APPENDIX IF CHECKED		



## Asphalt Shingles Part 2: Technical Data

1. COMPANY NAME	TAMKO ROOFING PRODUCTS
2. PRODUCT NAME	HERITAGE 30 AR
3. PRODUCT DESCRIPTION Reinforcing (organic/fiberglass/polyglass)	FIBERGLASS
4. COMPLIES WITH:	
4A. ASTM D 225-95 <i>Standard Specification for Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules</i> (indicate type or NA)	
Type I -- Uniform or nonuniform thickness shingles of any style	
Type II -- Thick butt, square tab, strip shingles	
Type III -- Uniform or nonuniform thickness shingles of any style	
4B. ASTM D 3018-90 <i>Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules</i> (indicate type or NA)	
Type I -- Self-sealing	
Type II -- Non-self-sealing	
4C. ASTM D 3462-97 <i>Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules</i> (YES/NO/NA)	
5A. MASSES OF ASPHALT SHINGLES: ORGANIC SHINGLES	
Average net mass per unit area, min, lb/100 ft <sup>2</sup>	Type I: 95.0; Type II: 95.0; Type III: 89.7
Net mass of weather-exposed portion (ea. bundle) min, lb/100 ft <sup>2</sup>	Type I: 91.0; Type II: 110.0; Type III: 85.7
Net mass of upper portion (ea bundle), min, lb/100 ft <sup>2</sup>	Type I: NA; Type II: 72.0; Type III: NA
Mass of desaturated, moisture-free felt, min, lb/100 ft <sup>2</sup>	Type I: 11.0; Type II: 11.0; Type III: 9.0
Mass of asphalt saturant based on the mass of the dry felt, min %	165
Mass of weather-side coating on the weather-exposed portion, min, lb/100 ft <sup>2</sup>	Type I: 23.0; Type II: 30.0; Type III: 23.0
Mass of weather-side coating on the upper portion, min lb/100ft <sup>2</sup>	Type I: 23.0; Type II: 15.0; Type III: 23.0
Mass of reverse-side coating, min, lb/100 ft <sup>2</sup>	3.0
Ash of the desaturated felt, max %	Type I: NA; Type II: 10.0; Type III: 10
Mass of weather-side mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, min, lb/100 ft <sup>2</sup>	18.5
Mass of weather-side mineral matter retained on a No. 20 sieve, based on the mass passing a No. 6 sieve and retained on a No. 70 sieve, min, %	55.0
Mass of weather-side mineral matter passing a No. 40 sieve, based on the mass of passing a No. 6 sieve, and retained on a No. 70 sieve, max %	5.0
Mass of weather-side mineral matter passing a No. 70 sieve, based on the mass of the weather-side coating asphalt and the mineral matter passing the No. 70 sieve, max %	60.0
Mass of total mineral matter including surfacing and stabilizer on both sides, based on the net mass of the finished product, min %	Type I: NA; Type II: 35.0; Type III: NA
5B. MASSES OF ASPHALT SHINGLES: FIBERGLASS SHINGLES	
Minimum net mass per area of shingles (individual bundle), lb/100 ft <sup>2</sup> , min.	70.0 >70
Average net mass per area of shingles (total sample), lb/100 ft <sup>2</sup> , min.	73.0 >73
Mass per area of mat, lb/100 ft <sup>2</sup> , min.	1.35 >1.35
Mass per area of asphalt, lb/100 ft <sup>2</sup> , min.	15.0 >15
Mass per area of mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, lb/100 ft <sup>2</sup> , min	25.0 >25
Mass percent of mineral matter passing a No. 70 sieve based on the total asphalt and mineral matter passing the No. 70 sieve, max.	70.0 <70
6. PHYSICAL REQUIREMENTS: FIBERGLASS SHINGLES	
Behavior on heating	
Loss of volatile matter, % max.	1.5 <1.5
Sliding of granular surfacing, in. min.	1/16 >1/16
Tear strength, g min.	1700 >1700
Fastener pull-through resistance at 73 ±4 F, lbf, min	20 >20
Fastener pull-through resistance at 32 ±4 F, lbf, min	23 >23
Penetration of asphalt, 0.1mm (tested w/o mineral stabilizer)	15 >15
Asphalt softening point, F (tested w/o mineral stabilizer) min/max	235 max; 190 min. >190 <235
Weight of displaced granules, max.	1.0 g <1.0
7. FIRE/WIND/IMPACT RESISTANCE	
Fire resistance, UL 790 or ASTM E 108 (Class A, B, or C)	CLASS A
Wind resistance, UL 997 or ASTM D3161 (pass/fail, or not tested)	PASS
Wind resistance (max. wind speed)	
Impact resistance, UL 2218 (Class 1, 2, 3, or 4)	
8. CODE ACCEPTANCE	
BOCA Evaluation Service, Inc. (report number)	
ICBO Evaluation Service, Inc. (report number)	ER-5375
SBCCI Public Safety Testing & Evaluation Service, Inc. (report number)	
National Evaluation Service, Inc. (report number)	
Other agencies (agency & report identification number)	
7. SEE MEMBRANE APPENDIX IF CHECKED	

## Asphalt Shingles Part 2: Technical Data

| TAMKO ROOFING PRODUCTS |
|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| HERITAGE 40            | HERITAGE 40 AR         | HERITAGE M25           | HERITAGE M30           | HERITAGE M40           | RELIANCE 25            | RELIANCE 30            | HERITAGE GE 25         |
| FIBERGLASS             | FIBERGLASS             | FIBERGLASS             | FIBERGLASS             | FIBERGLASS             | ORGANIC                | ORGANIC                |                        |
|                        |                        |                        |                        |                        |                        |                        |                        |
|                        |                        |                        |                        |                        |                        |                        |                        |
|                        |                        |                        |                        |                        |                        |                        |                        |
|                        |                        |                        |                        |                        |                        |                        |                        |
|                        | X                      | X                      | X                      | X                      | NA                     | NA                     | X                      |
|                        | YES                    | NO                     | YES                    | YES                    | NA                     | NA                     | YES                    |
|                        |                        |                        |                        |                        |                        |                        |                        |
|                        |                        |                        |                        |                        | >89.7                  | >89.7                  |                        |
|                        |                        |                        |                        |                        | >85.7                  | >85.7                  |                        |
|                        |                        |                        |                        |                        | NA                     | NA                     |                        |
|                        |                        |                        |                        |                        | >9                     | >9                     |                        |
|                        |                        |                        |                        |                        | >165                   | >165                   |                        |
|                        |                        |                        |                        |                        | >23                    | >23                    |                        |
|                        |                        |                        |                        |                        | >23                    | >23                    |                        |
|                        |                        |                        |                        |                        | >3                     | >3                     |                        |
|                        |                        |                        |                        |                        | <10                    | <10                    |                        |
|                        |                        |                        |                        |                        | >18.5                  | >18.5                  |                        |
|                        |                        |                        |                        |                        | >55                    | >55                    |                        |
|                        |                        |                        |                        |                        | <5                     | <5                     |                        |
|                        |                        |                        |                        |                        | <60                    | <60                    |                        |
|                        |                        |                        |                        |                        |                        |                        |                        |
| >70                    | >70                    | >70                    | >70                    |                        |                        |                        | >70                    |
| >73                    | >73                    | >73                    | >73                    |                        |                        |                        | >73                    |
| >1.35                  | >1.35                  | >1.35                  | >1.35                  |                        |                        |                        | >1.35                  |
| >15                    | >15                    | >15                    | >15                    |                        |                        |                        | >15                    |
| >25                    | >25                    | >25                    | >25                    |                        |                        |                        | >25                    |
| <70                    | <70                    | <70                    | <70                    |                        |                        |                        | <70                    |
|                        |                        |                        |                        |                        |                        |                        |                        |
| <1.5                   | <1.5                   | <1.5                   | <1.5                   |                        |                        |                        | <1.5                   |
| >1/16                  | >1/16                  | >1/16                  | >1/16                  |                        |                        |                        | >1/16                  |
| >1700                  | >1700                  | <1700                  | >1700                  |                        |                        |                        | >1700                  |
| >20                    | >20                    | >20                    | >20                    |                        |                        |                        | >20                    |
| >23                    | >23                    | >23                    | >23                    |                        |                        |                        | >23                    |
| >15                    | >15                    | >15                    | >15                    |                        |                        |                        | >15                    |
| >190 <235              | >190 <235              | >190 <235              | >190 <235              |                        |                        |                        | 190-235                |
| <1.0                   | <1.0                   | <1.0                   | <1.0                   |                        |                        |                        | <1.0                   |
| CLASS A<br>PASS        | CLASS A<br>PASS        | CLASS A<br>PASS        | CLASS A<br>PASS        |                        | CLASS C<br>PASS        | CLASS C<br>PASS        | CLASS A<br>PASS        |
|                        |                        |                        |                        |                        |                        |                        |                        |
|                        |                        |                        |                        |                        |                        |                        |                        |
| ER-5375                |                        |                        |                        | ER-5375                |                        |                        |                        |
|                        |                        |                        |                        |                        |                        |                        |                        |
|                        |                        |                        |                        |                        |                        |                        |                        |
|                        |                        |                        |                        |                        |                        |                        |                        |

## Asphalt Shingles Part 2: Technical Data

1. COMPANY NAME			TAMKO ROOFING PRODUCTS
2. PRODUCT NAME			HERITAGE 25
3. PRODUCT DESCRIPTION Reinforcing (organic/fiberglass/polyglass)			
4. COMPLIES WITH:			
4A. ASTM D 225-95 <i>Standard Specification for Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules</i> (indicate type or NA)			
Type I -- Uniform or nonuniform thickness shingles of any style			
Type II -- Thick butt, square tab, strip shingles			
Type III -- Uniform or nonuniform thickness shingles of any style			
4B. ASTM D 3018-90 <i>Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules</i> (indicate type or NA)			
Type I -- Self-sealing			X
Type II -- Non-self-sealing			
4C. ASTM D 3462-97 <i>Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules</i> (YES/NO/NA)			YES
5A. MASSES OF ASPHALT SHINGLES: ORGANIC SHINGLES			
Average net mass per unit area, min, lb/100 ft <sup>2</sup>	Type I: 95.0; Type II: 95.0; Type III: 89.7		
Net mass of weather-exposed portion (ea. bundle) min, lb/100 ft <sup>2</sup>	Type I: 91.0; Type II: 110.0; Type III: 85.7		
Net mass of upper portion (ea bundle), min, lb/100 ft <sup>2</sup>	Type I: NA; Type II: 72.0; Type III: NA		
Mass of desaturated, moisture-free felt, min, lb/100 ft <sup>2</sup>	Type I: 11.0; Type II: 11.0; Type III: 9.0		
Mass of asphalt saturant based on the mass of the dry felt, min %	165		
Mass of weather-side coating on the weather-exposed portion, min, lb/100 ft <sup>2</sup>	Type I: 23.0; Type II: 30.0; Type III: 23.0		
Mass of weather-side coating on the upper portion, min lb/100ft <sup>2</sup>	Type I: 23.0; Type II: 15.0; Type III: 23.0		
Mass of reverse-side coating, min, lb/100 ft <sup>2</sup>	3.0		
Ash of the desaturated felt, max %	Type I: NA; Type II: 10.0; Type III: 10		
Mass of weather-side mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, min, lb/100 ft <sup>2</sup>	18.5		
Mass of weather-side mineral matter retained on a No. 20 sieve, based on the mass passing a No. 6 sieve and retained on a No. 70 sieve, min, %	55.0		
Mass of weather-side mineral matter passing a No. 40 sieve, based on the mass of passing a No. 6 sieve, and retained on a No. 70 sieve, max %	5.0		
Mass of weather-side mineral matter passing a No. 70 sieve, based on the mass of the weather-side coating asphalt and the mineral matter passing the No. 70 sieve, max %	60.0		
Mass of total mineral matter including surfacing and stabilizer on both sides, based on the net mass of the finished product, min %	Type I: NA; Type II: 35.0; Type III: NA		
5B. MASSES OF ASPHALT SHINGLES: FIBERGLASS SHINGLES			
Minimum net mass per area of shingles (individual bundle), lb/100 ft <sup>2</sup> , min.	70.0	>70	
Average net mass per area of shingles (total sample), lb/100 ft <sup>2</sup> , min.	73.0	>73	
Mass per area of mat, lb/100 ft <sup>2</sup> , min.	1.35	>1.35	
Mass per area of asphalt, lb/100 ft <sup>2</sup> , min.	15.0	>15	
Mass per area of mineral matter passing a No. 6 sieve and retained on a No. 70 sieve, lb/100 ft <sup>2</sup> , min	25.0	>25	
Mass percent of mineral matter passing a No. 70 sieve based on the total asphalt and mineral matter passing the No. 70 sieve, max.	70.0	<70	
6. PHYSICAL REQUIREMENTS: FIBERGLASS SHINGLES			
Behavior on heating			
Loss of volatile matter, % max.	1.5	<1.5	
Sliding of granular surfacing, in. min.	1/16	>1/16	
Tear strength, g min.	1700	>1700	
Fastener pull-through resistance at 73 ±4 F, lbf, min	20	>20	
Fastener pull-through resistance at 32 ±4 F, lbf, min	23	>23	
Penetration of asphalt, 0.1mm (tested w/o mineral stabilizer)	15	>15	
Asphalt softening point, F (tested w/o mineral stabilizer) min/max	235 max; 190 min.	190-235	
Weight of displaced granules, max.	1.0 g	<1.0	
7. FIRE/WIND/IMPACT RESISTANCE			
Fire resistance, UL 790 or ASTM E 108 (Class A, B, or C)			CLASS A
Wind resistance, UL 997 or ASTM D3161 (pass/fail, or not tested)			PASS
Wind resistance (max. wind speed)			
Impact resistance, UL 2218 (Class 1, 2, 3, or 4)			
8. CODE ACCEPTANCE			
BOCA Evaluation Service, Inc. (report number)			
ICBO Evaluation Service, Inc. (report number)			
SBCCI Public Safety Testing & Evaluation Service, Inc. (report number)			
National Evaluation Service, Inc. (report number)			
Other agencies (agency & report identification number)			
7. SEE MEMBRANE APPENDIX IF CHECKED			



# ASPHALT SHINGLES WARRANTIES

1. Identity of issuing entity	Atlas Roofing Corporation	Elk Corporation	Elk Corporation
2. Title, original publication date, and identifying symbol, if any	"Limited Warranty Shingles and Roll Roofing Products"; June 1997	ALimited Warranty Prestique Asphalt Shingles;; February 1, 1993	"Limited Warranty Prestique® II MD Asphalt Shingles;" Dade, Broward and Palm Beach Counties Only; July 1, 1998; MDW 7/98
3. Products covered	StormMaster LM, StormMaster ST, Pinnacle 40, Pinnacle 30, GlassMaster 25, GlassMaster 25 Alpine, GlassMaster 25 Matterhorn, GlassMaster 20, GlassMaster T-LOK, Chalet, Legend, WeatherMaster ST, WeatherMaster 20, WeatherMaster T-LOK and MOD 90 MSR	Prestique Plus, Prestique Plus with StainGuard, Prestique I, Prestique I with StainGuard, Prestique II, Prestique II with StainGuard	Prestique® II MD with StainGuard (See Special Features/Conditions)
4. Scope of coverage	Atlas warrants the roofing products are free from manufacturing defects, which would reduce the usable life of the product. Atlas warrants that its algae resistant shingles (i.e., StormMaster, Pinnacle 40, Pinnacle 30, GlassMaster 25, WeatherMaster ST, Chalet and Legend) will remain free of obvious and unsightly discoloration due to algae growth.	Elk warrants that the Prestique shingles are free from manufacturing defects in material or manufacturing workmanship that would adversely affect performance and, when manufactured with StainGuard treatment, will inhibit the discoloration of roofing granules caused by growth of the blue-green algae, Gloeocapsa, which may adversely affect the appearance of the roofs.	Elk warrants that the Prestique® shingles are free from manufacturing defects in material or manufacturing workmanship that would adversely affect performance and, when manufactured with StainGuard treatment, will inhibit the discoloration of roofing granules caused by growth of the blue-green algae, Gloeocapsa, which may adversely affect appearance.
4a. Does the warranty provide coverage for defects in manufacture?	Yes	Yes	Yes
4b. Does the warranty provide coverage for defects in application?	No	No	No
4c. Does the warranty limit coverage to leakage and, if no, what defects or conditions other than leakage are covered?	No; warranty covers manufacturing defects that would reduce the usable life of the shingles and algae resistance.	No; warranty covers manufacturing defects and, in some cases, algae resistance.	No; warranty covers manufacturing defects and algae resistance
4d. Does the warranty provide coverage for flashings, metal work, or related work that may be affected and/or need to be repaired or removed?	No	No	No
5. Length of Coverage	<b>For Manufacturing Defects:</b> 40 years: StormMaster LM, Pinnacle 40 30 years: StormMaster ST, Pinnacle 30 25 years: GlassMaster 25, GlassMaster 25 Alpine, GlassMaster Matterhorn, GlassMaster T-LOK, Chalet, Legend, WeatherMaster ST, WeatherMaster T-LOK 20 years: GlassMaster 20, WeatherMaster 20 10 years: MOD 90 MSR <b>For Algae Resistance:</b> 10 years: For Wind Coverage: 5 years	<b>For Manufacturing Defects</b> 40 years: Prestique Plus, Prestique Plus with Stain Guard 30 years: Prestique I, Prestique I with Stain Guard 25 years: Prestique II, Prestique II with Stain Guard <b>For Algae Resistance:</b> 5 years	Manufacturing Defects: 30 years Algae Resistance: 5 years Wind Resistance: 5 years
5a. Is the warranty prorated?	Yes	Yes	Yes
5b. When does prorating begin?	After five yrs.: StormMaster LM, Pinnacle 40, Pinnacle 30 After three yrs.: StormMaster ST, GlassMaster 25, GlassMaster 25 Alpine, GlassMaster 25 Matterhorn, GlassMaster 20, GlassMaster T-LOK, Chalet, Legend, WeatherMaster ST, WeatherMaster 20, WeatherMaster T-LOK After one year: MOD 90 MSR	After one year	After one year
5c. What is the prorating formula?	<b>StormMaster LM, Pinnacle 40:</b> After initial five years, warranty is reduced by 1/480 for each month since original application (so that at the beginning of the sixth year, warranty would be reduced by 60/480). <b>Pinnacle 30:</b> After initial five years, warranty is reduced by 1/360 for each month since original application (so that at the beginning of the sixth year, warranty would be reduced by 60/360). <b>StormMaster ST, GlassMaster 25 Alpine, GlassMaster 25 Matterhorn:</b> After initial three years, warranty is reduced by 1/360 for each month since original application (so that at the beginning of the fourth year, warranty would be reduced by 36/360). <b>GlassMaster 25, GlassMaster T-LOK, Chalet, Legend, WeatherMaster ST, WeatherMaster T-LOK:</b> After initial three years, warranty is reduced by 1/300 for each month since original application (so that at the beginning of the fourth year, warranty would be reduced by 36/300). <b>Glass Master 20, WeatherMaster 20:</b> After initial three years, warranty is reduced by 1/240 for each month since original application (so that at the beginning of the fourth year, warranty would be reduced by 36/240). <b>MOD 90 MSR:</b> After first year, warranty is reduced by 1/120 for each month since original application (so that at the beginning of the second year, warranty would be reduced by 12/120).	<b>Prestique Plus, Prestique Plus with StainGuard:</b> After one year, warranty is reduced by 1/480 for each month since original application. <b>Prestique I, Prestique I with StainGuard:</b> After one year, warranty is reduced by 1/360 for each month since original application. <b>Prestique II, Prestique II with StainGuard:</b> After one year, warranty is reduced by 1/300 for each month since original application.	After one year, warranty is reduced by 1/360 for each month since original application
6. Nature of Remedy	Atlas is liable for cost to repair or replace defectively manufactured shingles. For algae resistant shingles, Atlas' sole and only liability shall be to pay the reasonable cost of repair or replacement subject to pro-rating. During the initial five, three, or one year period (depending upon the type of shingle), the maximum repair or replacement cost to Atlas shall be the replacement cost of those shingles exhibiting discoloration due to algae, including replacement installation costs. For the remainder of the warranty, the maximum repair or replacement cost to Atlas shall be the replacement cost of those shingles exhibiting discoloration, in proportion to the unexpired warranty period, excluding all installation costs	Elk, at its sole discretion, shall either (1) pay the reasonable replacement cost of shingles and application labor, (2) provide replacement shingles only or pay the reasonable cost of replacement shingles of similar design, or (3) pay the reasonable cost for repair of the shingles. In the unlikely event the entire roof is found to be defective, Elk shall provide, or pay the reasonable replacement cost of, shingles and reasonable application labor to recover the roof. After the first year, the replacement cost which Elk will pay will be prorated. Application costs covered by warranty do not include costs for tear-off, dump fees, flashing, metal work, underlayment, or related work.	Elk, at its sole discretion, shall either (1) pay the reasonable replacement cost of shingles and application labor, (2) provide replacement shingles only or pay the reasonable cost of replacement shingles of similar design, or (3) pay the reasonable cost for repair of the shingles. If the entire roof is found to be defective, Elk shall provide, or pay the reasonable replacement cost of, shingles and reasonable application labor to recover the roof. After the first year, the replacement cost which Elk will pay will be prorated. Application costs covered by warranty do not include costs for tear-off, dump fees, flashing, metal work, underlayment, or related work.
6a. Does the warranty provide for furnishing of replacement shingles?	Yes	Yes	Yes

<b>6b. Does the warranty provide for labor to install replacement shingles?</b>	For the first five years for StormMaster LM, Pinnacle 40 and Pinnacle 30, for the first three years for StormMaster ST, GlassMaster 25, GlassMaster 25 Alpine, GlassMaster 25 Matterhorn, GlassMaster 20, GlassMaster T-LOK, Chalet, Legend, WeatherMaster ST, WeatherMaster 20 and WeatherMaster T-LOK, and for the first year for MOD 90 MSR, warranty covers replacement application cost, exclusive of metal work, flashing or other work. For the balance of the warranty, replacement installation costs are excluded.	Yes	Yes
<b>6c. Does the warranty provide for labor to remove defective shingles?</b>	For the first five years for StormMaster LM, Pinnacle 40 and Pinnacle 30, for the first three years for StormMaster ST, GlassMaster 25, GlassMaster 25 Alpine, GlassMaster 30 Matterhorn, GlassMaster 20, GlassMaster T-LOK, Chalet, Legend, WeatherMaster ST, WeatherMaster 20 and WeatherMaster T-LOK, and for the first year for MOD 90 MSR, warranty covers product plus replacement application cost, exclusive of metal work, flashing or other work. For the balance of the warranty, tear-off and replacement installation costs are excluded.	NO	No
<b>6d. Does the warranty cover disposal of defective shingles?</b>	No	No	No
<b>6e. Does the warranty apply to any materials other than shingles?</b>	No	No	No
<b>7. Is there a monetary limitation?</b>	For the first five years for StormMaster LM, Pinnacle 40 and Pinnacle 30, for the first three years for StormMaster ST, GlassMaster 25, GlassMaster 25 Alpine, GlassMaster 25 Matterhorn, GlassMaster 20, GlassMaster T-LOK, Chalet, Legend, WeatherMaster ST, WeatherMaster 20 and WeatherMaster T-LOK, and for the first year for MOD 90 MSR, the maximum repair or replacement cost to Atlas shall not exceed the replacement cost to the Owner for the product, plus replacement application cost, exclusive of metal work, flashing or other costs. For the balance of the warranty, Atlas' liability excludes any cost for tear-off or replacement installation of new product and is pro-rated.	Elk's liability is limited to reasonable cost of replacement. The amount of refund will be based on the replacement purchase price.	During the first year, Elk shall pay the reasonable replacement cost of shingles and application labor or provide replacement shingles of similar design or pay the reasonable cost for repair of the shingles. After the first year, the replacement cost which Elk will pay will be reduced by the amount of usage received from the shingles
<b>8. Specific Exclusions from Coverage (See Warranty Introduction for codes.)</b>	1, 2, 4, 8, 13, 19, 24, 27	1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 13, 19, 21, 24, 26. Warranty also excludes damage caused by wildlife and decking nails or staples backing out and either perforating or pushing up the shingle.	1, 2, 3, 4, 8, 9, 10, 11, 13, 17, 19, 21. Warranty also excludes claims by subsequent owners or transferees and damage caused by decking nails or staples backing out and either perforating or pushing up the shingles.
<b>9. Wind Coverage/Exclusion</b>	Atlas warrants that its StormMaster LM and StormMaster ST shingles will resist damage by wind gusts up to a maximum of 102 mph for the first five years after installation. Atlas warrants that its Pinnacle 40, Pinnacle 30, GlassMaster 25, GlassMaster 25 Alpine, GlassMaster 25 Matterhorn, GlassMaster T-LOK, Chalet, Legend, WeatherMaster ST, and WeatherMaster T-LOK shingles will resist damage by wind gusts up to a maximum of 60 mph for the first five years after installation. Atlas warrants that its GlassMaster 20 and WeatherMaster 20 shingles will resist damage by wind gusts up to a maximum of 54 mph for the first five years after installation. If, during this five year period, damage occurs to the shingles as a result of wind gusts less than the warranted speed, Atlas will furnish at no charge, replacement shingles for the damaged shingles only, but no replacement labor. Shingles installed under conditions which temporarily or permanently preclude activation of the sealant must be hand sealed at the time of installation. In the event the shingles fail to self-seal after proper installation and climatic exposure, Atlas' sole responsibility shall be to pay a reasonable cost to hand seal the affected shingles. In order to activate the sealant feature, the shingles must be exposed to warm sunlight for a continued period of time.	During the first five years, Capstone roofing products will be resistant to blow-offs in wind velocities up to 60 mph provided the thermal sealing has properly occurred. Elk's obligation is to pay the reasonable cost of replacing shingles that have blown-off and the reasonable cost of manually sealing any unsealed shingles which have had adequate exposure to heat.  Warranty is conditioned upon application in accordance with Elk application instructions printed on the shingle wrapper. In order for sealing to occur, the shingles must be exposed to adequate heat from surface temperatures or sunlight. Failure of shingles to seal due to insufficient heat exposure is not a manufacturing defect.	During the first 5 years, Elk's Prestige® II MD shingles will be resistant to blow-offs in wind velocities up to 60 mph, provided the thermal sealant has properly activated. Elk's obligation is to pay the reasonable cost of replacing shingles that have blown-off and the reasonable cost of manually sealing any unsealed shingles which have had adequate exposure to heat.  Warranty is conditioned upon application in accordance with Elk application instructions printed on the shingle wrapper. In order for sealing to occur, the shingles must be exposed to adequate heat from surface temperatures or sunlight. Failure of shingles to seal due to insufficient heat exposure is not a manufacturing defect
<b>10. Notification Requirements</b>	Any claim made must be in writing and mailed along with the proof of purchase to Atlas Roofing Corporation, Attn: Consumer Services, 2564 Valley Road, Meridian, MS 39307, within five days after discovery of the alleged defect.	Notification to Elk Corporation of Alabama, 4600 Stillman Blvd., Tuscaloosa, AL 35401, within 30 days after discovery of any alleged defect. Notice must describe defect, include the number of warranty certificate, proof of purchase and the date of installation. The owner may be required to provide samples of shingles and photographs.	Written notification of alleged defect with a copy of warranty card and proof of purchase to Elk Corporation of Alabama, 4600 Stillman Boulevard, Tuscaloosa, AL 35401, within 30 days of discovery of a problem. Owner may be requested to submit samples of shingles and photographs.
<b>11. Determination of Warranty Applicability</b>	Within 45 days from receipt of notice, Atlas will investigate claim, or at its option, designate in writing another party including the owner to procure samples and forward them to Atlas.	Elk will make investigation, including roof top inspection by an Elk employee and laboratory testing of the suspect product. If the investigation reveals manufacturing defects covered by warranty, Elk will provide a settlement within a reasonable time.	Elk will make investigation, including roof top inspection by an Elk employee and laboratory testing of the suspect product. If the investigation reveals manufacturing defects covered by warranty, Elk will provide a settlement within a reasonable time.
<b>12. Does the issuing entity manufacture and/or sell the shingles?</b>	Atlas manufactures and sells the shingles.	Elk manufactures and sells the shingles.	Elk manufactures and sells the shingles.
<b>13. Specific Conditions to Make Warranty Ineffective or Void (See Warranty Introduction for codes.)</b>	C, E	A, C, E, G	C, E
<b>14. Inclusion of Consequential Damages</b>	No	No	No
<b>15. Assignability</b>	Warranty may be transferred by original purchaser to new buyers of the building only when title to the real estate is transferred.	Warranty is transferable. Successor purchaser or transferee must complete and return Transfer Notification Card within 30 days after transfer of the building to the transferee along with a \$50 transfer fee.	Warranty is not assignable or transferable under any circumstances.
<b>16. Cost to Obtain</b>	None	None	None
<b>17. Is the warranty backed by insurance coverage?</b>	No	Elk indicates that it is self-insured.	Elk indicates that it is self-insured.
<b>18. Is the warranty an additional or exclusive remedy for the owner?</b>	Warranty is owner's sole and exclusive remedy. Atlas makes no representation or warranty of any kind other than as set forth in the limited warranty. Atlas' liability is limited to the provisions of the warranty, whether any claim against it is based upon strict liability, negligence, breach of warranty or any other theory or cause of action. No person is authorized to alter the warranty either orally or in writing.	Statements in the warranty constitute the only warranty extended by Elk.	Warranty is the sole and exclusive remedy provided to the owner. Elk makes no representation or warranty of any kind, other than what is stated in the warranty. Elk shall not be liable based upon any theory of negligence, breach of warranty, strict liability, or any other theory.
<b>19. Special Features/Conditions</b>	Repairs made prior to or during the period of Atlas' investigation of a claim without Atlas' prior written approval shall be at owner's expense.	Yes; original homeowner and contractor must complete warranty registration form and return it to Elk, 14643 Dallas Parkway, Suite 1000, Dallas, TX 75240, within 30 days after the installation.	Warranty applies only to products manufactured for sale and sold in Dade, Broward and Palm Beach Counties, Florida. No person is authorized to alter the warranty either orally or in writing.
<b>20. Executed by Owner?</b>	No	Yes; original homeowner and contractor must complete warranty registration form and return it to Elk, 14643 Dallas Parkway, Suite 1000, Dallas, TX 75240, within 30 days after the installation.	Yes; the owner and contractor must complete warranty registration form and return it to Elk Corporation of Alabama, 3150 Holcomb Bridge Road, N.W., Suite 410, Norcross, GA 30071

# ASPHALT SHINGLE WARRANTIES

1. Identity of issuing entity	Elk Corporation of Alabama	GAF Materials Corporation	GAF Materials Corporation
2. Title, original publication date, and identifying symbol, if any	Elk A Capstone Roofing Products Warranty	"GAF Smart Choice System Plus Limited Warranty;" February 1999; 0475-199-50M, CAPWP100	"GAF Golden Pledge Limited Warranty;" March 1999; 1162-499-100M; RESWT161
3. Products covered	Capstone Roofing Products	Royal Sovereign, Marquis WeatherMax, Timberline 25, Original Timberline, Timberline Ultra, Slateline, Grand Sequoia, Country Mansion; all GAF Weather Stopper™ products	Royal Sovereign, Marquis WeatherMax, Timberline 25, Original Timberline, Timberline Ultra, Slateline, Grand Sequoia, Country Mansion; all GAF Weather Stopper™ products
4. Scope of coverage	Elk warrants that the Capstone roofing products will be free from manufacturing defects in materials and manufacturing workmanship that would adversely affect performance; is Class A fire rated by Underwriter's Laboratories when installed per Elk's printed installation instructions; and, when manufactured with StainGuard treatment, will inhibit the discoloration of roofing granules caused by growth of the blue-green algae, Gloecapsa, which may adversely affect the appearance of roofs.	GAF warrants that its products will remain free from manufacturing defects that adversely affect their performance. If shingles were sold with Algae-Eater™ protection, GAF warrants that blue-green algae will not cause a pronounced discoloration.	GAF warrants that its Weather Stopper roof system will remain free from manufacturing defects and application errors in the Weather Stopper roof system or covered flashings that adversely affect their performance. If shingles were sold with Algae-Eater™ protection, GAF warrants that blue-green algae will not cause a pronounced discoloration. GAF Weather Stopper roof system includes GAF roof shingles, hip and ridge shingles, attic ventilation products and underlayments. Misapplication of the Weather Stopper products and flashings at valleys, dormers, chimneys and plumbing vents are also covered. (See Special Features/Conditions)
4a. Does the warranty provide coverage for defects in manufacture?	Yes	Yes	Yes
4b. Does the warranty provide coverage for defects in application?	No	No	Yes
4c. Does the warranty limit coverage to leakage and, if no, what defects or conditions other than leakage are covered?	No; warranty covers manufacturing defects, Class A fire rating, and algae resistance.	No; warranty covers manufacturing defects that adversely affect performance and blue-green algae discoloration	No; warranty cover manufacturing defects, application errors and covered flashings that adversely affect performances and blue-green algae discoloration.
4d. Does the warranty provide coverage for flashings, metal work, or related work that may be affected and/or need to be repaired or removed?	No	No; however, warranty covers all GAF Weather Stopper™ system components, including ridge vents and underlayment	Yes; warranty covers GAF products and application of flashings at valleys, dormers, chimneys and plumbing vents.
5. Length of Coverage	For manufacturing defects and Class A fire rating: 30 years For algae resistance: five years	For Manufacturing Defects: Life: Country Mansion 40 years: Timberline Ultra, Slateline, Grand Sequoia 30 years: Marquis WeatherMax, Original Timberline 25 years: Royal Sovereign, Timberline 25  Attic Pro and Master Flow ventilation products are warranted for either the 10 or 12 year non-prorated period applicable to the shingles with which they are installed.  For Algae Discoloration: 10 years	For Manufacturing Defects: Life: Country Mansion 40 years: Timberline Ultra, Slateline, Grand Sequoia 30 years: Marquis WeatherMax, Original Timberline 25 years: Royal Sovereign, Timberline 25 12 years: AtticPro and Master Flow  For Application Errors: 12 years For Algae Discoloration: 10 years
5a. Is the warranty prorated?	Yes	Yes	Yes
5b. When does prorating begin?	After ten years for manufacturing defects	After 12 years: Slateline, Grand Sequoia, Country Mansion After 10 years: Royal Sovereign, Marquis WeatherMax, Timberline 25, Original Timberline, Timberline Ultra	After 12 years
5c. What is the prorating formula?	After ten years, warranty is reduced by 1/360 for each month of service from date of installation (so that at the beginning of the eleventh year, warranty would be reduced by 120/360).	Slateline, Grand Sequoia: After 12 years, warranty is reduced by 1/480 for each month of service from the date of installation (so that at the beginning of the 13 <sup>th</sup> year, warranty would be reduced by 144/480). Timberline Ultra: After 10 years, warranty is reduced by 1/480 for each month of service from the date of installation (so that at the beginning of the 11 <sup>th</sup> year, warranty would be reduced by 120/480). Marquis WeatherMax, Original Timberline: After 10 years, warranty is reduced by 1/360 for each month of service from the date of installation (so that at the beginning of the 11 <sup>th</sup> year, warranty would be reduced by 120/360). Royal Sovereign, Timberline 25: After 10 years, warranty is reduced by 1/300 for each month of service from the date of installation (so that at the beginning of the 11 <sup>th</sup> year, warranty would be reduced by 120/300). Country Mansion: After 10 years, warranty is reduced in accordance with the following years of service & prorating adjustment: 11-12 85%, 13-14 80%, 15-16 75%, 17-18 70%, 19-20 65%, 21-22 60%, 23-24 55%, 25-26 50%, 27-28 45%, 29-30 40%, 31-32 35%, 33-34 30%, 35-40 25%, 41-Lifetime 20%.	Timberline Ultra, Slateline, Grand Sequoia: After 12 years warranty is reduced by 1/480 for each month of service from date of installation (so that at the beginning of the 13 <sup>th</sup> year, warranty is reduced by 144/480). Marquis Weather Max, Original Timberline: After 12 years, warranty is reduced by 1/360 for each month of service from date of installation (so that at the beginning of the 13 <sup>th</sup> yr, warranty is reduced by 144/360). Royal Sovereign, Timberline 25: After 12 yrs., warranty is reduced 1/300 for each month of service from date of installation (so that at the beginning of 13 <sup>th</sup> year, warranty is reduced by 144/360). Country Mansion: After 10 years, warranty is reduced in accordance with the following schedule: 11-12 yrs 85%; 13-14 80%, 15-16 75%, 17-18 70%, 19-20 65%, 21-22 60%, 23-24 55%, 25-26 50%, 27-28 45%, 29-30 40%, 31-32 35%, 33-34 30%, 35-40 25%, 41-Lifetime 20%
6. Nature of Remedy	For the first ten years, Elk will elect, at Elk's sole option, whether to pay the reasonable cost of replacement shingles and the cost of labor to install replacement shingles or provide replacement product of similar design and/or color and cost of application labor to install replacement shingles. After ten years, Elk will elect, at Elk's sole option, whether to pay the reasonable prorated cost of replacement shingles, exclusive of the cost of application labor, or provide on a prorata basis replacement product of similar design and/or color. In either case, Elk will not refund or pay any costs for tear-off and disposal of shingles, accessory materials such as fasteners, flashings, vents, underlayment, or any similar costs.	For Manufacturing Defects: For the first 10 or 12 years (depending upon the shingle type), GAF will pay the full reasonable cost of labor to repair or recover any part of the GAF products that are found to have a manufacturing defect that affects performance and will provide replacement products. After the 10 or 12 year period, the repair or recover cost that GAF will pay and the roof products to be provided will be reduced by the amount of use received. For Algae Discoloration: During the first year, GAF will be responsible for either the cost of cleaning shingles or the cost to repair or recover shingles up to a maximum of the original installed cost of the affected shingles. For the 9 year balance of the 10 year warranty period, GAF's maximum contribution will be reduced by the amount of use received.	For Manufacturing Defects or Misapplication: For the first 12 years, if any part of the roof system is found to have manufacturing defects or there are application errors, GAF will arrange to have roof repaired or recovered or, at its sole option, will provide replacement roofing products and reimburse for the full reasonable cost of labor and other materials to repair or recover roof, including flashings at valleys, dormers, chimneys, and plumbing vents. After the first 12 years, GAF will compensate only if there is a covered manufacturing defect, and the repair or recover cost which GAF will pay and the roofing products to be provided, will be reduced by amount of use received. For Algae Discoloration: During the first year, GAF will contribute either the cost of cleaning shingles or the cost to repair or recover shingles up to the maximum of the original installed cost of the affected shingles. For the next 9 years, GAF's maximum contribution will be based upon the applicable dollar per square value, reduced by the amount of use received (See Item #7).
6a. Does the warranty provide for furnishing of replacement shingles?	Yes	Yes	Yes
6b. Does the warranty provide for labor to install replacement shingles?	Yes, for the first ten years; no, for the balance of the warranty.	Yes	Yes
6c. Does the warranty provide for labor to remove defective shingles?	No	No	Yes

<b>6d. Does the warranty cover disposal of defective shingles?</b>	No	No	Yes
<b>6e. Does the warranty apply to any materials other than shingles?</b>	No	Warranty covers all GAF Weather Stopper™ products	Warranty covers all GAF Weather Stopper™ products
<b>7. Is there a monetary limitation?</b>	During the first year, Elk shall pay the reasonable replacement cost of shingles and application labor or provide replacement shingles of similar design or pay the reasonable cost for repair of the shingles. After the first year, the replacement cost which Elk will pay will be reduced by the amount of usage received from the shingles.	For Manufacturing Defects: After the initial 10 or 12 year period (depending upon the shingle type, GAF's maximum liability shall not exceed three times the applicable dollar per square value (before any reduction for use) Country Mansion: \$120/sq. Grand Sequoia: \$80/sq. Timberline Ultra: \$55/sq. Slateline: \$50/sq. Original Timberline: \$45/sq. Timberline 25: \$40/sq. Marquis WeatherMax: \$35/sq. Royal Sovereign: \$30/sq.  For Algae Discoloration: During the first year, GAF's maximum contribution shall be the original installed cost of the affected shingles. After the first year, GAF's maximum contribution will be based upon the dollar per square value, reduced by the amount of use received.	For Manufacturing Defects: After the initial 12 year period, GAF's maximum liability shall not exceed three times the dollar per square value before any reduction for use: Country Mansion: \$120/sq. Grand Sequoia: \$80/sq. Timberline Ultra: \$55/sq. Slateline: \$50/sq. Original Timberline: \$45/sq. Timberline 25: \$40/sq. Marquis WeatherMax: \$35/sq. Royal Sovereign: \$30/sq.  For Algae Discoloration: During the first year, GAF's maximum contribution shall be the original installed cost of the affected shingles. After the first year, GAF's maximum contribution will be based upon the above dollar per square value, reduced by the amount of use received.
<b>8. Specific Exclusions from Coverage (See Warranty Introduction for codes.)</b>	1, 2, 3, 4, 8, 9, 10, 11, 13, 17, 19, 21. Warranty also excludes claims by subsequent owners or transferees and damage caused by decking nails or staples backing out and either perforating or pushing up the shingles.	1, 2, 4, 6, 8, 9, 10, 11, 13, 1, 19, 20, 23, 24	1, 2, 4, 6, 8, 9, 10, 11, 13, 14, (unless shingles were sold with Algae-Eater protection), 15, 17, 19, 20, 23, 24. Warranty also excludes improperly designed or installed gutter or downspout systems.
<b>9. Wind Coverage/Exclusion</b>	During the first five years, Elk's Prestige shingles will be resistant to blow-offs in wind velocities up to 60 mph, provided the thermal sealant has properly activated. Elk's obligation is to pay the reasonable cost of replacing shingles that have blown-off and the reasonable cost of manually sealing any unsealed shingles which have had adequate exposure to heat. Warranty is conditioned upon application in accordance with Elk application instructions printed on the shingle wrapper. In order for sealing to occur, the shingles must be exposed to adequate heat from surface temperatures or sunlight. Failure of shingles to seal due to insufficient heat exposure is not a manufacturing defect.	For the first 5 years after application, GAF warrants against shingle blow-off and damage by winds up to the maximum wind speeds listed below after thermal sealing should have occurred and did not due to a manufacturing defect Country Mansion, Grand Sequoia, Slateline, Timberline Ultra, Marquis WeatherMax – 80 mph; Original Timberline – 70 mph; Sentinel, Royal Sovereign, Timberline 25-60 mph. GAF will reimburse for the reasonable costs of replacing blown-off shingles (exclusive of underlayment, metal work or flashings) and hand sealing any remaining unsealed shingles. All self-sealing shingles must be subjected to warm sunlight for several days before full thermal sealing can occur. Shingles installed in fall or winter may not seal until the following spring. Failure to seal or shingles that blow off under these circumstances result from the nature of self-sealing shingles, not a manufacturing defect.	For the first 12 years after application, GAF warrants its shingles against blow-off or damage by winds up to the maximum wind speeds listed below and that its shingles will not fail to seal.  Country Mansion: 80 mph Grand Sequoia: 80 mph Timberline Ultra: 80 mph Slateline: 80 mph Original Timberline: 70 mph Timberline 25: 60 mph Marquis WeatherMax: 80 mph Royal Sovereign: 60 mph GAF will reimburse only for the reasonable costs of replacing the blown-off shingles and hand sealing any remaining unsealed shingles.
<b>10. Notification Requirements</b>	Written notification of alleged defect with a copy of warranty card and proof of purchase of the shingles to Elk, 4600 15th Street, Tuscaloosa, AL 35401, or P.O. Box 500, Ennis, TX 75120-0500, within 30 days of discovery of a problem. The owner may be requested to submit samples of shingles and photographs.	Owner must send a notice of claim in writing, together with proof of purchase to establish original ownership (or proof to transfer if the second owner has properly transferred coverage) and proof of application date, to GAF Materials Corporation Warranty Service Department, 1361 Alps Road, Wayne, NJ 07470, within 30 days after discovery of alleged defect. Owner may be required, at its expense, to submit sample shingles for testing and photographs.	Owner must send a notice of claim in writing, together with proof of ownership (or proof of transfer if the second owner has properly transferred coverage), to GAF Materials Corporation Warranty Service Department, 1361 Alps Road, Wayne, NJ 07470, within 30 days after discovery of alleged claim. Owner may be required, at its expense, to submit sample roof products for testing and photographs.
<b>11. Determination of Warranty Applicability</b>	Elk will make investigation, including roof top inspection by an Elk employee and laboratory testing of the suspect product. If the investigation reveals manufacturing defects covered by warranty, Elk will provide a settlement within a reasonable time.	Decisions as to the extent of repair, recover or cleaning required, whether the shingles should be repaired, recovered or cleaned, and the reasonable cost of such work, will be made solely by GAF	Decisions as to the extent of repair, recover or cleaning required, whether the shingles should be repaired, recovered or cleaned, and the reasonable cost of such work, will be made solely by GAF
<b>12. Does the issuing entity manufacture and/or sell the shingles?</b>	Elk manufactures and sells the shingles.	GAF manufacturers and sells the shingles.	GAF manufacturers and sells the products
<b>13. Specific Conditions to Make Warranty Ineffective or Void (See Warranty Introduction for codes.)</b>	A, C, E, G	C	C
<b>14. Inclusion of Consequential Damages</b>	No	No	No
<b>15. Assignability</b>	Warranty is not assignable or transferable under any circumstances.	Warranty coverage terminates upon sale of building and warranty may not be transferred or assigned, directly or indirectly, except for one transfer to a new owner as follows: (a) The second owner must notify GAF in writing within 30 days after the property transfer has occurred. (b) If the transfer takes place within the first 12 years for Slateline, Grand Sequoia or Country Mansion or within the first 10 years for Royal Sovereign, Marquis WeatherMax, Timberline 25, Original Timberline, or Timberline Ultra, the second owner shall be entitled to all benefits contained in warranty. (c) If the transfer takes place after the 12 or 10 year period ends, the length of the warranty shall be reduced to a two-year period after ownership changes. During this two-year period, GAF's reimbursement to the second owner will be based on the dollar per square value, reduced by the amount of use that has been received from date of installation	Warranty coverage terminates upon sale of building and warranty may not be transferred or assigned, directly or indirectly, except for one transfer to a new owner as follows: (a) The second owner must notify GAF in writing within 30 days after the property transfer has occurred. (b) If the transfer takes place within the first 12 years, the second owner shall be entitled to all benefits contained in warranty. (c) If the transfer takes place after 12 years, the length of the warranty shall be reduced to a two-year period after ownership changes. During this two-year period, GAF's reimbursement to the second owner will be based only on the dollar per square value, reduced by the amount of use that has been received from the roof from date of installation.
<b>16. Cost to Obtain</b>	None	Manufacturer charges for this warranty; however, they refused to provide costs. Contact manufacturer directly for specific pricing information.	Manufacturer charges for this warranty; however, they refused to provide costs. Contact manufacturer directly for specific pricing information.
<b>17. Is the warranty backed by insurance coverage?</b>	Elk indicates that it is self-insured	No	No
<b>18. Is the warranty an additional or exclusive remedy for the owner?</b>	Statement in the warranty constitutes the only warranty extended by Elk.	Warranty is exclusive and replaces all other warranties, express or implied. Warranty is exclusive remedy from GAF and represents the sole remedy available to any owner of GAF's shingles. GAF makes no other representations or warranty of any kind. Warranty may not be changed or modified. No one, including any representative or employee of GAF, has authority to assume any additional liability or responsibility for GAF	Warranty is exclusive and replaces all other warranties, express or implied. Warranty is owner's exclusive remedy from GAF and represents the sole remedy available to any owner of GAF's shingles. GAF makes no other representations or warranty of any kind. Warranty may not be changed or modified. No one, including any representative or employee of GAF, has authority to assume any additional liability or responsibility for GAF.
<b>19. Special Features/Conditions</b>	Yes, original homeowner and contractor must complete warranty registration form and return to Elk, 14643 Dallas Parkway, Suite 1000, Dallas, TX 75350 within 30 days after the installation.	GAF reserves the right to arrange directly for shingles to be repaired, recovered or cleaned instead of reimbursing owner for such work. GAF reserves the right to discontinue or modify its shingles, including the colors available, so any replacement shingles may not be an exact match. Notice of claim to contractor or dealer is not notice to GAF. GAF will send owner notification that warranty has been registered. If notification has not been received within 45 days after installation, contact GAF at 1-888-532-5767. Warranty not effective until written confirmation received from GAF.	Roof system must be installed by a GAF Master Elite Residential Roofing Contract. The roof system must not be installed over an existing roof; all existing materials must be removed to deck. COBRA ridge ventilation must be used in conjunction with adequate soffit ventilation. If claim arises out of an application error in the roof system or covered flashings which is discovered or discoverable within the first two years after installation, it is the obligation of the Master Elite roofing contractor to make all necessary repairs. In the event that the Master Elite roofing contractor is unable or unwilling to perform these repairs, GAF will arrange to have roof repaired. GAF reserves the right to discontinue or modify its shingles, including the colors available, so any replacement shingles may not be an exact match. Notice of claim to contractor or dealer is not notice to GAF.
<b>20. Executed by Owner?</b>	Yes, original homeowner and contractor must complete warranty registration form and return to Elk, 14643 Dallas Parkway, Suite 1000, Dallas, TX 75350 within 30 days after the installation.	No; contractor must complete and return warranty application form along with proof of purchase and the appropriate fee. (See special features/conditions.)	Contractor must complete and return warranty application form and the appropriate fee.

# ASPHALT SHINGLE WARRANTIES

1. Identity of issuing entity	GAF Materials Corporation	Georgia-Pacific Corporation	Globe Building Materials Inc.
2. Title, original publication date, and identifying symbol, if any	"GAF Smart Choice Shingle Limited Warranty," February 1999; 0649-199-100M RESWT150	"Limited Shingle Warranty"; January 1996; Lit. Item #041350	"Premium Product Warranty," January 1999
3. Products covered	Sentinel, Royal Sovereign, Marquis WeatherMax, Timberline 25, Original Timberline, Timberline Ultra, Slateline, Grand Sequoia, Country Mansion	Summit III, Summit, Tough-Glass Plus, Tough-Glass, Tough-Glass T-Lock, Premium-25, Asphalt-20, Asphalt T-Lock	Copper Mountain Shadow, Aspen Shadow, Premier Shadow, ProSeal 30, ProSeal 30 Rx
4. Scope of coverage	GAF warrants that its roofing shingles will remain free from manufacturing defects that adversely affect their performance (during an initial 3, 5 or 10 year period) (See Item No. 5b below) or cause leaks (during the entire warranty term). If shingles were sold with Algae-Eater™ protection, GAF warrants that blue-green algae will not cause a pronounced discoloration.	Georgia-Pacific warrants the roofing shingles are free from manufacturing defects, which would reduce the usable life of the shingles. Georgia-Pacific warrants that its algae resistant shingles will remain free of obvious and unsightly discoloration due to algae growth.	Provided shingles have been installed in accordance with Globe's written installation instructions, Globe warrants that the shingles will be free from manufacturing defects. Globe shingles that contain 3M Algae Block (Copper Mountain Shadow and ProSeal 30 Rx) are warranted against discoloration or staining due to algae growth.
4a. Does the warranty provide coverage for defects in manufacture?	Yes	Yes	Yes
4b. Does the warranty provide coverage for defects in application?	No	No	No
4c. Does the warranty limit coverage to leakage and, if no, what defects or conditions other than leakage are covered?	No; warranty covers manufacturing defects that adversely affect performance and blue-green algae discoloration	No; warranty covers manufacturing defects that would reduce the usable life of the shingles and algae resistance.	No; Copper Mountain Shadow and ProSeal 30 Rx are also warranted against discoloration or staining due to algae growth.
4d. Does the warranty provide coverage for flashings, metal work, or related work that may be affected and/or need to be repaired or removed?	No	No	No
5. Length of Coverage	<p>For Manufacturing Defects: Life: Country Mansion 40 years: Timberline Ultra, Slateline, Grand Sequoia 30 years: Marquis WeatherMax, Original Timberline 25 years: Royal Sovereign, Timberline 25 20 years: Sentinel</p> <p>For Algae Discoloration: 10 years: Royal Sovereign, Marquis WeatherMax, Timberline 25, Original Timberline, Timberline Ultra, Slateline, Grand Sequoia, Country Mansion 7 years: Sentinel</p>	<p>For Manufacturing Defects: 40 years: Summit III 30 years: Summit, 25 years: Tough-Glass Plus, Tough-Glass T-Lock, Premium-25, Asphalt T-Lock 20 years: Tough-Glass, Asphalt-20</p> <p>For Algae Resistance: 10 years</p>	<p>For Manufacturing Defects: 40 years: Copper Mountain Shadow 30 years: Aspen Shadow, Premier Shadow, ProSeal 30, ProSeal 30 Rx For Algae Resistance (for Copper Mountain Shadow and ProSeal 30 Rx): 10 years For Wind Resistance: 5 years</p>
5a. Is the warranty prorated?	Yes	Yes	Yes
5b. When does prorating begin?	After 10 years: Slateline, Grand Sequoia, Country Mansion After 5 years: Royal Sovereign, Marquis WeatherMax, Timberline 25, Original Timberline, Timberline Ultra After 3 years: Sentinel	After five years: Summit III, Summit, After three years: Tough-Glass Plus, Tough-Glass, Tough-Glass T-Lock, Premium-25, Asphalt-20, Asphalt T-Lock	For Manufacturing Defects: After 5 years For Algae Resistance: After 1 year
5c. What is the prorating formula?	<p>Slateline, Grand Sequoia: After 10 years, warranty is reduced by 1/480 for each month of service from date of installation (so that at the beginning of the 11<sup>th</sup> years, warranty would be reduced by 120/480).</p> <p>Marquis WeatherMax: After 5 years, warranty is reduced by 1/360 for each month of service from the date of installation (so that at the beginning of the 6<sup>th</sup> year, warranty would be reduced by 60/360).</p> <p>Royal Sovereign, Timberline 25: After 5 years, warranty is reduced by 1/360 for each month of service from the date of installation (so that at the beginning of the 6<sup>th</sup> year, warranty would be reduced by 60/300).</p> <p>Sentinel: After 3 years, warranty is reduced by 1/240 for each month of service from the date of installation (so that at the beginning of the 4<sup>th</sup> year, warranty would be reduced by 36/240).</p> <p>Country Mansion: After 10 years, warranty is reduced in accordance with the following years of service &amp; prorating adjustment: 11-12 85%, 13-14 80%, 15-16 75%, 17-18 70%, 19-20 65%, 21-22 60%, 23-24 55%, 25-26 50%, 27-28 45%, 29-30 40%, 31-32 35%, 33-34 30%, 35-40 25%, 41-Lifetime 20%.</p>	<p><b>Summit III:</b> After initial five years, warranty is reduced by 1/480 for each month since original installation (so that at beginning of sixth year, warranty would be reduced by 60/480).</p> <p><b>Summit:</b> After initial five years, warranty is reduced by 1/360 for each month since original installation (so that at beginning of sixth year, warranty would be reduced by 60/360).</p> <p><b>Tough-Glass Plus, Tough-Glass T-Lock, Premium-25, Asphalt T-Lock:</b> After initial three years, warranty is reduced by 1/300 for each month since original installation (so that at beginning of fourth year, warranty would be reduced by 36/300).</p> <p><b>Tough-Glass, Asphalt-20:</b> After initial three years, warranty is reduced by 1/240 for each month since original installation (so that at beginning of fourth year, warranty would be reduced by 36/240).</p>	<p>Copper Mountain Shadow: After 5 years, warranty is reduced by 3.3% annually commencing with date of application.</p> <p>Aspen Shadow, Peirmie Shadow, ProSeal 30, ProSeal 30 Rx: After 5 years, warranty is reduced by 3.3% annually commencing with date of application.</p>
6. Nature of Remedy	For Manufacturing Defects: For the first 3, 5 or 10 years (depending upon the shingle type, see Item 5b), GAF will pay the full reasonable cost of labor to repair or recover the defective shingles (exclusive of underlayment, metal work or flashings) and will provide replacement shingles. After the first 3, 5 or 10 year period, GAF will contribute a pro-rated amount or, at GAF's sole option, provide replacement shingles. For Algae Discoloration: During the first year, GAF will contribute either the cost of cleaning shingles or repairing or replacing shingles up to a maximum of the original installed cost of the affected shingles. For the next 6 years for Sentinel and for the next 9 years for the other GAF shingles, GAF's maximum contribution will be reduced by the amount of use received.	Georgia-Pacific is liable for cost to repair or replace defectively manufactured shingles. For algae resistant shingles, Georgia-Pacific's liability shall be to pay the reasonable cost of repair or replacement subject to pro-rating. During the initial three- or five-year period (depending upon the type of shingle), the maximum repair or replacement cost to Georgia-Pacific shall be the replacement cost of those shingles exhibiting discoloration due to algae, including replacement installation costs. For the remainder of the warranty, the maximum repair or replacement cost to Georgia-Pacific shall be the replacement cost of those shingles exhibiting discoloration, in proportion to the unexpired warranty period, excluding all installation costs.	For manufacturing defects, Globe will supply material and labor necessary, at its option, to repair or replace any shingles proven to contain manufacturing defects which have resulted in leaks during the first 5 years. After 5 years, Globe's maximum liability shall be a prorated amount of the reasonable replacement material cost only. For Algae Resistance (Copper Mountain Shadow, ProSeal 30 Rx): In the first year, the maximum repair or replacement cost shall be the original cost of those shingles exhibiting discoloration due to algae growth, including the original installation cost. During years two (2) through ten (10), a prorated portion of the maximum repair or replacement cost shall be the original cost of those shingles exhibiting discoloration, excluding installation costs. From years eleven (11) through the end of the specific shingle's warranty, Globe's maximum liability will be computed by using the original purchase price of the Globe algae resistant shingles minus the purchase price of the comparable Globe non-algae resistant shingle times the number of years since installation divided by the length of the specific shingle's warranty.
6a. Does the warranty provide for furnishing of replacement shingles?	Yes	Yes	Yes
6b. Does the warranty provide for labor to install replacement shingles?	Yes; however, after the initial 3, 5 or 10 year period (depending upon shingle type), GAF may provide replacement shingles at its sole option.	For the first five years for Summit III, Summit, and for the first three years for Tough-Glass Plus, Tough-Glass, Tough-Glass T-Lock, Premium-25, Asphalt-20, Asphalt T-Lock warranty covers replacement application cost, exclusive of metal work, flashing or other work. For the balance of the warranty, labor costs are excluded.	Yes, during the first 5 years. No, after 5 years
6c. Does the warranty provide for labor to remove defective shingles?	No	For the first five years for Summit III, Summit, and for the first three years for Tough-Glass Plus, Tough-Glass, Tough-Glass T-Lock, Premium-25, Asphalt-20, Asphalt T-Lock, warranty covers replacement cost, plus replacement application cost, exclusive of metal work, flashing or other work. For the balance of the warranty, tear off costs are excluded.	No
6d. Does the warranty cover disposal of defective shingles?	No	No	No
6e. Does the warranty apply to any materials	No	No	No

<b>other than shingles?</b>		No	
<b>7. Is there a monetary limitation?</b>	For Manufacturing Defects: After the initial 3, 5 or 10 year period (depending upon the shingle type), GAF's contribution will be based on either the following dollar per square value or, at GAF's sole option, on providing replacement shingles, reduced by the amount of use received:  Country Mansion: \$120/sq.      Grand Sequoia: \$ 80/sq. Timberline Ultra: \$ 55/sq.      Slateline: \$ 50/sq. Original Timberline: \$ 45/sq.      Timberline 25: \$ 40/sq. Marquis WeatherMax: \$ 35/sq.      Royal Sovereign: \$ 30/sq. Sentinel: \$ 25/sq.  For Algae Discoloration: After the first year, GAF's maximum contribution will be based upon the above dollar per square value, reduced by the amount of use received.	For the first five years for Summit III, Summit, and for the first three years for Tough-Glass Plus, Tough-Glass, Tough-Glass T-Lock, Premium-25, Asphalt-20, Asphalt T-Lock, the maximum repair or replacement cost to Georgia-Pacific shall not exceed the replacement cost to the owner for the shingles, plus replacement application cost, exclusive of metal work, flashing or other costs. For the balance of the warranty, Georgia-Pacific's liability excludes any cost for tear-off or replacement installation of new shingles and is prorated.	After 5 years, Globe's maximum liability for the cost of repair or replacement of defective shingles shall be a prorated amount of the reasonable replacement material cost only.
<b>8. Specific Exclusions from Coverage (See Warranty Introduction for codes.)</b>	1, 2, 4, 6, 8, 9, 10, 11, 13, 17, 19, 20, 23, 24	1, 2, 4, 8, 13, 19, 23, 24	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14 (unless shingle includes 3M Algae Block Copper Granule Roofing System), 16, 19, 20, 23
<b>9. Wind Coverage/Exclusion</b>	For the last 5 years after application, GAF warrants its shingles against blow-off or damage by winds up to the maximum winds speeds listed below after thermal sealing should have occurred and did not due to manufacturing defect: Country Mansion, Grand Sequoia, Slateline, Timberline Ultra, Marquis WeatherMax – 80 mph; Original Timberline – 70 mph; Sentinel, Royal Sovereign, Timberline 25-60 mph. GAF will reimburse for the reasonable costs of replacing blown-off shingles (exclusive of underlayment, metal work or flashings) and hand sealing any remaining unsealed shingles. All self-sealing shingles must be subjected to warm sunlight for several days before full thermal sealing can occur. Shingles installed in fall or winter may not seal until the following spring. Failure to seal or shingles that blow off under these circumstances result from the nature of self-sealing shingles, not a manufacturing defect.	Georgia-Pacific warrants that its Summit III, Summit, Tough-Glass Plus, Tough-Glass, Tough-Glass T-Lock, Premium-25, Asphalt-20, Asphalt T-Lock will resist damage by wind gusts up to a maximum of 54 mph for the first five years after installation. If, during this five year period, damage occurs to the shingles as a result of wind gusts under 54 mph, Georgia-Pacific will furnish at no charge, replacement shingles for the damaged shingles only, but no replacement labor. Shingles installed under conditions which temporarily or permanently preclude activation of the sealant must be hand sealed at the time of installation. In the event the shingles fail to self-seal after proper installation and climatic exposure, Georgia-Pacific's sole responsibility shall be to pay a reasonable cost to hand seal the affected shingles. In order to activate the sealant feature, the shingles must be exposed to warm sunlight for a continued period of time.	Globe warrants for the initial 5 years that its shingles will resist blow offs due to wind velocities up to a maximum of 60 mph provided application is in accordance with Globe's application instructions and upon the occurrence of thermal sealing of the shingles. In order for sealing to occur, shingles must be exposed to sufficient sunlight to generate enough thermal heat to activate the sealing strip. It is not a manufacturing defect if asphalt shingles installed in fall or winter fail to seal until the following summer when thermal heat is sufficient to cause sealing. Shingles which do not receive direct sunlight or are not exposed to adequate surface temperatures may never seal. If blow-off occurs within the first 5 years after proper application and thermal heat has been sufficient for proper sealing, Globe will furnish replacement shingles for those damaged or missing without charge, but will not be responsible for labor costs pertaining to removal or replacement of damaged shingles. In the event the shingles contain self-sealing strips which fail to activate after proper installation and climatic exposure, Globe shall have no liability unless it is afforded the opportunity to hand seal, at its sole expense, any nonsealing shingles within the first year after application. Any costs in excess of Globe's contribution shall be the owner's responsibility.
<b>10. Notification Requirements</b>	Owner must send a notice of claim in writing, together with proof of purchase to establish original ownership (or proof to transfer if the second owner has properly transferred coverage) and proof of application date, to GAF Materials Corporation Warranty Service Department, 1361 Alps Road, Wayne, NJ 07470, within 30 days after discovery of alleged defect. Owner may be required, at its expense, to submit sample shingles for testing and photographs.	Any claim made must be in writing and mailed along with the proof of purchase to Atlas Roofing Corporation [sic], Attention: Consumer Services, 2322 Valley road, Meridian, MS 39307-9805 within five days after discovery of the alleged defect prior to any repairs being made.	Written notification to Globe within 30 days of discovery of any alleged shingle manufacturing defects which result in leaks through the shingle or wind damage. Proof of purchase and application must accompany written notice to Globe Building Materials, Inc., Customer Service Department, 2230 Indianapolis Boulevard, Whiting, IN 46394. Owner is responsible for supplying samples of shingles and photographs showing problem, at owner's expense, if requested by Globe.
<b>11. Determination of Warranty Applicability</b>	Decisions as to the extent of repair, recover or cleaning required, whether the shingles should be repaired, recovered or cleaned, and the reasonable cost of such work, will be made solely by GAF	Within 45 days from receipt of notice, Georgia-Pacific will investigate claim, or at its option, designate in writing another party including the owner to procure samples and forward them to Georgia-Pacific.	Neutral (no provision)
<b>12. Does the issuing entity manufacture and/or sell the shingles?</b>	GAF manufacturers and sells the shingles.	Georgia-Pacific sells shingles only.	Globe manufacturers and sells the shingles.
<b>13. Specific Conditions to Make Warranty Ineffective or Void (See Warranty Introduction for codes.)</b>	C	C, E. Warranty also states that warranty will be void if information submitted on warranty information form is erroneous.	None
<b>14. Inclusion of Consequential Damages</b>	No	No	No
<b>15. Assignability</b>	Warranty coverage terminates upon sale of building and warranty may not be transferred or assigned, directly or indirectly, except for one transfer as follows: (a) The second owner must notify GAF in writing within 30 days after the property transfer has occurred. (b) If the transfer takes place within the first 10 years for Slateline, Grand Sequoia or Country Mansion or within the first 5 years for Royal Sovereign, Marquis WeatherMax, Timberline 25, Original Timberline, or Timberline Ultra, or within the first 3 years for Sentinel, the second owner shall be entitled to all benefits contained in warranty. (c) If the transfer takes place after the initial 10, 5 or 3 year period ends, the length of the warranty shall be reduced to a two-year period after ownership changes. During this two-year period, GAF's reimbursement to the second owner will be based on the dollar per square value, reduced by the amount of use that has been received from date of installation.	Warranty may be transferred to new buyers of the building only when title to the real estate is transferred.	Warranty is not transferable
<b>16. Cost to Obtain</b>	None	None	None
<b>17. Is the warranty backed by insurance coverage?</b>	No	Georgia-Pacific indicates that it is self-insured.	No
<b>18. Is the warranty an additional or exclusive remedy for the owner?</b>	Warranty is exclusive and replaces all other warranties, express or implied. Warranty is exclusive remedy from GAF and represents the sole remedy available to any owner of GAF's shingles. GAF makes no other representations or warranty of any kind. Warranty may not be changed or modified. No one, including any representative or employee of GAF, has authority to assume any additional liability or responsibility for GAF	Warranty is sole and exclusive remedy. Georgia-Pacific makes no representation or warranty of any kind, other than as set forth in the limited warranty. Georgia-Pacific's liability is limited to the provisions of the warranty, whether any claim against it is based upon strict liability, negligence, breach of warranty or any other theory or cause of action. No person is authorized to alter the warranty either orally or in writing.	Globe makes no warranties other than those stated in warranty; warranty constitutes the complete and exclusive statement of the terms of the agreement between Globe and the owner.
<b>19. Special Features/Conditions</b>	GAF reserves the right to arrange directly for shingles to be repaired, recovered or cleaned instead of reimbursing owner for such work. GAF reserves the right to discontinue or modify its shingles, including the colors available, so any replacement shingles may not be an exact match. Notice of claim to contractor or dealer is not notice to GAF		If Globe and the owner cannot reach agreement as to matters covered by warranty, Globe and the owner agree that such matters shall be settled by arbitration in accordance with the Center for Public Resources Rules for Non-Administered Arbitration of Business Disputes by one arbitrator, who shall not be appointed by either party. Pending final award, arbitrator compensation and expenses shall be advanced equally by the parties. The arbitration shall be governed by the United States Arbitration Act, 9 U.S.C. §§ 1-16. If the United States Arbitration Act is determined not to govern the arbitration, then it shall be governed by the Illinois Arbitration Act. The place of arbitration shall be Chicago, Illinois, at such location as the arbitrator directs. No representative of Globe, or its dealer and distributors, are authorized to make any change or modification to the warranty.
<b>20. Executed by Owner?</b>	No; owner should have contractor or deal sign and date warranty certificate to help establish proof of purchase	No	Yes; homeowner must complete warranty registration card and return it to Globe Building Materials, 2230 Indianapolis Boulevard, Whiting, IN 46394, within 30 days

## ASPHALT SHINGLE WARRANTIES

<b>1. Identity of issuing entity</b>	<b>Globe Building Materials Inc.</b>	<b>Herbert Malarkey Roofing Company</b>	<b>Herbert Malarkey Roofing Company</b>
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<b>2. Title, original publication date, and identifying symbol, if any</b>	"Limited Warranty;" February 1998	Legacy-35 Limited Warranties"; August 1, 1997	Herbert Malarkey Roofing Company A Limited Warranties for the Hurricane Shingle; 1993
<b>3. Products covered</b>	Globe 25, Globe 30, French Estate, French Royale, Klip-Lok, Premier Shake 25, Super Seal, Super Seal Rx, Windlok, Cascade 25	Legacy-35 shingles	Hurricane Shingles, Type 240 SBS Metric Polyglass
<b>4. Scope of coverage</b>	Provided shingles have been installed in accordance with Globe's written installation instructions, Globe warrants that the shingles will be free from manufacturing defects which result in leakage. Globe shingles that contain the 3M Algae Block (Super Seal Rx) are warranted against discoloration or staining due to algae growth	Malarkey warrants to the original home/building owner that the Legacy-35 shingles are free from manufacturing defects that reduce the life of the shingle. Legacy-35 shingles using 3M Algae Block will resist discoloration or staining due to algae growth which causes an obvious and unsightly appearance on the granules.	The Hurricane shingles are free from manufacturing defects.
<b>4a. Does the warranty provide coverage for defects in manufacture?</b>	Yes	Yes	Yes
<b>4b. Does the warranty provide coverage for defects in application?</b>	No	No	No
<b>4c. Does the warranty limit coverage to leakage and, if no, what defects or conditions other than leakage are covered?</b>	No; Super Seal Rx is also warranted against discoloration or staining due to algae growth.	No; warranty covers manufacturing defects, including algae resistance.	No; warranty covers manufacturing defects, including algae resistance. (See Item 19 below.)
<b>4d. Does the warranty provide coverage for flashings, metal work, or related work that may be affected and/or need to be repaired or removed?</b>	No	No	No
<b>5. Length of Coverage</b>	For Manufacturing Defects: After 5 yrs: French; Estate, French royale, Klip-Lok, Premier Shake 25, Super Seal, Super Seal Rx, Windlok, Cascade 25 After 3 yrs: Globe 30, Globe 25 For Algae Resistance: 10 years For Wind Resistance: 5 years	Manufacturing Defects: 35 years (See Item 15 below.) Algae Resistance: 15 years Wind: 5 years	30 years
<b>5a. Is the warranty prorated?</b>	Yes	Yes	Yes
<b>5b. When does prorating begin?</b>	For Manufacturing Defects: After 5 years: French Estate, French Royale, Klip-Lok, Premier Shake 25, Super Seal, Super Seal Rx, Windlok, Cascade 25; After 3 years: Globe 30, Globe 25 For Algae Resistance: After 1 year.	After seven years	After one year
<b>5c. What is the prorating formula?</b>	Globe 30: After 3 yrs. Warranty is reduced 3.3% annually commencing with date of installation. Globe 25: After 3 yrs. Warranty is reduced by 4% annually commencing with date of installation. French; Estate, French Royale, Klip-Lok, Premier Shake 25, Super Seal, Super Seal RX, Windlok, Cascade 25: after 5 yrs, warranty is reduced by 4% annually commencing with date of installation.	After seven years, warranty is reduced by 1/420 for each month since original application, less all sums previously paid (so that at the beginning of the eighth year, warranty would be reduced by 84/420 plus any sums previously paid).	After one year, warranty is reduced by 1/360 for each month since original application, less all sums previously paid (so that at the beginning of the second year, warranty would be reduced by 12/360 plus any sums previously paid).
<b>6. Nature of Remedy</b>	For manufacturing defects, Globe will supply material and labor necessary, at its option, to repair or replace shingles proven to contain manufacturing defects which have resulted in leaks during the first 3 years for Globe 25 and Globe 30 and for 5 years for other shingles. After the initial 3 or 5 year period, Globe's maximum liability shall be a prorated amount of the reasonable replacement material cost only.  For Algae Resistance (Super Seal Rx): In the first year, the maximum repair or replacement cost shall be the original cost of those shingles exhibiting discoloration due to algae growth, including the original installation cost. During years two (2) through ten (10), the maximum repair or replacement cost shall be the original cost of those shingles exhibiting discoloration, excluding all installation costs. From years eleven (11) through the end of the specific shingle's warranty, Globe's maximum liability will be computed by using the original purchase price of the Globe algae resistant shingles minus the purchase price of the comparable Globe non-algae resistant shingle times the number of years since installation divided by the length of the specific shingle's warranty.	Malarkey's sole liability is, at its option, to repair or replace the defective shingles or to pay the owner an amount not exceeding the replacement cost of the shingles plus reasonable installation costs. After verification that the shingles are defective, Malarkey will perform its obligation within 45 days of receipt of notice, unless performance is delayed by causes beyond Malarkey's control. For Algae resistant shingles, Malarkey's sole liability is, at its option, to repair or replace the defective shingles, or to pay to the owner an amount not exceeding the original cost of the shingles plus reasonable installation costs. For the first year, the payment to the owner for those shingles exhibiting discoloration due to algae will be an amount not exceeding the original cost of the defective shingles plus reasonable installation costs. During the remaining fourteen year warranty period, the maximum repair or replacement payment will be an amount not exceeding the original cost of those shingles exhibiting discoloration, excluding all installation costs, less a percentage which is based on the number of months elapsed in the warranty period divided by the fifteen year warranty period.	Malarkey's sole liability is, at its option, to repair or replace the defective shingles, or to pay to the owner an amount not exceeding the original cost of the shingles plus reasonable installation costs. After one year, the warranty is prorated. After verification that the shingles are defective, Malarkey will perform its obligations within 45 days of receipt of notice, unless performance is delayed by causes beyond Malarkey's control.
<b>6a. Does the warranty provide for furnishing of replacement shingles?</b>	No	Yes	Yes
<b>6b. Does the warranty provide for labor to install replacement shingles?</b>	Yes, during the first 3 years for Globe 25 & Globe 30; and for 5 years for the other shingles. No, after the first 3 years for Globe 25 & Globe 30 and after 5 years for the other shingles.	Yes	Yes
<b>6c. Does the warranty provide for labor to remove defective shingles?</b>	No	No	Warranty states that Malarkey will repair or replace defective shingles or make payment to the owner. [Malarkey indicates that warranty does not provide for labor to remove defective shingles.]
<b>6d. Does the warranty cover disposal of defective shingles?</b>	No	No	No
<b>6e. Does the warranty apply to any materials other than shingles?</b>	No	No	No

<b>7. Is there a monetary limitation?</b>	After 3 years for Globe 25 and Globe 30 shingles and after 5 years for the other shingles, Globe's maximum liability for the cost of repair or replacement of the defective shingles shall be a prorated amount of the reasonable replacement material cost only.	For the first seven years, Malarkey's maximum liability shall be equal to the reasonable replacement costs of the defective shingles plus reasonable installation costs, less all sums previously paid under the warranty. After seven years, Malarkey's maximum repair or replacement payment to the owner will be an amount not exceeding the replacement cost of the defective shingles plus reasonable installation costs, less a percentage based on the number of months elapsed in the warranty period divided by 420 months warranty period, less all sums previously paid under this warranty.	For the first year, Malarkey's liability shall not exceed the original cost of the shingles plus reasonable installation costs. After one year, Malarkey's maximum contribution toward the repair or replacement payment to the owner will not exceed the original cost of the defective shingles plus installation costs, less a percentage based on the number of months elapsed in the warranty period divided by the 360 month warranty period, less all sums previously paid under the warranty.
<b>8. Specific Exclusions from Coverage (See Warranty Introduction for codes.)</b>	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14 (unless shingle includes 3M Algae Block Copper Granule Roofing System), 16, 19, 20, 23	1, 4, 5, 6, 7, 8, 9, 10, 13, 16, 19, 23	1, 4, 5, 6, 7, 8, 9, 10, 13, 16, 19, 23
<b>9. Wind Coverage/Exclusion</b>	Globe warrants for the initial 5 years that its shingles will resist blow offs due to wind velocities up to a maximum of 54 mph provided application is in accordance with Globe's application instructions and upon the occurrence of thermal sealing of the shingles. In order for sealing to occur, shingles must be exposed to sufficient sunlight to generate enough thermal heat to activate the sealing strip. It is not a manufacturing defect if asphalt shingles installed in fall or winter fail to seal until the following summer when thermal heat is sufficient to cause sealing. Shingles which do not receive direct sunlight or are not exposed to adequate surface temperatures may never seal. If blow-off occurs within the first 5 years after proper application and thermal heat has been sufficient for proper sealing, Globe will furnish replacement shingles for those damaged or missing without charge, but will not be responsible for labor costs pertaining to removal or replacement of damaged shingles. In the event the shingles contain self-sealing strips which fail to activate after proper installation and climatic exposure, Globe shall have no liability unless it is afforded the opportunity to hand seal, at its sole expense, any nonsealing shingles within the first year after application. Any costs in excess of Globe's contribution shall be the owner's responsibility.	Malarkey warrants that for up to five years, the Legacy-35 shingles will resist damage from winds of up to 100 miles per hour. Malarkey's wind warranty applies only if the shingles are sealed, whether by hand sealing or by the self-sealing strips. Hand sealing is recommended when average daytime temperature drops below 50 F during installation. Malarkey's sole liability is, at its option, to repair or replace the defective shingles or to pay to the owner an amount not exceeding the original cost of the shingles plus reasonable installation costs. No amount shall be paid for removal or disposal of damaged shingles. In high-wind areas, as identified by the National Weather Service, shingles should be installed using six fasteners and per Malarkey's printed installation instructions. All shingles which contain a factory-applied self-sealing strip must be subjected to sunlight for several days before full sealing will occur. Shingles installed in the fall or winter may not seal until the following spring; consequently, the shingles should be hand sealed. Shingles which do not receive direct sunlight or which are not exposed to adequate surface temperatures may never seal. This is the nature of shingles and failure to seal down under such circumstances is not a manufacturing defect. If any self sealing shingles that have been exposed to adequate temperatures and direct sunlight fail to activate the self sealing strips during the first year after application, Malarkey will have no liability under this warranty for each defect unless proper written notification has been made and Malarkey has been allowed the opportunity to hand seal any nonsealed shingles at its own expense.	Malarkey warrants for up to five years, the Hurricane shingles will resist damage from winds up to 100 mph. Malarkey's sole liability will be to supply new shingles to replace those damaged or blown from the roof by the wind. No amount will be paid for removal of damaged shingles or the installation of replacement shingles.
<b>10. Notification Requirements</b>	Written notification to Globe within 30 days of discovery of any alleged shingle manufacturing defects which result in leaks through the shingle or wind damage. Proof of purchase and application must accompany written notice to Globe Building Materials, Inc., Customer Service Department, 2230 Indianapolis Boulevard, Whiting, IN 46394. Owner is responsible for supplying samples of shingles and photographs showing problem, at owner's expense, if requested by Globe.	Claims shall be made in writing, by certified or registered mail, within 30 days of discovery, and prior to any repairs being made.	Claims shall be made in writing, by certified or registered mail, within 30 days of discovery, and prior to any repairs being made.
<b>11. Determination of Warranty Applicability</b>	Neutral (no provision)	Malarkey verifies that shingles are defective.	Malarkey will be given the opportunity to inspect the roof and to be provided with samples before any steps are taken to repair the roof.
<b>12. Does the issuing entity manufacture and/or sell the shingles?</b>	Globe manufacturers and sells the shingles.	Malarkey manufactures and sells the shingles.	Malarkey manufactures and sells the shingles.
<b>13. Specific Conditions to Make Warranty Ineffective or Void (See Warranty Introduction for codes.)</b>	None	C, G, I	C, G, I
<b>14. Inclusion of Consequential Damages</b>	No		No
<b>15. Assignability</b>	Warranty is not transferable	Warranty may be transferred one time to the subsequent owner only during the first seven years. Once the warranty has been transferred, the new owner's warranty period will be 10 years from date of transfer. The current holder of the warranty must notify Malarkey in writing by registered or certified mail within 30 days from the date title to the property changed. Request to transfer the warranty must include (1) name and address of the current holder of the warranty, (2) date of original completed installation, (3) proof of purchase of the shingles, (4) the address where the shingles are installed, (5) the name and address of the new owner, and (6) the date of title transfer of the property.	Warranty is valid only to the original owner and is not transferable.
<b>16. Cost to Obtain</b>	None	None	None
<b>17. Is the warranty backed by insurance coverage?</b>	No	No	No
<b>18. Is the warranty an additional or exclusive remedy for the owner?</b>	Globe makes no warranties other than those stated in warranty; warranty constitutes the complete and exclusive statement of the terms of the agreement between Globe and the owner.	Warranties are the only express warranties made by Malarkey in connection with the sale of its product. No person is authorized to alter warranty either orally or in writing.	Warranties are the only express warranties made by Malarkey in connection with the sale of its product. No person is authorized to alter these limited warranties either orally or in writing.
<b>19. Special Features/Conditions</b>	If Globe and the owner cannot reach agreement as to matters covered by warranty, Globe and the owner agree that such matters shall be settled by arbitration in accordance with the Center for Public Resources Rules for Non-Administered Arbitration of Business Disputes by one arbitrator, who shall not be appointed by either party. Pending final award, arbitrator compensation and expenses shall be advanced equally by the parties. The arbitration shall be governed by the United States Arbitration Act, 9 U.S.C. §§ 1-16. If the United States Arbitration Act is determined not to govern the arbitration, then it shall be governed by the Illinois Arbitration Act. The place of arbitration shall be Chicago, Illinois, at such location as the arbitrator directs. No representative of Globe, or its dealers and distributors, are authorized to make any change or modification to the warranty.	Malarkey is to be provided with samples before any steps are taken to repair the roof. Any repairs made prior to or during the investigation period without Malarkey's prior written approval will be at owner's expense.	Malarkey warrants that the Hurricane shingles will resist discoloration or staining due to algae growth which causes an obvious and unsightly appearance on the granules for a period of 15 years. Malarkey's sole liability is, at its option, to repair or replace the defective shingles, or to pay to the owner an amount not exceeding the original cost of the shingles plus reasonable installation costs. For the first year, the payment to the owner for those shingles exhibiting discoloration due to algae will be an amount not exceeding the original cost of the defective shingles plus reasonable installation costs. During the remaining 14-year (168-month) warranty period, the maximum repair or replacement payment will be an amount not exceeding the original cost of those shingles exhibiting discoloration, excluding all installation costs, less a percentage which is based upon the number of months elapsed in the warranty period divided by the 15-year (180-month) warranty period.
<b>20. Executed by Owner?</b>	Yes; homeowner must complete warranty registration card and return it to Globe Building Materials, 2230 Indianapolis Boulevard, Whiting, IN 46394, within 30 days.	Yes; the owner must complete warranty registration card and return it to Herbert Malarkey Roofing Company, P.O. Box 17217, Portland, OR 97217-0217, within 30 days of installation or warranty will be void.	Yes; the owner must complete warranty registration card and returns it to Malarkey at Herbert Malarkey Roofing Company, P.O. Box 17217 Kenton Station, Portland, OR 97217-0217, within 30 days of installation or warranty will be void.

## ASPHALT SHINGLE WARRANTIES

<b>1. Identity of issuing entity</b>	<b>Herbert Malarkey Roofing Company</b>	<b>Herbert Malarkey Roofing Company</b>	<b>IKO Manufacturing Inc.</b>
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2. Title, original publication date, and identifying symbol, if any	"Highlander-25 Limited Warranties"; October 1, 1997	Herbert Malarkey Roofing Company A Limited Warranty; 1977	"Asphalt Shingle Limited Lifetime Warranty Dynasty Warranty Coverage"; January 1, 1997
3. Products covered	Highlander-25 shingles	Type 202, 204 Premium Metric Fiberglass, 230 SBS Metric Polyglass	Dynasty (See Special Features/Conditions.)
4. Scope of coverage	Malarkey warrants to the original home/building owner that the Highlander-25 shingles are free from manufacturing defects that reduce the life of the shingle.	Malarkey warrants its shingles to be free from manufacturing defects.	IKO warrants to the original consumer-purchaser that the Dynasty shingles are free from manufacturing defects that result in leaks and IKO warrants against discoloration due to algae growth.
4a. Does the warranty provide coverage for defects in manufacture?	Yes	Yes	Yes
4b. Does the warranty provide coverage for defects in application?	No	No	No
4c. Does the warranty limit coverage to leakage and, if no, what defects or conditions other than leakage are covered?	No; warranty covers manufacturing defects that reduce the life of the shingle.	No; warranty covers manufacturing defects.	No; warranty also covers algae resistance.
4d. Does the warranty provide coverage for flashings, metal work, or related work that may be affected and/or need to be repaired or removed?	No	No	No
5. Length of Coverage	25 years (See Item 15 below.)	30 years: Type 230 SBS Metric Polyglass 25 years: Type 204 Premium Metric Fiberglass 20 years: Type 202 Premium Metric Fiberglass	For manufacturing defects: warranty extends for the lifetime of the original consumer-purchaser who retains ownership of the individual residential property on which the shingles were installed. Lifetime warranty ends automatically upon the sale or transfer of the property or upon death of the individual who was the property owner at the time the Dynasty shingles were installed. Dynasty shingles installed on any type of building other than individual residences, such as, but not limited to, corporate, commercial, governmental, condominium, school, religious, apartment or multi-family type buildings, the length of the warranty is 40 years. If the warranty is transferred during the first 7 years, the total duration of the warranty is limited to 15 years. For algae resistance: 10 years For wind coverage: 5 years
5a. Is the warranty prorated?	Yes	Yes	Yes
5b. When does prorating begin?	After three years	Immediately upon application	After 7 years
5c. What is the prorating formula?	After three years, warranty is reduced by 1/300 for each month since original application, less all sums previously paid (so that at the beginning of the fourth year, warranty would be reduced by 36/300 plus any sums previously paid).	The prorated adjustment will be calculated by multiplying the original reasonable cost of the material and installation, times the number of squares of defective shingles, divided by the total number of years in the applicable warranty period, and then multiplied by the number of years remaining.	After the initial seven-year period, the IKO warranty is reduced by 1/225 per month for the first 15 years of the warranty period (so that at the beginning of the eighth year, warranty would be reduced by 84/225 and reduced by an additional 1/225 for each month through year 15). After the first 15 years, the warranty is reduced by 384/480 (80%) for months 181-480 and the warranty is reduced 432/480 (90%) after 480 months.
6. Nature of Remedy	Malarkey's sole liability is, at its option, to repair or replace the defective shingles or to pay the owner an amount not exceeding the replacement cost of the shingles plus reasonable installation costs. After verification that the shingles are defective, Malarkey will perform its obligation within 45 days of receipt of notice, unless performance is delayed by causes beyond Malarkey's control.	Malarkey shall, at its option, elect to repair or replace the defective shingles or pay to the owner an amount not to exceed the original reasonable cost of the shingles and installation, prorated for the number of years remaining on the warranty, less all sums previously paid under the warranty. Malarkey shall perform its obligations under the warranty within 45 days from receipt of notice, unless performance is delayed by causes beyond Malarkey's control.	During the first seven years, IKO will at its option have the shingles repaired or replaced free of charge, exclusive of costs for tear-off, flashing, and metal work or required repairs to associated defects or damage. After seven years, IKO's liability toward repair or replacement is the pro-rated amount of the current value of the shingles only, exclusive of labor, disposal, and tear-off. In the event that an algae develops causing discoloration of the Dynasty shingles within the first ten years, IKO will at its option clean, repair, or replace (including installation labor costs where necessary) only those shingles which have developed the algae growth that cause discoloration.
6a. Does the warranty provide for furnishing of replacement shingles?	Yes	Yes	Yes
6b. Does the warranty provide for labor to install replacement shingles?	Yes	Yes	For manufacturing defects: yes, for the first seven years; no, for the balance of the warranty. For algae resistance: yes, for the first year; no, for the nine year balance of the warranty
6c. Does the warranty provide for labor to remove defective shingles?	No	Warranty states that Malarkey will repair or replace defective shingles or make payment to owner. [Malarkey indicates that warranty does not provide labor to remove defective shingles.]	No
6d. Does the warranty cover disposal of defective shingles?	No	No	No
6e. Does the warranty apply to any materials other than shingles?	No	No	No
7. Is there a monetary limitation?	For the first three years, Malarkey's maximum liability shall be equal to the reasonable replacement costs of the defective shingles plus reasonable installation costs, less all sums previously paid under the warranty. After three years, Malarkey's maximum repair or replacement payment to the owner will be an amount not exceeding the replacement cost of the defective shingles plus reasonable installation costs, less a percentage based on the number of months elapsed in the warranty period divided by 300 months warranty period, less all sums previously paid under this warranty.	Malarkey's maximum liability shall not exceed the original reasonable cost of the shingles and installation, prorated for the number of years remaining in the warranty, less all sums previously paid.	During the first seven years, IKO's maximum liability shall be equal to the reasonable replacement cost of the defective shingles that are proven to have a manufacturing defect which has resulted in leaks. After the initial seven-year period, IKO's maximum liability toward repairs or replacement shall be a prorated amount of the current value of the shingles only (exclusive of labor, disposal, and tear-off).
8. Specific Exclusions from Coverage (See Warranty Introduction for codes.)	1, 4, 5, 6, 7, 8, 9, 10, 13, 16, 19, 23	1, 4, 5, 6, 7, 8, 9, 10, 13, 16, 19, 23	1, 2, 4, 6, 8, 9, 13, 14, 17, 19, 23, 24. Warranty also excludes any back surfacing transfer or asphalt staining, any costs related to disposal, and any costs related to the removal of any asbestos present in the roof to which IKO shingles are installed.
	Malarkey warrants that for up to five years, the Highlander-25 shingles will resist damage from winds of up to 60 miles per hour.	Malarkey warrants that up to five years from the date of installation, its	IKO warrants its shingles for five years against wind blow-off damage due to wind

<b>9. Wind Coverage/Exclusion</b>	<p>Malarkey's wind warranty applies only if the shingles are sealed, whether by hand sealing or by the self-sealing strips. Hand sealing is recommended when average daytime temperature drops below 50 F during installation. Malarkey's sole liability is, at its option, to repair or replace the defective shingles or to pay to the owner an amount not exceeding the original cost of the shingles plus reasonable installation costs. No amount shall be paid for removal or disposal of damaged shingles. In high wind areas, as identified by the National Weather Service, shingles should be installed using six fasteners and per Malarkey's printed installation instructions.</p> <p>All shingles which contain a factory-applied self-sealing strip must be subjected to sunlight for several days before full sealing will occur. Shingles installed in the fall or winter may not seal until the following spring; consequently, the shingles should be hand sealed. Shingles which do not receive direct sunlight or which are not exposed to adequate surface temperatures may never seal. This is the nature of shingles and failure to seal down under such circumstances is not a manufacturing defect. If any self sealing shingles that have been exposed to adequate temperatures and direct sunlight fail to activate the self sealing strips during the first year after application, Malarkey will have no liability under this warranty for each defect unless proper written notification has been made and Malarkey has been allowed the opportunity to hand seal any non-sealed shingles at its own expense.</p>	<p>shingles with resist damage from winds up to 54 mph for Types 202, 204 and 210 and for winds up to 100 mph for Type 230 SBS.</p> <p>Malarkey's sole liability for wind damage shall be to supply new shingles to replace those damaged or blown off by the wind. No amount will be paid by Malarkey for removal of damaged shingles or installation of replacement shingles.</p>	<p>velocities, including "gusts" up to a maximum of 60 mph. In the event that it is proven that there has been wind damage from winds up to 60 mph, IKO will furnish similar shingles necessary for replacement for damaged shingles. Warranty does not cover the labor costs for the removal of damaged shingles or the application of the replacement shingles.</p> <p>All self-sealing strip shingles must be subjected to direct sunlight for several days before full sealing will occur. Shingles installed in fall or winter may not seal until the following spring. Shingles that do not receive direct sunlight or that are not exposed to adequate surface temperatures may not seal. Damage to the factory applied self-sealing strip by dust, sand, or foreign matter will prevent the sealing strip from activating. Failure to seal down under such circumstances is not a manufacturing defect.</p> <p>For shingles which fail to activate during the first year after application, IKO will have no liability under warranty for defects unless proper written notification has been made and IKO has been allowed the opportunity to hand seal any nonsealed shingles at its own expense.</p>
<b>10. Notification Requirements</b>	<p>Claims shall be made in writing, by certified or registered mail, within 30 days of discovery, and prior to any repairs being made.</p>	<p>Written notice of the discovery of manufacturing defects, by registered or certified mail, shall be given to Malarkey within 30 days after discovery.</p>	<p>Claims must be filed within thirty days of discovery of the alleged defect in the following manner: (1) contact IKO Quality Services at 1-800-433-2811; (2) furnish the information as requested by the quality services representative; (3) complete, sign and return the home owner inquiry survey, including proof of purchase indicating the IKO product involved, the required number of pictures, and two full sample shingles; and (4) provide access to the IKO products in question for the purpose of investigation if requested.</p>
<b>11. Determination of Warranty Applicability</b>	<p>Malarkey verifies that shingles are defective.</p>	<p>Malarkey shall be given opportunity to inspect the material and to be provided with samples before any steps are taken to adjust the claim.</p>	<p>IKO will, within approximately sixty days of receipt of the completed home owner inquiry survey, evaluate the claim and respond. Any claimed defect for which notice is not received by IKO within the applicable warranty period is not covered. Failure to provide requested information will cause the claim not to be considered.</p>
<b>12. Does the issuing entity manufacture and/or sell the shingles?</b>	<p>Malarkey manufactures and sells the shingles.</p>	<p>Malarkey manufactures and sells the shingles.</p>	<p>IKO manufactures and sells the shingles.</p>
<b>13. Specific Conditions to Make Warranty Ineffective or Void (See Warranty Introduction for codes.)</b>	<p>C, G, I</p>	<p>C, G, I</p>	<p>I; warranty does not apply if slope is less than 4:12 or shingles are applied over insulated roof deck panels.</p>
<b>14. Inclusion of Consequential Damages</b>	<p>No</p>	<p>No</p>	<p>No</p>
<b>15. Assignability</b>	<p>Warranty may be transferred one time to a subsequent owner only during the first three years. Once the warranty has been transferred, the new owner's warranty period will be 7 years from date of transfer. The current holder of the warranty must notify Malarkey in writing by registered or certified mail within 30 days from the date title to the property changed. Request to transfer the warranty must include (1) name and address of the current holder of the warranty, (2) date of original completed installation, (3) proof of purchase of the shingles, (4) the address where the shingles are installed, (5) the name and address of the new owner, and (6) the date of title transfer of the property.</p>	<p>Warranty is valid only to the original owner and is not transferable.</p>	<p>Warranty may be transferred by the original consumer-purchaser only to a subsequent property owner only within the first seven-year period under the following conditions: (1) notification of a request for transfer must be received in writing by IKO at 6600 S. Central Avenue, Chicago, IL 60638, Attn: quality services, from the original consumer-purchaser, within thirty days after the date of the real estate transfer. Request must include a copy of the original invoice showing proof of purchase of the IKO product and a copy of the real estate transfer; and (2) a transfer fee of \$100 must accompany all requests for warranty transfer.</p>
<b>16. Cost to Obtain</b>	<p>None</p>	<p>None</p>	<p>None</p>
<b>17. Is the warranty backed by insurance coverage?</b>	<p>No</p>	<p>No</p>	<p>No</p>
<b>18. Is the warranty an additional or exclusive remedy for the owner?</b>	<p>Warranties are the only express warranties made by Malarkey in connection with the sale of its product. No person is authorized to alter these limited warranties either orally or in writing.</p>	<p>The limited shingle warranty and limited wind warranty are the only express warranties made by Malarkey in connection with the sale of its product. No representative of Malarkey or other person has any authority whatsoever to accept from or for Malarkey any additional or different liability, or responsibility for Malarkey products.</p>	<p>This warranty replaces all other oral or written warranties, liabilities or obligations of IKO. IKO will not be liable for any oral statement or other written statement about the shingle, whether such statements are made by an agent or employee of IKO or by any other person. IKO does not authorize its representatives, distributors, contractors, or dealers to make any changes or modifications to this warranty; excludes UCC warranties.</p>
<b>19. Special Features/Conditions</b>	<p>Malarkey is to be provided with samples before any steps are taken to repair the roof. Any repairs made prior to or during the investigation period without Malarkey's prior written approval will be at owner's expense.</p>	<p>See Item 20.</p>	<p>This warranty only covers Dynasty shingles when they are installed on roof slopes of 4 in 12 or greater.</p> <p>No action for breach of this limited warranty shall be brought against IKO later than one year after any cause of action has accrued. IKO reserves the right to discontinue or modify any of its products, including the color blend of its shingles, without notice to the original consumer-purchaser and shall not be liable to the original consumer-purchaser as a result of this modification or discontinuance. IKO will have no liability in the event that replacement material may vary in color in comparison to the original product as a result of product changes or normal weathering.</p>
<b>20. Executed by Owner?</b>	<p>Yes; the owner must complete warranty registration card and return it to Herbert Malarkey Roofing Company, P.O. Box 17217, Portland, OR 97217-0217, within 30 days of installation or warranty will be void.</p>	<p>Yes; the owner must complete warranty registration card and return it to Herbert Malarkey Roofing Company, P.O. Box 17217 Kenton Station, Portland, OR 97217-0217, within 30 days of installation or warranty will be void.</p>	<p>No</p>

# ASPHALT SHINGLE WARRANTIES

1. Identity of issuing entity	IKO Manufacturing Inc.	Owens Corning	Owens Corning
2. Title, original publication date, and identifying symbol, if any	"Asphalt Shingle Limited Warranty"; December 1, 1996	"Roofing System Advantage Limited Warranty;" December 1998; Pub. No. 15-RR-21561-E	"Limited Warranty on Algae Resistant Shingles;" December 1998; Pub. No. 16-RR-13760-O
3. Products covered	Chateau Ultra Shadow Band, Crowne 30, Cambridge Ultra, Renaissance XL, Aristocrat 25, Imperial Gentry 25, Royal Victorian, Skyline 25, Cathedral 25, Imperial Seal 20, Imperial Glass 20	Oakridge 40 Deep Shadow, Oakridge 40 Deep Shadow AR, Oakridge 30 Shadow, Oakridge 30 Shadow AR, Prominence, Prominence AR, Oakridge 25, Oakridge 25 AR, Supreme 30, Supreme 30 AR, Glaslock, Classic, Classic AR	Oakridge 40 Deep Shadow Algae Resistant, Oakridge 30 Shadow Algae Resistant, Oakridge 25 Algae Resistant, Prominence Algae Resistant, Supreme 30 Algae Resistant, Supreme Algae Resistant, Classic Algae Resistant
4. Scope of coverage	IKO warrants to the original consumer-purchaser that its shingles are free from manufacturing defects that result in leaks.	Owens Corning warrants that the Owens Corning Roofing System components are free from manufacturing defects that would reduce the performance of the System components. (See Special Features/Conditions.) Owens Corning warrants that shingles described as algae resistant shall be resistant to algal, fungal, lichen or cyanobacterial growth.	Owens Corning warrants to the original consumer purchaser that its Algae Resistant roofing shingles ("AR shingles") are free from manufacturing defects that affect shingle performance and that the AR shingles will remain free from discoloration due to algal, fungal, lichen and cyanobacterial growth which cause an obvious and unsightly appearance on the AR shingles.
4a. Does the warranty provide coverage for defects in manufacture?	Yes	Yes	Yes
4b. Does the warranty provide coverage for defects in application?	No	No	No
4c. Does the warranty limit coverage to leakage and, if no, what defects or conditions other than leakage are covered?	Yes	No; warranty covers manufacturing defects that affect shingle performance.	No; warranty covers manufacturing defects that affect shingle performance and unsightly appearance due to fungal, lichen and cyanobacterial growth.
4d. Does the warranty provide coverage for flashings, metal work, or related work that may be affected and/or need to be repaired or removed?	No	No	No
5. Length of Coverage	30 years: Chateau Ultra Shadow Band, Crowne 30 25 years: Cambridge Ultra, Renaissance XL, Aristocrat 25, Imperial Gentry 25, Royal Victorian, Skyline 25, Cathedral 25 20 years: Imperial Seal 20, Imperial Glass 20  (See Item 15 for effect of transfer.)	For Manufacturing Defects: 40 years: Oakridge 40 Deep Shadow 30 years: Oakridge 30 Shadow, Prominence, Supreme 30 25 years: Oakridge 25, Supreme, Glaslock 20 years: Classic  For Algae Resistance: 10 years	Non-Algae Manufacturing Defects: 40 years: Oakridge 40 Deep Shadow Algae Resistant 30 years: Oakridge 30 Shadow Algae Resistant, Prominence Algae Resistant, Supreme 30 Algae Resistant 25 years: Oakridge 25 Algae Resistant, Supreme Algae Resistant 20 years: Classic Algae Resistant For Algae Resistance: 10 years: All Owens Corning Algae Resistant (AR) shingles
5a. Is the warranty prorated?	Yes	Yes	Yes
5b. When does prorating begin?	After 5 years: Chateau Shadow Band, Crowne 30, Cambridge Ultra, Renaissance XL, Aristocrat 25, Imperial Gentry 25, Royal Victorian, Skyline 25, Cathedral 25 After 3 years: Imperial Seal 20, Imperial Glass 20	For Manufacturing Defects: After 15 years: Oakridge 40 Deep Shadow After 10 years: Oakridge 30 Shadow, Prominence, Supreme 30 After 7 years: Oakridge 25, Supreme, Glaslock After 5 years: Classic If consumer purchases Raft-R-Mate attic vents and Soffit Vents from Owens Corning, the non-prorated period shall be extended by an additional two years. For Algae Resistance: After 1 year	After one year
5c. What is the prorating formula?	After the initial period (three or five years, depending upon the product (see Item 5b above), all IKO warranties are reduced by 1/225 per month for the first 15 years of the warranty period. After the first 15 years, the monthly reduction figure changes as follows: for Royal Victorian, Imperial Seal 20, and Imperial Glass 20, the warranty is reduced by 1/300 per month; for Cambridge Ultra, Renaissance XL, Aristocrat 25 and Imperial Gentry 25, Skyline 25 and Cathedral 25, the warranty is reduced by 1/600 per month; for Chateau Shadow Band and Crowne 30, the warranty is reduced by 1/900 per month (so that at the beginning of the sixteenth year, each warranty would be reduced by 180/225 and then either 1/300, 1/600 or 1/900 for each month thereafter, depending upon the type of shingle.)	For Manufacturing Defects: Oakridge 40 Deep Shadow - After 15 years, warranty is reduced by 1/480 for each month since original installation (so that at the beginning of the 16th year, warranty would be reduced by 180/480). Oakridge 30 Shadow, Prominence, Supreme 30 - After 10 years, warranty is reduced by 1/360 for each month since original installation (so that at the beginning of the 11th year, warranty would be reduced by 120/480). Oakridge 25, Supreme, Glaslock - After 7 years, warranty is reduced by 1/300 for each month since original installation (so that at the beginning of the 8th year, warranty would be reduced by 84/300). Classic - After 5 years, warranty is reduced by 1/240 for each month since original installation (so that at the beginning of the 6th year, warranty would be reduced by 60/240). For Algae Resistance: Algae Resistant Shingles - After 1 year, warranty is reduced by 1/120 for each month since original installation (so that at the beginning of the second year, warranty would be reduced by 12/120).	For Non-Algae Manufacturing Defects: Oakridge 40 Deep Shadow AR: After one (1) year, warranty is reduced by 1/480 for each month of service from date of installation. Oakridge 30 Shadow AR, Prominence AR, Supreme 30 AR: After one (1) year, warranty is reduced by 1/360 for each month of service from date of installation. Oakridge 25 AR, Supreme AR: After one (1) year, warranty is reduced by 1/300 for each month of service from date of installation. Classic AR: After one (1) year, warranty is reduced by 1/240 for each month of service from date of installation.  For Algae Resistance: After one (1) year, warranty is reduced by 1/120 for each month of service from date of installation.
6. Nature of Remedy	IKO will at its option have the shingles repaired or replaced free of charge, exclusive of costs for tear-off, flashings, and metal work.	During the initial period (15, 10, 7 or 5 years, depending upon the product -- see Item No. 5b), Owens Corning shall pay the reasonable cost of repair or replacement of the defective System components as well as any other System components which must also be repaired or replaced in order to properly repair or replace the defective System components, including labor, exclusive of tear-off, disposal, metal work, flashing or other related work. After the initial periods, Owens Corning shall pay prorated reasonable replacement costs as determined by Owens Corning. A monetary settlement will be the only remedy available to the consumer for defective System components. If algae resistant shingles exhibit discoloration due solely to algal, fungal, lichen or cyanobacterial growth, Owens Corning will pay the consumer prorated, reasonable cost of repair or replacement.	For Non-Algae Manufacturing Defects: For the first year, Owens Corning shall pay the reasonable cost of repair or replacement of the defective AR shingles, including labor, exclusive of metal work, flashing or other related work. After one year, Owens Corning shall pay the pro-rated reasonable cost of repair or replacement as determined by Owens Corning. A monetary settlement will be the only remedy available to the consumer for defective shingles.  For Algae Resistance: If the AR shingles exhibit discoloration due solely to algal, fungal or cyanobacterial growth during the 10-year algae resistance warranty period, Owens Corning's sole obligation shall be to pay the consumer an amount equal to the reasonable cost of cleaning off such growth. For the first year, Owens Corning's liability shall be replacement costs up to the initial cost of the AR Shingles and their installation. After one year, Owens Corning's liability is limited to pro-rated cost of the original AR shingles.
6a. Does the warranty provide for furnishing of replacement shingles?	Yes	Yes	Yes
6b. Does the warranty provide for labor to install replacement shingles?	Yes, for the first five years for Chateau Ultra Shadow Band, Crowne 30, Cambridge Ultra Shadow, Renaissance XL, Royal Victorian, Cathedral 25, Skyline 25, Aristocrat 25 and Imperial Gentry 25 and, for the first three years for Imperial Glass 20 and Imperial Seal 20, the warranty includes labor to install replacement shingles; no, for the balance of each warranty.	Yes	Yes
6c. Does the warranty provide for labor to remove defective shingles?	No	No	No

<b>6d. Does the warranty cover disposal of defective shingles?</b>	No	No	No
<b>6e. Does the warranty apply to any materials other than shingles?</b>	No	Yes; warranty covers all Owens Corning Roofing System Components such as Owens Corning VentSure ridge vent, hip and ridge products, WeatherLock, No. 15 or No. 30 asphalt saturated felt, Raft-R-Mate attic vents, soffit vents.	No
<b>7. Is there a monetary limitation?</b>	During the first five years for Chateau Ultra Shadow Band, Crowne 30, Cambridge Ultra, Renaissance XL, Aristocrat 25, Imperial Gentry 25, Royal Victorian, Skyline 25 and Cathedral 25, and three years for Imperial Seal 20 and Imperial Glass 20, IKO's maximum liability shall be equal to the reasonable replacement cost of the defective shingles that are proven to have a manufacturing defect which has resulted in leaks. After the initial period applicable to the specific product, IKO's maximum liability toward repairs or replacement shall be a prorated amount of the current value of the shingles only (exclusive of labor, disposal, and tear-off).	For manufacturing defects, during the nonprorated period, Owens Corning's maximum costs shall be the replacement cost of the defective System components, including labor, exclusive of metal work, flashing or other related work. For algae resistance, during the first year, Owens Corning's maximum liability shall be the replacement cost of the AR shingles exhibiting discoloration up to the initial cost of the shingles and their initial installation. For the balance of the warranty, Owens Corning's maximum costs shall be prorated and the prorating formula for algae resistance shall exclude the cost of installation labor.	Owens Corning's maximum repair or replacement cost shall be the replacement cost of the defective AR shingles, including labor, if there is a non-biological manufacturing defect within the first year. After one year, Owens Corning's liability is prorated. Owens Corning's maximum liability for algae resistant defects occurring within the first year is the initial cost of the AR shingles and the cost of their initial installation. After one (1) year, Owens Corning's maximum liability for algae resistant defects shall not exceed the prorated original cost of the AR shingles, excluding the cost of initial application.
<b>8. Specific Exclusions from Coverage (See Warranty Introduction for codes.)</b>	1, 2, 4, 6, 8, 9, 13, 14, 17, 19, 23, 24. Warranty also excludes any back surfacing transfer or asphalt staining, any costs related to disposal, and any costs related to the removal of any asbestos present in the roof to which IKO shingles are installed.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 17, 19, 21, 23, 24	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 17, 19, 21, 23, 24
<b>9. Wind Coverage/Exclusion</b>	IKO warrants its shingles for five years against wind blow-off damage due to wind velocities, including "gusts" up to a maximum of 60 mph. In the event that it is proven that there has been wind damage from winds up to 60 mph, IKO will furnish similar shingles necessary for replacement for damaged shingles. Warranty does not cover the labor costs for the removal of damaged shingles or the application of the replacement shingles. All self-sealing strip shingles must be subjected to direct sunlight for several days before full sealing will occur. Shingles installed in fall or winter may not seal until the following spring. Shingles that do not receive direct sunlight or that are not exposed to adequate surface temperatures may not seal. Damage to the factory applied self-sealing strip by dust, sand or foreign matter will prevent the sealing strip from activating. Failure to seal down under such circumstances is not a manufacturing defect. For shingles which fail to activate during the first year after application, IKO will have no liability under warranty for defects unless proper written notification has been made and IKO has been allowed the opportunity to hand seal any non-sealed shingles at its own expense.	During the first five (5) years after installation, 20- and 25-year shingles classified as "Wind Resistant" shall be resistant to wind damage, after thermal sealing has taken place, at wind velocities up to 60 mph. 30- and 40-year shingles classified as A/Wind Resistant shall be resistant to wind damage, after thermal sealing has taken place, at wind velocities up to 80 mph only during the first five (5) years after installation. In cases where Owens Corning determines that thermal sealing should have occurred and did not due to a manufacturing defect, Owens Corning will be liable only for the reasonable cost of replacing blown-off shingles and the reasonable cost of manually sealing the unsealed shingles remaining on the roof. Shingles installed in the fall or winter may not seal until the following spring. Shingles which do not receive direct sunlight or which are not exposed to adequate surface temperatures may never seal. This is the nature of shingles and failure to seal under such circumstances is not a manufacturing defect.	During the first five (5) years after installation, 20- and 25-year AR shingles classified as "Wind Resistant" shall be resistant to wind damage, after thermal sealing has taken place, at wind velocities up to 60 mph. 30- and 40-year AR shingles classified as A/Wind Resistant shall be resistant to wind damage, after thermal sealing has taken place, at wind velocities up to 80 mph only during the first five (5) years after installation. In cases where Owens Corning determines that thermal sealing should have occurred and did not due to a manufacturing defect, Owens Corning will be liable only for the reasonable cost of replacing blown-off AR shingles and the reasonable cost of manually sealing the unsealed AR shingles remaining on the roof. AR shingles installed in the fall or winter may not seal until the following spring. AR shingles which do not receive direct sunlight or which are not exposed to adequate surface temperatures may never seal. This is the nature of AR shingles and failure to seal under such circumstances is not a manufacturing defect.
<b>10. Notification Requirements</b>	Claims must be filed within thirty days of discovery of the alleged defect in the following manner: (1) contact IKO Quality Services at 1-800-433-2811; (2) furnish the information as requested by the quality services representative; (3) complete, sign and return the home owner inquiry survey, including proof of purchase indicating the IKO product involved, the required number of pictures, and two full sample shingles; and (4) provide access to the IKO products in question for the purpose of investigation if requested.	Claims must be submitted in writing to Owens Corning World Headquarters, One Owens Corning Parkway, Customer Response Center, System Advantage Warranty Administrator, Toledo, Ohio 43659, within 30 days after discovery of the alleged defect. Notice to contractor or dealer is not notice to Owens Corning.	Claims must be submitted in writing, together with proof of purchase of the AR shingles and the application date, to Owens Corning World Hdqtrs, Customer Response Center, One Owens Corning Parkway, Toledo, OH 43659, within 30 days after discovery of the alleged defect. Notice to contractor or dealer is not notice to Owens Corning.
<b>11. Determination of Warranty Applicability</b>	IKO will, within approximately sixty days of receipt of the completed home owner inquiry survey, evaluate the claim and respond. Any claimed defect for which notice is not received by IKO within the applicable warranty period is not covered by this warranty. Failure to provide requested information will cause the claim not to be considered.	In all cases the extent of repair and replacement will be at the sole discretion of Owens Corning.	In all cases the extent of repair and replacement required and the reasonable cost of such repair or replacement will be at the sole discretion of Owens Corning.
<b>12. Does the issuing entity manufacture and/or sell the shingles?</b>	IKO manufactures and sells the shingles.	Owens Corning manufactures and sells the shingles.	Owens Corning manufactures and sells the AR shingles
<b>13. Specific Conditions to Make Warranty Ineffective or Void (See Warranty Introduction for codes.)</b>	I; no warranty coverage if shingles are installed over insulated roof deck panels.	C, E	C, E
<b>14. Inclusion of Consequential Damages</b>	No	No	No
<b>15. Assignability</b>	Warranty may be transferred by the original consumer-purchaser only to a subsequent property owner within ten years following shingle installation under the following conditions: (1) notification of a request for transfer must be received in writing by IKO at 6600 S. Central Avenue, Chicago, IL 60638, Attn: Quality Services, from the original consumer-purchaser, within thirty days after the date of the real estate transfer. Request must include a copy of the original invoice showing proof of purchase of the IKO product and a copy of the real estate transfer; and (2) a transfer fee of \$100 must accompany all requests for warranty transfer. Should a transfer occur during the initial five years for Chateau Shadow Band, Cambridge Ultra, and Renaissance XL, the duration of the warranty shall be the balance of the initial five-year period plus an additional five years rather than the normal 30 or 25 years. Except as stated above, if there is a transfer within ten years of installation, the remaining duration of the warranty shall be two years from the date of real estate transfer; the warranty will be prorated using the date of installation as the start date, and the warranty will exclude labor costs.	Warranty may be transferred one time if the original consumer sells the building upon which the Owens Corning Roofing System has been installed under the following conditions: (1) warranty transfer card must be completed and returned to Owens Corning within 30 days of the date of the sale of building; and (2) payment of \$50.00 transfer fee.	Warranty is not transferable.
<b>16. Cost to Obtain</b>	None	\$50.00 registration fee.	None
<b>17. Is the warranty backed by insurance coverage?</b>	No	No	No
<b>18. Is the warranty an additional or exclusive remedy for the owner?</b>	This warranty replaces all other oral or written warranties, liabilities, or obligations of IKO; all implied warranties are excluded. IKO will not be liable for any oral statement or other written statement about the shingle, whether such statements are made by an agent or employee of IKO or by any other person. IKO does not authorize its representatives, distributors, contractors, or dealers to make any changes or modifications to warranty.	Warranty contains all of the provisions of remedies from Owens Corning. Owens Corning's liability is limited to the provisions of the warranty, whether any claim against it is based on strict liability, negligence, breach of warranty, or any other theory or cause of action.	Warranty contains all of the provisions of remedies from Owens Corning. Owens Corning's liability is limited to the provisions of the warranty, whether any claim against it is based on strict liability, negligence, breach of warranty, or any other theory or cause of action. Consumer's sole and exclusive remedy, and Owens Corning's sole obligation, shall be for Owens Corning to pay the consumer an amount equal to the reasonable cost of cleaning growth off of the affected AR shingles.
<b>19. Special Features/Conditions</b>	For all products, the original consumer-purchaser may extend the initial three or five years of nonprorated warranty coverage, which includes labor to install replacement shingles, for up to two years. This optional purchase must take place during the first year of warranty coverage only. IKO will charge a one time fee of \$5.00/100 sq. ft. of roofing per year of additional coverage for this extension. Call the IKO quality services dept. at 800-433-2811 to purchase this additional coverage. No action for breach of this limited warranty shall be brought against IKO later than one year after any cause of action has accrued. IKO reserves the right to discontinue or modify any of its products, including the color blend of its shingles, without notice to the original consumer-purchaser and shall not be liable to the original consumer-purchaser as a result of this modification or discontinuance. IKO will have no liability in the event that replacement material may vary in color in comparison to the original product as a result of product changes or normal weathering.	Consumer must purchase a complete "Roofing System" from Owens Corning to be installed on a single-family dwelling with a roof that is no larger than 100 squares. The Roofing System may not be installed over existing roofing materials, all of which must be removed to the deck. The components of a complete roofing system includes all of the following items: (1) Owens Corning asphalt shingles; (2) Owens Corning VentSure ridge vent product in conjunction with eave and/or soffit intake vents to ensure that air circulates freely under the roof deck; (3) one of Owens Corning's hip and ridge products or an Owens Corning shingle product in lieu of hip and ridge product (provided that such shingle product has a warranty period which is at least equal to the warranty period for the roofing shingles purchased); (4) Owens Corning WeatherLock installed according to Owens Corning's recommended applications (unless WeatherLock is not available in the Consumer's area; and (5) any breather type No. 15 or No. 30 asphalt saturated felt which is intended to be used as shingle underlayment. Owens Corning may require consumer to submit, at consumer's expense, sample shingles for testing and for photographs.	Owens Corning may require consumer to submit, at consumer's expense, sample shingles for testing and/or photographs. Owens Corning reserves the right to discontinue or modify any of its shingles, including the color, without notice to the consumer and shall not be liable to the consumer as a result of any such discontinuance or modification, nor shall Owens Corning be liable in the event replacement shingles may vary in color in comparison to the original shingle as a result of normal weathering. If Owens Corning replaces any shingles under warranty, it may substitute shingles designated by Owens Corning to be of comparable quality or price range in the event the original shingles purchased are no longer available.
<b>20. Executed by Owner?</b>	No		No

# ASPHALT SHINGLE WARRANTIES

1. Identity of issuing entity	Owens Corning	PABCO Roofing Products, division of Pacific Coast Building Prods, Inc.	Pabco Roofing Products, Division of Pacific Coast Bldg. Prods., Inc.
2. Title, original publication date, and identifying symbol, if any	"Limited Warranty on Roofing Shingles," December 1998; Pub. No. 16-RR-08456-X	"Shingle Warranty"; September 1989	Premier Advantage 45 Year Shingle Warranty; @ May 1999 (See Special Features/Conditions)
3. Products covered	Oakridge 40 Deep Shadow, Oakridge 30 Shadow, Oakridge 25, Prominence, Supreme 30, Supreme, Classic, Glaslock	PABCO SG-25, PABCO GG-20, PABCO Laminated Shingles: Premier-40, Premier-30/3M Algae Block, Premier-25, Premier-25/3M Algae Block	Premier Advantage
4. Scope of coverage	Owens Corning warrants to the original consumer purchaser that its roofing shingles are free from manufacturing defects that affect shingle performance	PABCO warrants to the homeowner/consumer that the asphalt shingles are free from actual manufacturing defects and not causing the roof to leak, will remain serviceable for the length of time specified for the shingle applied	PABCO warrants to the original homeowner/consumer that the asphalt shingles are free from actual manufacturing defects and not causing the roof to leak, will remain serviceable for the length of time specified
4a. Does the warranty provide coverage for defects in manufacture?	Yes	Yes	Yes
4b. Does the warranty provide coverage for defects in application?	No	No	No
4c. Does the warranty limit coverage to leakage and, if no, what defects or conditions other than leakage are covered?	No; Warranty covers manufacturing defects that affect shingle performance.	No; warranty also states that shingles are free from manufacturing defects and will remain serviceable	No; warranty also states that shingles are free from manufacturing defects and will remain serviceable.
4d. Does the warranty provide coverage for flashings, metal work, or related work that may be affected and/or need to be repaired or removed?	No	No	No
5. Length of Coverage	40 years: Oakridge 40 Deep Shadow 30 years: Oakridge 30 Shadow, Prominence, Supreme 30 25 years: Oakridge 25, Supreme, Glaslock 20 years: Classic	40 Years: PABCO Premier-40 30 Years: PABCO Premier-30/3M Algae Block 25 Years: PABCO Premier-25, PABCO Monarch, PABCO SG-25, PABCO Premier-25/3M Algae Block 20 Years: PABCO GG-20	45 Years
5a. Is the warranty prorated?	Yes	Yes	Yes
5b. When does prorating begin?	After one year	After one year.	After 5 years
5c. What is the prorating formula?	Oakridge 40 Deep Shadow: After one (1) year, warranty is reduced by 1/480 for each month of service from the date of installation.  Oakridge 30 Shadow, Prominence, Supreme 30: After one (1) year, warranty is reduced by 1/360 for each month of service from the date of installation.  Oakridge 25, Supreme, Glaslock: After one (1) year, warranty is reduced by 1/300 for each month of service from the date of installation.  Classic: After one (1) year, warranty is reduced by 1/240 for each month of service from the date of installation	<b>Premier-40:</b> After one year, warranty is reduced by 1/480 for each month since original application (so that at the beginning of the second year, warranty would be reduced by 12/480). <b>Premier - 30/3M Algae Block:</b> After one year, warranty is reduced by 1/360 for each month since original application (so that at the beginning of the second year, warranty will be reduced by 12/360). <b>Premier - 25, Monarch SG-25, SG-25/3M Algae Block, Premier - 25/3M Algae Block:</b> After one year, warranty is reduced by 1/240 for each month since original application (so that at the beginning of the second year, warranty would be reduced by 12/240.)	After 5 years, warranty is reduced by 1/540 for each month since original application (so that the beginning of the 6 <sup>th</sup> year, warranty would be reduced by 60/540).
6. Nature of Remedy	For the first year, Owens Corning shall pay the repair or replacement cost of the defective shingles, including labor, exclusive of metal work, flashing or other related work. After one year, Owens Corning shall pay the prorated reasonable cost of repair or replacement as determined by Owens Corning. A monetary settlement will be the only remedy available to the consumer for defective shingles..	PABCO, at its election, will repair or replace, free of charge, any shingles proven to be defective during the first 5 years for Premium Advantage and the first year for all others after completion. For the balance of the warranty, PABCO will contribute toward the cost of repairing or replacing defective shingles.	PABCO, at its election, will repair or replace, free of charge, any shingle proven to be defective during the first 5 years after completion. For the balance of the warranty, PABCO will contribute a prorated amount toward the cost of repairing or replacing defective shingles.
6a. Does the warranty provide for furnishing of replacement shingles?	Yes	Yes	Yes
6b. Does the warranty provide for labor to install replacement shingles?	Yes	Warranty states PABCO will repair or replace defective shingles or make appropriate contribution to repair or replacement.	Yes
6c. Does the warranty provide for labor to remove defective shingles?	No	Cost of roof tear-off is not included [PABCO states total warranty liability is based on specified, fixed dollar per square amount, corresponding to a reasonable value.]	No
6d. Does the warranty cover disposal of defective shingles?	No	Cost of roof tear-off is not included [PABCO states total warranty liability is based on a specified, fixed dollar per square amount, corresponding to a reasonable value.]	MP
6e. Does the warranty apply to any materials other than shingles?	No	No	No

7. Is there a monetary limitation?	No monetary limitation for first year. After one year, Owens Corning's maximum liability is the prorated reasonable cost of repair or replacement cost as determined by Owens Corning.	For the first year, PABCO's maximum liability shall be equal to the initial cost of the asphalt shingles and the cost of their initial application, exclusive of costs of flashings and metal work. For the balance of the warranty period, PABCO's maximum liability is: Premier-40: \$80/square Premier-30/3M Algae Block: \$70/square Premier-25/3M Algae Block: \$60/square Premier -25: \$55/square SG-25: \$47/square GG-20: \$40/square PABCO's total maximum liability is calculated by multiplying the number of defective shingles by the applicable maximum liability per square and then decreasing the resulting amount by the applicable per month pro-rating (e.g. 1/240, 1/300) for each month of service from date of installation to the date when shingles prove defective.	For the first five years PABCO's maximum liability shall be equal to the initial cost of the asphalt shingles and the cost of their initial application, exclusive of costs of flashings and metal work. For the balance of the warranty period, PABCO's maximum liability is \$90/square.
8. Specific Exclusions from Coverage (See Warranty Introduction for codes.)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14, 15, 17, 19, 21, 23, 24	1, 2, 4, 6, 7, 8, 9, 13, 16, 19, 23, 24, 28	1, 2, 4, 6, 7, 8, 9, 13, 16, 19, 23, 24, 28
9. Wind Coverage/Exclusion	During the first five (5) years after installation, 20- and 25-year shingles classified as "Wind Resistant" shall be resistant to wind damage, after thermal sealing has taken place, at wind velocities up to 60 mph. 30- and 40-year shingles classified as "Wind Resistant" shall be resistant to wind damage, after thermal sealing has taken place, at wind velocities up to 80 mph only during the first five (5) years after installation. In cases where Owens Corning determines that thermal sealing should have occurred and did not due to a manufacturing defect, Owens Corning will be liable only for the reasonable cost of replacing blown-off shingles and the reasonable cost of manually sealing the unsealed shingles remaining on the roof. Shingles installed in the fall or winter may not seal until the following spring. Shingles which do not receive direct sunlight or which are not exposed to adequate surface temperatures may never seal. This is the nature of shingles and failure to seal under such circumstances is not a manufacturing defect.	Pabco warrants that its other shingles will resist wind blow-off due to wind velocities, including "gusts" up to a maximum of 60 mph (Beaufort Scale #9) during the first year following the application of the shingles. If any such blow-off damage occurs during the first year, PABCO will furnish replacement shingles without charge for those shingles damaged. Wind warranty does not cover labor costs for removal of damaged shingles or application of replacement shingles. If self-sealing asphalt shingles fail to properly activate within the first year, Pabco shall have the opportunity to hand seal, at its sole expense, any non-sealing shingles. All shingles containing a strip of thermal sealing asphalt must be subjected to warm sunlight for several days before full sealing will occur. Shingles installed in the fall or winter may not seal until the following spring. Shingles which do not receive direct sunlight or which are not exposed to adequate surface temperatures may never seal. Failure to seal under such circumstances is not a manufacturing defect.	For the first 5 years, the warranty applies to wind speeds up to 80 mph when installed with 4 nails per shingle or 100 mph when installed with 6 nails per fastener.
10. Notification Requirements	Claims must be submitted in writing, together with proof of purchase of the shingles and the application date, to Owens Corning world headquarters, Customer Response Center, Toledo, OH 43659, within 30 days after discovery of the alleged defect.	Written notification shall be provided to Pabco Roofing Products, 1718 Thorne Road, Tacoma, WA 98421-3207, of any defect promptly following its discovery and submitted with notice of proof of date of purchase and application. In all correspondence, reference should be made to registration number on warranty certificate.	Written notification shall be provided to PABCO Roofing Products, 1718 Thorne Road, Tacoma, WA 98421-3207, of any defect promptly following its discovery and submitted with notice of proof of date of purchase and application. In all correspondence, reference should be made to registration number on warranty certificate
11. Determination of Warranty Applicability	In all cases, the extent of repair or replacement required and the reasonable cost of such repair or replacement will be at the sole discretion of Owens Corning.	PABCO shall promptly inspect claimed defect and, if such examination discloses a defect covered by the warranty, PABCO shall, within a reasonable time after inspection, either repair or replace the defective shingles or make the appropriate contribution toward repair or replacement	PABCO shall promptly inspect claimed defect and, if such examination discloses a defect covered by the warranty, PABCO shall, within a reasonable time after inspection, either repair or replace the defective shingles or make the appropriate contribution toward repair or replacement.
12. Does the issuing entity manufacture and/or sell the shingles?	Owens Corning manufactures and sells the shingles.	PABCO manufactures and sells the shingles.	PABCO manufacturers and sells the shingles.
13. Specific Conditions to Make Warranty Ineffective or Void (See Warranty Introduction for codes.)	C, E	Application of PABCO Roofing Products on "Geo-Detic" dome construction is not warranted nor approved under any circumstances.	Application of PABCO Roofing Products on "Geodesic" dome construction is not warranted nor approved under any circumstances.
14. Inclusion of Consequential Damages	No	No	No
15. Assignability	No	Warranty is transferable.	Warranty is transferable.
16. Cost to Obtain	None	None	None
17. Is the warranty backed by insurance coverage?	No	PABCO indicates that it is self-insured.	No
18. Is the warranty an additional or exclusive remedy for the owner?	Warranty contains all of the provisions of remedies from Owens Corning. Owens Corning's liability is limited to the provisions of the warranty, whether any claim against it is based on strict liability, negligence, breach of warranty, or any other theory or cause of action.	Warranty is expressly in lieu of any other guarantees and/or warranties, oral or written, expressed or implied. Warranty is in lieu of all other theories of liability, causes of action, and claims whatsoever, against PABCO.	Warranty is expressly in lieu of any other guarantees and/or warranties, oral or written, expressed or implied. Warranty is in lieu of all other theories of liability, causes of action, and claims whatsoever, against PABCO.
19. Special Features/Conditions	Within 30 days after receipt of written claim, Owens Corning representative will contact consumer regarding the claim.	All actions and proceedings against PABCO based upon the warranty, shall be commenced within the earlier of six months after the defect is discovered by the homeowner, or the last day of the applicable warranty. PABCO reserves the right to discontinue or modify any of its products, including the color of shingles, without notice to the original homeowner/consumer and shall not be liable to the original homeowner/consumer as a result of discontinuance or modification. Warranty applies to shingles applied from January 1, 1997 to December 31, 2000. PABCO Premier-25 3M Algae Block System shingles and SG-25 3M Algae Block System shingles will carry a minimum of 15 years Algae Block limited warranty as warranted by 3M Corporation in conjunction with PABCO Roofing Products' normal warranty.	PABCO indicates that its Premier Advantage 45 Year Shingle Warranty, which is set forth in a supplemental warranty card, is to be considered an addition to the standard PABCO Shingle Warranty. All limitations and special conditions in the PABCO Roofing Shingle Warranty apply.
20. Executed by Owner?	No; contractor or dealer should sign and date the warranty upon completion to help establish proof of purchase.	Yes; after job completion, owner should return the asphalt shingle warranty registration to PABCO Roofing Products.	Yes; after job completion, owner should return the asphalt shingle warranty registration to PABCO Roofing Products.

# ASPHALT SHINGLE WARRANTIES

1. Identity of issuing entity	Tamko Roofing Products, Inc.	Tamko Roofing Products, Inc.	Tamko Roofing Products, Inc.
2. Title, original publication date, and identifying symbol, if any	Tamko Roofing Products "Algae Resistant Shingles Limited Warranty;" April 15, 1999; 997298, JP23190	Tamko Roofing Products, Inc. "Fiberglass Shingles Limited Warranty;" April 15, 1999; 997449 JP 21371	ATamko Roofing Products, Inc. Reliance 25, Reliance 30 Full Start 5 Organic Shingles Limited Warranty;= April 15, 1999 JP21385
3. Products covered	Heritage 40 AR, Heritage 30 AR, Heritage 25 AR, Elite Glass-Seal AR, Glass-Seal AR	Heritage 40, Heritage 30, Heritage 25, Elite Glass-Seal, Glass-Seal, Tam-Loc Glass	Reliance 25, Reliance 30
4. Scope of coverage	Tamko warrants that the Tamko shingles are free from manufacturing defects which result in leaks.	Tamko warrants that the Tamko shingles are free from manufacturing defects which result in leaks.	Tamko warrants that the Tamko shingles are free from manufacturing defects which directly result in leaks
4a. Does the warranty provide coverage for defects in manufacture?	Yes	Yes	Yes
4b. Does the warranty provide coverage for defects in application?	No	No	No
4c. Does the warranty limit coverage to leakage and, if no, what defects or conditions other than leakage are covered?	Yes	Yes	Yes
4d. Does the warranty provide coverage for flashings, metal work, or related work that may be affected and/or need to be repaired or removed?	No	No	No
5. Length of Coverage	For Manufacturing Defects Resulting in Leaks: 40 yrs: Heritage 40 AR; 30 years: Heritage 30 AR 25 yrs: Heritage 25 AR, Elite Glass-Seal AR; 20 yrs: Glass-Seal AR For Algae Resistance: 10 years: All Tamko algae resistant (AR) shingles	40 years: Heritage 40 30 years: Heritage 30 25 years: Heritage 25, Elite Glass-Seal, Tam-Loc Glass 20 years: Glass-Seal	30 years: Reliance 30 in Region A 25 years: Reliance 25 in Region A 20 years: Reliance 30 in Region B, Reliance 25 in Region B (See Item 19 below)
5a. Is the warranty prorated?	Warranty coverage for manufacturing defects is prorated; warranty coverage for algae resistance is not prorated.	Yes	Yes
5b. When does prorating begin?	After one year for manufacturing defects	After one year	After 5 years
5c. What is the prorating formula?	<b>Heritage 40 AR:</b> After one year, warranty is reduced by 1/480 for each month of service from date of installation. <b>Heritage 30 AR:</b> After one year, warranty is reduced by 1/360 for each month of service from date of installation. <b>Heritage 25 AR, Elite Glass-Seal AR:</b> After one year, warranty is reduced by 1/300 for each month of service from date of installation. <b>Glass-Seal AR:</b> After one year, warranty is reduced by 1/240 for each month of service from date of installation.	<b>Heritage 40:</b> After one year, warranty is reduced by 1/480 for each month of service from date of installation. <b>Heritage 30:</b> After one year, warranty is reduced by 1/360 for each month of service from date of installation. <b>Heritage 25, Elite Glass-Seal, Tam-Loc Glass:</b> After one year, warranty is reduced by 1/300 for each month of service from date of installation. <b>Glass-Seal:</b> After one year, warranty is reduced by 1/240 for each month of service from date of installation.	<b>Region A:</b> Reliance 30: After five years, warranty is reduced by 1/360 for each month of service from date of installation (so that at the beginning of the sixth year, warranty would be reduced by 60/360). Reliance 25: After five years, warranty is reduced by 1/300 for each month of service from date of installation (so that at the beginning of the sixth year, warranty would be reduced by 60/300). <b>Region B:</b> After five years, warranty is reduced by 1/240 for each month of service from date of installation (so that at the beginning of the sixth year, warranty would be reduced by 60/240).
6. Nature of Remedy	For manufacturing defects, Tamko will make repairs or cause repairs to be made, or will replace defective shingles, exclusive of flashings and metal work, as required to prevent leaks resulting directly and solely from manufacturing defects. Tamko will have ninety days after receipt of notification to make or cause to be made repairs or replacements unless otherwise prevented by acts of God. For algae resistance, Tamko will either make repairs or cause repairs to be made to the shingles, which may include cleaning or replacing the shingles, exclusive of flashings and metal work, as required to correct the adverse appearance of the shingles.	Tamko will make repairs or cause repairs to be made, or will replace defective shingles, exclusive of flashings and metal work, as required to prevent leaks resulting directly and solely from manufacturing defects. Tamko will have ninety days after receipt of notification to make or cause to be made repairs or replacements unless otherwise prevented by acts of God.	Tamko will make repairs or cause repairs to be made, or will replace defective shingles, exclusive of flashings and metal work, as required to prevent leaks resulting directly from manufacturing defects within 90 days after receipt of notification. Alternatively, at Tamko's option, Tamko may tender payment to the owner of the lesser of the reasonable cost of repairs or the amount of Tamko's maximum liability.
6a. Does the warranty provide for furnishing of replacement shingles?	Yes	Yes	Yes
6b. Does the warranty provide for labor to install replacement shingles?	Yes	Yes	Yes
6c. Does the warranty provide for labor to remove defective shingles?	No	No	No
6d. Does the warranty cover disposal of defective shingles?	No	No	No
6e. Does the warranty apply to any materials other than shingles?	No	No	No
7. Is there a monetary limitation?	During the first year, Tamko's maximum liability for manufacturing defects shall be limited to the reasonable replacement cost of the Tamko shingles and their application. After one year, Tamko's maximum liability shall be pro-rated and shall be equal to the product of: (1) the quotient derived by dividing the reasonable replacement cost by the total months of the warranty period multiplied by (2) the difference between the total months of the warranty period minus the total months of service (the number of months from the date of the original application to the date of repair or replacement of the shingles). Tamko's maximum liability for repair or replacement due to algae or fungus growth shall be limited to the original cost of the shingles and the cost of their original installation.	During the first year, Tamko's maximum liability shall be limited to the reasonable replacement cost of the Tamko shingles and their application. After one year, Tamko's maximum liability shall be prorated and shall be equal to the product of: (1) the quotient derived by dividing the reasonable replacement cost by the total months of the warranty period multiplied by (2) the difference between the total months of the warranty period minus the total months of service (the number of months from the date of the original application to the date of repair or replacement of the shingles).	During the first 5 years, Tamko's maximum liability shall be limited to the reasonable replacement cost of the Tamko shingles and their application. After 5 years, Tamko's maximum liability shall be limited to the pro-rated reasonable cost of the shingles excluding application costs, and shall be equal to the product of: (1) the quotient derived by dividing the reasonable cost of the shingles by the total months of the term multiplied by (2) the difference between the total months of the term minus the total months of service (the number of months from the date of purchase to the date of notification to Tamko of leaks. The remaining cost shall be the responsibility of the owner.

<b>8. Specific Exclusions from Coverage (See Warranty Introduction for codes.)</b>	1, 2, 4, 7, 8, 9, 14 (green algae, moss and staining from overhanging trees), 17, 18 (including aliphatic or aromatic solvents, chlorinated hydrocarbons, turpentine, oils, or organic or inorganic polar materials), 19, 23, 24 Warranty also excludes removal or abatement of any asbestos present in the roof to which the shingles are applied, or for any costs related to the removal or abatement.	1, 2, 4, 7, 8, 9, 14, 17, 18 (including aliphatic or aromatic solvents, chlorinated hydrocarbons, turpentine, oils, or organic or inorganic polar materials), 19, 23, 24 Warranty also excludes removal or abatement of any asbestos present in the roof to which the shingles are applied, or for any costs related to the removal or abatement.	1, 2, 4, 7, 8, 9, 14, 17, 18 (including aliphatic or aromatic solvents, chlorinated hydrocarbon, turpentine, oils, or organic or inorganic polar materials), 19, 23, 24. Warranty also excludes removal or abatement of any asbestos present in the roof to which the shingles are applied, or for any costs related to the removal of abatement.
<b>9. Wind Coverage/Exclusion</b>	During the first five years after initial application, Tamko shingles shall resist damage by winds up to 60 mph after the shingles have had the opportunity to seal down. In situations where Tamko determines that sealing should have occurred but did not, as a result of a manufacturing defect, Tamko will repair or replace any such single. Tamko may manually seal the shingles or replace the shingles with shingles of a similar color. Shingles that are installed in the fall or winter may not seal until weather conditions are adequate to allow the seal down strip to be activated.	During the first five years after initial application, Tamko shingles shall resist damage by winds up to 60 mph after the shingles have had the opportunity to seal down. In situations where Tamko determines that sealing should have occurred but did not, as a result of a manufacturing defect, Tamko will repair or replace any such single. Tamko may manually seal the shingles or replace the shingles with shingles of a similar color. Shingles that are installed in the fall or winter may not seal until weather conditions are adequate to allow the seal down strip to be activated.	During the first five (5) years, when installed according to the instructions printed on the wrapper and after the shingles have had the opportunity to seal down, the Tamko shingles shall resist damage by winds up to 60 mph. If Tamko determines that sealing did not occur as a result of a manufacturing defect, Tamko will repair or replace or tender payment to the owner of the reasonable cost of repairing or replacing any such unsealed shingle. Tamko may manually seal the shingles or replace the shingles with shingles of a similar color or tender payment to the owner of the reasonable cost thereof. Shingles will be conclusively deemed to have been exposed to winds in excess of 60 mph if the National Weather Service or other reputable weather agency records wind in excess of 60 mph in the county or parish where the shingles are installed or in any adjoining county or parish
<b>10. Notification Requirements</b>	The owner must notify Tamko by certified mail at P.O. Box 1404, Joplin, Missouri 64802 of any leaks alleged to result from manufacturing defects or any algae or fungus growth within 30 days following discovery.	Owner must notify Tamko by certified mail at P.O. Box 1404, Joplin, Missouri 64802 of any leaks alleged to result from manufacturing defects within thirty (30) days following discovery.	Owner must notify Tamko by certified mail at P.O. Box 1404, Joplin, Missouri 64802 of any leaks alleged to result from manufacturing defects within (30) days following discovery of leak. Claims require documentary proof of purchase.
<b>11. Determination of Warranty Applicability</b>	The extent of repair or replacement is at the sole discretion of Tamko.	The extent of repair or replacement is at the sole discretion of Tamko.	Extent of repair or replacement is at the sole discretion of Tamko.
<b>12. Does the issuing entity manufacture and/or sell the shingles?</b>	Tamko manufactures and sells the shingles.	Tamko manufactures and sells the shingles.	Tamko manufactures and sells the shingles.
<b>13. Specific Conditions to Make Warranty Ineffective or Void (See Warranty Introduction for codes.)</b>	C, E, F (Hawaii and Alaska are also excluded.)	C, E, F (Hawaii and Alaska also excluded)	E, F, (See Special Features/Conditions
<b>14. Inclusion of Consequential Damages</b>	No	No	No
<b>15. Assignability</b>	Warranty shall not be assigned, sold, or transferred in any manner whatsoever.	Warranty shall not be assigned, sold or transferred in any manner whatsoever.	Warranty shall not be assigned, sold or transferred in any manner whatsoever. Any assignment, sale or transfer of the warranty or the building to which the Tamko shingles are applied shall immediately terminate all liability and warranties.
<b>16. Cost to Obtain</b>	None	None	None
<b>17. Is the warranty backed by insurance coverage?</b>	No	No	No
<b>18. Is the warranty an additional or exclusive remedy for the owner?</b>	Warranty is expressly in lieu of any other obligations, guarantees and warranties, expressed or implied, and any other obligations or liability on the part of Tamko.	Warranty is expressly in lieu of any other obligations, guarantees and warranties, expressed or implied, and any other obligations or liability on the part of Tamko.	Warranty is expressly in lieu of any other obligations, guarantees and warranties, expressed or implied, and any other obligations or liability on the part of Tamko.
<b>19. Special Features/ Conditions</b>	No action for breach of this limited warranty shall be brought later than one year after any cause of action has accrued. Claims under warranty will require proof of purchase. No representative, employee or other agent of Tamko, or any other person, other than Tamko's president, has authority to assume for Tamko any additional liability or responsibility.	No action for breach of this limited warranty shall be brought later than one year after any cause of action has accrued. Claims under warranty will require proof of purchase. No representative, employee or other agent of Tamko, or any other person, other than Tamko's president, has authority to assume for Tamko any additional liability or responsibility.	This warranty only applies to shingles applied in certain regions of the country. Because of environmental conditions in Region C, Tamko does not market or recommend Reliance shingles in Region C, which consists of Alabama, California, Florida, Georgia, Louisiana, Mississippi (certain counties), North Carolina, South Carolina, Texas (certain counties), Virginia and West Virginia. In these states, there is no warranty coverage for Reliance shingles and such shingles are sold Aas is=, without any warranty, expressed or implied. Region A consists of all states other than parts of Arizona, Texas, New Mexico, which are Region B, and those states listed above, which comprise Region C. If reasonable access is denied or made subject to unreasonable conditions by the owner, or if the owner fails or refuses to cooperate in Tamko=s investigation of the complaint (including, but not limited to, failing to provide sample shingles or photographs or to complete and return a warranty questionnaire), Tamko=s obligation shall immediately terminate. Tender of payment to the owner of the maximum liability, shall immediately terminate all liability of Tamko and all warranties contained herein. No action for breach of this limited warranty or any other action relating to or arising out of the shingles, their purchase or this transaction shall be brought later than one year after any cause of action has accrued. No representative, employee or other agent of Tamko, or any other person, other than Tamko=s president, has authority to assume for Tamko any additional liability or responsibility.
<b>20. Executed by Owner?</b>		No	No

# ASPHALT SHINGLE WARRANTIES

1. Identity of issuing entity	Tamko Roofing Products, Inc.	Tamko Roofing Products, Inc.
2. Title, original publication date, and identifying symbol, if any	"Storm Fighter AR Category 3 Hurricane/130 MPH Wind Shingle Limited Warranty," January 1, 1998; JP39942 3/99	Tamko Roofing Products, Inc. Metric Laminated Shingles Limited Warranty ; April 15, 1999; 997528 JP28994
3. Products covered	Stormfighter AR shingles	Heritage M40, Heritage M30, Heritage M25
4. Scope of coverage	Tamko warrants that the Tamko shingles are free from manufacturing defects which directly result in leaks and will be resistant to certain algae or fungus growth, including blue-green algae of the Genus Gloeocapsa to the extent such growth damages appearance.	Tamko warrants that the Tamko shingles are free from manufacturing defects that result in leaks.
4a. Does the warranty provide coverage for defects in manufacture?	Yes	Yes
4b. Does the warranty provide coverage for defects in application?	No	No
4c. Does the warranty limit coverage to leakage and, if no, what defects or conditions other than leakage are covered?	Yes	Yes
4d. Does the warranty provide coverage for flashings, metal work, or related work that may be affected and/or need to be repaired or removed?	No	No
5. Length of Coverage	For Manufacturing Defects: 30 years  For Algae Resistance: 10 years	40 years: Heritage M40 30 years: Heritage M30 25 years: Heritage M25
5a. Is the warranty prorated?	Yes	Yes
5b. When does prorating begin?	After one year	After one year
5c. What is the prorating formula?	After one year, warranty is reduced by 1/360 for each month of service from date of installation.	<b>Heritage M40:</b> After one year, warranty is reduced by 1/480 for each month of service from date of installation (so that at the beginning of the second year, warranty would be reduced by 12/480). <b>Heritage M30:</b> After one year, warranty is reduced by 1/360 for each month of service from date of installation (so that at the beginning of the second year, warranty would be reduced by 12/360). <b>Heritage M25:</b> After one year, warranty is reduced by 1/300 for each month of service from date of installation (so that at the beginning of the second year, warranty would be reduced by 12/300).
6. Nature of Remedy	For manufacturing defects and not wind damage, Tamko will refund to the owner, subject to proration, the original installed cost of the shingles, except that Tamko, in its sole discretion, may make repairs or cause repairs to be made, or may replace defective shingles, exclusive of flashings and metal work, as required to prevent leaks resulting solely from manufacturing defects. Tamko will have ninety days after receipt of notification to make or cause to be made necessary refunds, repairs or replacements unless otherwise prevented by acts of God.  For algae resistance, Tamko will refund to the owner, subject to proration, the original installed cost of the shingles, except that Tamko, in its sole discretion, may either make repairs or cause repairs to be made to the shingles, which may include cleaning or replacing the shingles, exclusive of flashings and metal work, as required to correct the damage to the appearance of the shingles.	For manufacturing defects, Tamko will make repairs or cause repairs to be made, or will replace defective shingles, exclusive of flashings and metal work, as required to prevent leaks resulting directly and solely from manufacturing defects. Tamko will have 90 days after receipt of notification to make or cause to be made repairs or replacements unless otherwise prevented by acts of God.
6a. Does the warranty provide for furnishing of replacement shingles?	Yes	Yes
6b. Does the warranty provide for labor to install replacement shingles?	No	Yes
6c. Does the warranty provide for labor to remove defective shingles?	No	No
6d. Does the warranty cover disposal of defective shingles?	No	No
6e. Does the warranty apply to any materials other than shingles?	No	No
7. Is there a monetary limitation?	During the first year, Tamko's maximum liability shall be limited to the original installed cost of the Tamko shingles. The original installed cost shall be the actual original cost of purchase and application of the Stormfighter AR shingles which shall be evidenced by the owner's written proof of purchase and installation. After one year, Tamko's maximum liability shall be prorated and shall be equal to the product of: (1) the quotient derived by dividing the original installed cost by the total months of the warranty period, multiplied by (2) the difference between the total months of the warranty period minus the total months of service (the number of months from the date of original application to the date of the warranty claim). The remaining cost shall be the responsibility of the owner. For shingles damaged by algae or fungus growth to which shingles are warranted to be resistant, Tamko will refund to the owner the original installed cost of the shingles, except that Tamko, in its sole discretion, may either make repairs or cause repairs to be made or replace damaged shingles.	During the first year, Tamko's maximum liability for manufacturing defects shall be limited to the reasonable replacement cost of the Tamko shingles and their application. After one year, Tamko's maximum liability shall be prorated and shall be equal to the product of: (1) the quotient derived by dividing the reasonable replacement cost by the total months of the warranty period multiplied by (2) the difference between the total months of the warranty period minus the total months of service (the number of months from the date of the original application to the date of repair or replacement of the shingles).
8. Specific Exclusions from Coverage (See Warranty Introduction for codes.)	1, 2, 4, 7, 8, 9, 14 (green algae, moss and staining from overhanging trees), 17, 18 (including aliphatic or aromatic solvents, chlorinated hydrocarbons, turpentine, oils, or organic or inorganic polar materials), 19, 23, 24. Warranty also excludes	1, 2, 4, 7, 8, 9, 14, 17, 18 (including aliphatic or aromatic solvents, chlorinated hydrocarbons, turpentine, oils, or organic or inorganic polar

	removal or abatement of any asbestos or other hazardous material present in the roof to which the shingles are applied, or for any costs related to the removal or abatement, replacement of any shingles, if the shingle fasteners pull out of the roof deck or if the roof deck detaches in whole or in part from the building to which the Tamko shingles are applied, any wind damage when the roof has been subjected to sustained winds in excess of 130 mph or wind gusts in excess of 140 mph, whether or not such winds are associated with a hurricane of any category or any damages to shingles or roll goods used on hips and ridges of the roof.	materials), 19, 23, 24. Warranty also excludes removal or abatement of any asbestos present in the roof to which the shingles are applied, or for any costs related to the removal or abatement.
<b>9. Wind Coverage/Exclusion</b>	<p>During the first 10 years after having the opportunity to seal down, the Tamko shingles shall resist damage by winds up to 130 mph. Warranty will cease upon shingles being exposed to a Category 4 or higher hurricane or three Category 1, 2 or 3 hurricanes in the vicinity.</p> <p>For shingles that are damaged, Tamko will refund to the owner, subject to proration after one year, the original installed cost of the damaged shingles. Warranty does not cover labor costs for removal of damaged shingles, roof deck repairs or application of replacement shingles, except that Tamko, in its sole discretion, in lieu of refunding the original installed cost of damaged shingles, may make repairs or cause repairs to be made or replace the damaged shingles.</p> <p>Separation of shingles at the seal down strip shall not be a breach of warranty so long as the shingles remain attached to the roof deck. Shingles that are installed in the fall or winter may not seal until weather conditions are adequate to allow the seal down strip to be activated. In situations where Tamko determines that sealing should have occurred but did not as a result of a manufacturing defect, Tamko, in its sole discretion, may manually seal any such shingles.</p>	<p>During the first five years after initial application, Tamko shingles shall resist damage by winds up to 60 mph after the shingles have had the opportunity to seal down. In situations where Tamko determines that sealing should have occurred but did not, as a result of a manufacturing defect, Tamko will repair or replace any such shingle. Tamko may manually seal the shingles or replace the shingles with shingles of a similar color.</p> <p>Shingles that are installed in the fall or winter may not seal until weather conditions are adequate to allow the seal down strip to be activated.</p>
<b>10. Notification Requirements</b>	Owner must notify Tamko by certified mail at P.O. Box 1404, Joplin, Missouri 64802 of any leaks alleged to result from manufacturing defects, wind damage or other claims under warranty within (30) days following discovery of leak or wind damage. Claims require documentary proof of purchase and installation of the shingles which must include the dates of purchase and installation. Absent reasonable documentary proof, Tamko shall have no liability.	Owner must notify Tamko by certified mail at P.O. Box 1404, Joplin, Missouri 64802 of any leaks alleged to result from manufacturing defects within thirty days following discovery.
<b>11. Determination of Warranty Applicability</b>	The extent of repair or replacement is at the sole discretion of Tamko.	Tamko determines within a reasonable time after receipt of notification whether there are manufacturing defects covered by the warranty. The extent of repair or replacement is at the sole discretion of Tamko.
<b>12. Does the issuing entity manufacture and/or sell the shingles?</b>	Tamko manufactures and sells the shingles.	Tamko manufactures and sells the shingles.
<b>13. Specific Conditions to Make Warranty Ineffective or Void (See Warranty Introduction for codes.)</b>	F	C, E, F (California, Hawaii, and Alaska also excluded.)
<b>14. Inclusion of Consequential Damages</b>	No	No
<b>15. Assignability</b>	Warranty shall not be assigned, sold or transferred in any manner whatsoever. Any assignment, sale or transfer of the warranty or the building to which the Tamko shingles are applied shall immediately terminate all liability and warranties.	Warranty shall not be assigned, sold, or transferred in any manner whatsoever. Any assignment, sale, or transfer of the warranty or the building to which the Tamko shingles are applied shall void all warranties.
<b>16. Cost to Obtain</b>	None	None
<b>17. Is the warranty backed by insurance coverage?</b>	No	No
<b>18. Is the warranty an additional or exclusive remedy for the owner?</b>	Warranty is expressly in lieu of any other obligations, guarantees and warranties, expressed or implied, and any other obligations or liability on the part of Tamko.	Warranty is expressly in lieu of any other obligations, guarantees, and warranties, expressed or implied, and any other obligations or liability on the part of Tamko.
<b>19. Special Features/ Conditions</b>	<p>If reasonable access is denied or made subject to unreasonable conditions by the owner, or if the owner fails or refuses to cooperate in Tamko's investigation of the complaint (including, but not limited to, failing to provide sample shingles or photographs or to complete and return a warranty questionnaire), Tamko's obligation shall immediately terminate.</p> <p>No action for breach of this limited warranty or any other action relating to or arising out of the shingles, their purchase or this transaction shall be brought later than one year after any cause of action has accrued. No representative, employee or other agent of Tamko, or any other person, other than Tamko's president, has authority to assume for Tamko any additional liability or responsibility.</p>	<p>No action for breach of this limited warranty shall be brought later than one year after any cause of action has accrued.</p> <p>Claims under warranty will require proof of purchase.</p> <p>No representative, employee, or other agent of Tamko, or any other person other than Tamko's president, has authority to assume for Tamko any additional liability or responsibility. This warranty is not valid in California, Hawaii, and Alaska. A separate limited warranty is available for products used in California.</p>
<b>20. Executed by Owner?</b>	Owner may submit warranty registration card to Tamko.	The owner may submit warranty registration and keep and sign warranty information including contractor's signature and indicating number of squares, date of application, and total cost.

# Appendix

## ASPHALT SHINGLES

### Atlas Roofing Corporation

For roofing shingle products Atlas= regional sales offices are: Ardmore, OK 800/261-2852 FAX 405/223-6894; Daingerfield, TX 800/270-2852 FAX 903/645-2291; Franklin, OH 800/260-2852 FAX 513/746-6040; Hampton, GA 800/251-2852 FAX 770/946-5249; Meridian, MS 800/933-2721 FAX 601/483-7344; Quakertown, PA 800/254-2852 FAX 215/536-3002.

Atlas= corporate addresses are: Corporate Sales and Marketing, 1775 The Exchange, Suite 160, Atlanta, GA, 30339; Corporate Office, 802 Hwy 19 North, Suite 190, Meridian, MS, 39307; or, access their web site at [www.atlasroofing.com](http://www.atlasroofing.com).

The Atlas Stormmaster LM and ST comply with Impact Resistance rating per UL Standard 2218 (Class 4).

### CertainTeed Corporation

Classic Horizon, New Horizon, and Highlands AR Shingle shingles are constructed by a patented, unique overlay process that creates a dimensional look without lamination. Hallmark Shingle and Independence Shingle shingles are made using AShangle≡ construction, which consists of full-size one-piece three-tab base shingles laminated with random tabs. Landmark, Woodscape and Firehalt shingles are made by laminating a Abacker≡ strip to a Adragon's tooth≡ shaped top shingle piece. Grand Manor Shingle and Carriage House Shingle shingles are made using ASuper Shangle≡ construction, which consists of two full-size one-piece base shingles laminated together. In addition, Grand Manor is laminated with random tabs. Hatteras, constructed with two strong sealant strips, is designed to withstand 110 mph winds.

CertainTeed's shingle products are available in the following regions: North East (NE), Mid-Atlantic (MA), South East (SE), Lake Central (LC), North Central (NC), South Central (SC), North West (NW) and South West (SW). Following is a list of the shingles available in each region.

Product	Region
Grand Manor Shangle	Fiberglass National
Carriage House Shangle	Fiberglass National
Hallmark Shangle	Organic NC
Hatteras	Fiberglass National
Independence Shangle	Fiberglass NE, MA, SE, LC, NC, SC
Landmark 40	Fiberglass NE, MA, SE, LC, NC, SC
Landmark 30	Fiberglass NE, MA, SE, LC, NC, SC
Landmark 25	Fiberglass NE, MA, SE, LC, NC, SC
Classic Horizon Shangle	Fiberglass NE, MA, SE

New Horizon Shangle	Fiberglass LC, NC
Highlands AR Shangle	Fiberglass NE, MA, SE
Hearthstead	Organic NC, SC
Custom Sealdon 30	Organic LC, NC
XT 30	Fiberglass NE, MA, SE, LC, NC, SC
Sealdon 25	Organic NE, MA, SE, LC, NC, SC
XT 25	Fiberglass NE, MA, SE, LC, NC, SC
Fungus Buster 25	Fiberglass MA, SE
Custom Lok 25	Organic LC, NC
CertainTeed 20	Fiberglass MA, SE, SC
High Sierra	Fiberglass NW, SW, SE
Architect 80	Fiberglass NW, SE
Estate	Fiberglass SE
Firehalt	Fiberglass NW, SW, SC, SE
Firehalt 2000	Fiberglass NW, SW, SE
Firescreen	Fiberglass NW, SW, SC, SE
Firescreen Plus 2000	Fiberglass NW, SW, SE
Woodscape 40	Fiberglass NE
Woodscape 30	Fiberglass NE
Woodscape 25	Fiberglass NE
Seal King 25	Fiberglass NE
Jet 25	Fiberglass NE

All Grand Manor, Carriage House and Hatteras shingles are algae-resistant and are available in all regions. Other algae-resistant shingles available in some regions: all FungusBuster 25 shingles and Highlands AR Shangle shingles, and as an optional feature with Landmark 40, 30 and 25 shingles, Firehalt and Firescreen shingles.

The following shingles are recommended for application on hip and ridge, using matching colors: Grand Manor/Carriage House Accessory (for Grand Manor and Carriage House); Hatteras Accessory (for Hatteras); Hallmark Accessory (for Hallmark); Accessory (for Independence, Landmark 40, Landmark 30, Landmark 25, Classic Horizon, New Horizon, Highlands AR, and Hearthstead); Accessory or same as on roof (for CertainTeed XT-25, CertainTeed XT-30, CT-20, Sealdon 25, and Custom Sealdon 30); Sealdon 25 (for Custom Lok 25); FungusBuster 25 (for FungusBuster 25) and Laminate Accessory or Sierra Ridge Accessory (for High Sierra and Architect 80).

Refer to individual application instructions provided with the shingles for special instructions regarding ice-dam protection and steep slopes. WinterGuard Waterproofing Shingle Underlayment, a self-adhering roll product containing rubber-modified asphalt, is applied on low-slope decks for protection against wind-driven rain and at the eaves to prevent leakage from water back-up.

Shingles may be applied to minimum 3/8-inch-thick plywood, minimum 7/16-inch-thick nonveneer, or minimum nominal 1-inch-thick wood decks. The plywood or nonveneer decks must comply with APA specifications. Wood decking must not exceed maximum 6-inch nominal width. Shingles must not be applied to other deck types without written permission from CertainTeed.

CertainTeed fiberglass shingles that meet ASTM D3462 also comply with CSA Standard A123.5-M98,

except for CertainTeed 20. CertainTeed organic shingles meeting ASTM D225 also comply with CSA Standard A123.1-98. Refer to actual shingle wrapper for most up-to-date list of standards compliance.

CertainTeed shingles and roll products are sold through distributors. For sales information, contact the local plant office, as follows: North East 781/551-0656; Mid-Atlantic 919/693-1141; South East 843/744-7451; Lake Central 419/499-9256; North Central 612/445-6458; North West 503/222-1307; South West 310/952-8800, 925/606-7434; South Central 972/875-9661.

For technical information, call 800/322-3060 or FAX 610/341-6212; for architectural support, call 800/233-8990 or FAX 610/341-7940.

### Elk Corporation

Following are Elk Corporation's regional sales offices and their phone numbers: Northern, Hunt Valley, Md.: 800/944-4344; Southeast, Norcross, Ga.: 800/945-5551; Southwest, Ennis, Texas: 800/288-6789; Western, Tempe, Ariz.: 800/879-4355; and Midwest, Indianapolis, Ind.: 800/226-6111.

Elk Prestigue II is available in both ASTM and non-ASTM compliant versions. ASTM 3462-97 is met by Prestigue products labeled as such on the bundle wrapper.

### GAF Materials Corporation

GAF regional sales offices are: Dallas, Texas, 214/637-1060; Fontana, Calif., 909/360-4200; - Naperville, Ill., 630/778-0390; North Brunswick, N.J., 908/297-0091; and Tampa, Fla., 813/248-6202. Regional technical services office is: Wayne, N.J., 800/ROOF-411.

Timberline shingles comply with ASTM D3462-93a in Dade County, Fla. Timberline 25 shingles, in select colors, comply with ASTM 3462-93a.

### IKO Manufacturing Inc.

For additional information contact plant offices as follow: Plant A: IKO Brampton, 71 Orenda Road, Brampton, Ont. Canada, L6W 1V8; Plant B: IKO Calgary, 1600 42<sup>nd</sup> Avenue SE, Calgary, Alberta, Canada, T2P 2L2; Plant C: IKO Hawkesbury 1451 Spence Ave., Hwekesbury, Ont, Canada, K6A 3IKO Plant D: IKO Winnipeg, 421 Archibald Street, Winnipeg, Manitoba, Canada, R2J 0X2; Plant E: Canroof Corporation, 560 Commissioners St., Toronto, Ont., Canada, M4M 1A7; Plant F: IKO Wilmington, 120 Hay Road, Wilmington, DE, 19809; Plant G: IKO Chicago, 6600 S. Central Ave., Chicago, IL, 60638;

Plant H: IKO Franklin, 1200 Main Street Franklin, OH 45005; Plant I: IKO Sumas, 850 West Front Street, Sumas, WA 98295

### Owens Corning

The Owens Corning roofing system consists of the following products: WeatherLock waterproofing shingles (High Style on the west coast and High Ridge for the balance of the country), and Heart-of-Pink shingles. A System Advantage warranty is available to consumers who install a complete Owens Corning roofing system - see actual warranty for regional requirements. The System Advantage warranty is enhanced coverage that offers an extended, upfront period on non-proration that includes all applicable components of the roofing system. The warranty is transferable one time.

All Owens Corning asphalt shingles have a tough Fiberglas mat at the core of each shingle with weather-grade asphalt to help protect the roof against curling, blistering and buckling. Algae-resistant products are available on a regional basis. Color availability varies by region. There are three lines of asphalt shingles and our specialty line as shown below:

Shingle Name	Standard Warranty Year	System Advantage Warranty Non-proration period
<b>Architectural</b>		
Oakridge 40 Deep Shadow	40	15
Oakridge 30 Shadow	30	10
Oakrdige 25	25	7
<b>Performance</b>		
Prominence	30	10
Supreme	30	10
<b>Traditional</b>		
Supreme	25	7
Classic	20	5
Gaslock	25	7
<b>Specialty</b>		
MiraVista Shake	50	NA

For additional product or technical information and assistance, call 1-800-GET-PINK or visit the website at [www.owenscorning.com](http://www.owenscorning.com).

### Pabco Roofing Products

Product information, as offered, applies to product made to comply with ASTM D3462. This product information may not apply if compliance to D3462 has not been requested.

## Section 2

*Steep-Slope Roofing  
Materials Guide*

**2000**

*Fiber-Cement and Synthetic*

## Information on Section 2: Fiber-Cement and Synthetic

### General Information

Section 2: Fiber-Cement and Synthetic in the 2000 edition of NRCA's *Steep-Slope Roofing Materials Guide* provides a comprehensive listing of fiber-cement and synthetic roofing products commonly used in steep-slope roofing.

The category of fiber-cement components encompasses those products made of cement and reinforcing fibers, either organic and/or inorganic, that are designed as substitutes for wood shingles/shakes, slate, and tile in steep-slope applications. As such, they are made to look like, or to simulate, one of these products, and, in many instances, are installed in a similar manner.

### Specific Information Included in the Guide

The following information on fiber-cement and synthetic products is provided:

1. Company name
2. Product name
3. Style
4. Availability
5. Material composition
6. Factory-applied coating
7. Dimensions and coverage
8. Hip/ridge pieces available
9. Slope/underlayment-interlayment requirements
10. Recommended decks
11. Year product first used
12. Number of squares installed
13. Distribution
14. Fire/wind ratings
15. Accepted by the following codes
16. Sales and technical information contacts

Additional information regarding fiber-cement and synthetic roof products is provided in *The NRCA Steep Roofing Manual* and *The NRCA Roofing and Waterproofing Manual*.

# Index to Fiber-Cement and Synthetic

	<i>Fiber-Cement</i>	<i>Synthetic</i>
<b>AIR VENT INC.</b> 3000 W. Commerce Street Dallas, TX 75212 800/AIR-VENT FAX: 800/635-7006 E-mail: ventilation@certainteed.com Web: www.airvent.com		118
<b>ETERNIT, INC.</b> 610 Corporate Drive Reading, PA 19605 610/926-0100 or 800/233-3155 FAX: 610/926-9232 E-mail: Web: www.eteritusa.com	114	
<b>JAMES HARDIE BUILDING PRODUCTS</b> 26300 La Alameda, Suite 250 Mission Viejo, CA 92691 949/348-1800 FAX: 949/367-0195 E-mail: Web:	115	
<b>OWENS CORNING</b> One Owens Corning Parkway Toledo, OH 43659 419/248-8000 FAX: 419/248-7354 E-mail: owenscorning.com Web:		118
<b>RE-CON BUILDING PRODUCTS</b> P.O. Box 5659 Eugene, OR 07405 800/347-3373 FAX: 541/349-8929 E-mail: Web:	115	

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# Fiber-Cement

1.	COMPANY NAME	ETERNIT INC.	ETERNIT, INC.	ETERNIT, INC.	ETERNIT, INC.
2.	PRODUCT NAME	ETERNIT SLATES ALTERNA DIMENSIONAL SHAPE	ETERNIT ROOFING SLATES CONTINENTAL	ETERNIT ROOFING SLATES ENGLISH	ETERNIT ROOFING SLATES THRUTONE
3.	STYLE				
	Simulated Shingle (specific type if applicable)				
	Simulated Shake (specific type if applicable)				
	Simulated Slate (specific type if applicable)	X	X	X	X
	Simulate Tile (specific type if applicable)	1			
	Other				
	Number of Colors Available	1	5	5	6
4.	AVAILABILITY RESTRICTED REGIONALLY (yes/no)	NO	NO	NO	NO
5.	MATERIAL COMPOSITION	NON-ASBESTOS FIBER REINFORCED CEMENT	NON-ASBESTOS FIBER REINFORCED CEMENT	NON-ASBESTOS FIBER REINFORCED CEMENT	NON-ASBESTOS FIBER REINFORCED CEMENT
6.	FACTORY-APPLIED COATING (yes/no)	YES	YES	YES	YES
7.	DIMENSIONS AND COVERAGE				
	Dimensions (inches x inches)	15 3/4 X 15 3/4	10 5/8 X 15 3/4	11 13/16 X 23 5/8	9 7/8 X 19 11/16
	Exposure (inches)	13 3/4 OR 11 3/4	6 7/8 OR 5 7/8	10 13/16 OR 9 13/16	8 3/4 OR 7 3/4
	Headlap (inches)	2 OR 4	2, 3 OR 4	2, 3 OR 4	2, 3 OR 4
	Pieces Per Roof Square	90 OR 120	197, 214 OR 231	113, 119 OR 124	165, 176 OR 186
	Bundles Per Square				
	Weight Per Roof Square (ambient temp.,pounds)	258 OR 345	398, 433 OR 467	384, 403 OR 422	400, 425 OR 450
	Fasteners Required (nails, staples, or specify)	NAILS	NAILS	NAILS	NAILS
8.	HIP/RIDGE PIECES AVAILABLE? (yes/no)	NO	YES	YES	YES
9.	SLOPE/INTERLAYMENT-UNDERLAYMENT RECOMMENDATIONS				
	Minimum Slope Recommended for Normal Application (inches per foot)	8:12	5:12	5:12	4:12
	Interlayment Recommended in Normal Application				
	UNDERLAYMENT RECOMMENDED IN NORMAL APPLICATION	30-LB. FELT	30-LB. FELT	30-LB. FELT	30-LB. FELT
	Minimum Slope Recommended For Special Application (inches per foot)		3:12	3:12	4:12
	Interlayment Recommended In Special Application	CONTACT ETERNIT	CONTACT ETERNIT	CONTACT ETERNIT	CONTACT ETERNIT
	Underlayment Recommended In Special Application	CONTACT ETERNIT	2 30-LB. FELTS	2 30-LB. FELTS	2 30-LB. FELTS
10A.	RECOMMENDED DECK TYPE:				
	Solid Sheathing	X	X	X	X
	Spaced Sheathing	X	X	X	X
10B	RECOMMENDED DECK MATERIAL:				
	Plywood/Wood	X	X	X	X
	Oriented-Strand Board	X	X	X	X
	Waferboard	X	X	X	X
	Other (specify)				
11.	YEAR PRODUCT FIRST SOLD	1998	1984	1984	1984
12.	NUMBER OF SQUARES INSTALLED	50	50,000 +	50,000 +	50,000+
13.	DISTRIBUTION				
	Distributors (number handling product or no)	250 +	250 +	250 +	250 +
	Direct (number of regional service locations or no)	1	1	1	1
14.	FIRE/WIND RATINGS				
	Fire Rating(s) Available (per UL Standard 790)	PENDING			
	Fire Rating(s) Available (per ASTM E108)		CLASS A	CLASS A	CLASS A
	Wind Uplift Rating (per UL Standard 580)				
15.	ACCEPTED BY THE FOLLOWING CODES		ICBO, METRO-DADE COUNTY	ICBO, METRO-DADE COUNTY	ICBO
16.	FOR SALES INFORMATION, CONTACT:	M. SCOTT 800/233-3155	M. SCOTT 800/233-3155	M. SCOTT 800/233-3155	M. SCOTT 800/233-3155
	FOR TECHNICAL INFORMATION, CONTACT:	B. NABHOLZ 800/233-3155	B. NABHOLZ 800/233-3155	B. NABHOLZ 800/233-3155	B. NABHOLZ 800/233-3155
17.	SEE APPENDIX IF CHECKED				

NA=not applicable

# Fiber-Cement

ETERNIT, INC.	JAMES HARDIE BUILDING PRODUCTS INC.	JAMES HARDIE BUILDING PRODUCTS INC.	JAMES HARDIE BUILDING PRODUCTS INC.	RE-CON BUILDING PRODUCTS INC.	RE-CON BUILDING PRODUCTS INC.	RE-CON BUILDING PRODUCTS INC.
ETERNIT ROOFING	HARDISHAKE ROOFING	HARDISLATE ROOFING	HARDISHINGLE ROOFING	FIREFREE PLUS PMFC RUSTIC SHAKE	FIREFREE PLUS PMFC QUARRY SLATE	QUANTUM PLUS PMFC SHAKE PANEL
	X		X			
X		X		X	X	X
6	3	4	3	3	4	2
NO	YES	YES	YES	NO	NO	NO
NON-ASBESTOS FIBER REINFORCED CEMENT	CEMENT, SAND, MINERAL OXIDES, ADDITIVES, CELLULOSE FIBER	CEMENT, SAND, MINERAL OXIDES, ADDITIVES, CELLULOSE FIBER	CEMENT, SAND, MINERAL OXIDES, ADDITIVES, CELLULOSE FIBER	CEMENTITIOUS MATERIALS, CELLULOSE FIBERS	CEMENTITIOUS MATERIALS, CELLULOSE FIBERS	CEMENTITIOUS MATERIALS, CELLULOSE FIBERS
YES	YES	YES	YES	YES	YES	YES
11 13/16 X 23 5/8	12, 8, AND 6 X 18	8 X 18	12, 8, AND 6 X 18	12, 7, 5 X 22.5	12 X 22.5	48 X 11.5
10 13/16 OR 9 13/16	8	8	8	10	10	9.5
2, 3 OR 4	10	10	10	12.5	12.5	2
113, 119 OR 124				143	117	32
				13	13	8
400, 421 OR 442	400	400	400	570	570	405
NAILS	NAILS ONLY	NAILS ONLY	NAILS ONLY	COIL SIDING NAILS	COIL SIDING NAILS	COIL SIDING NAILS
YES	YES	YES	YES	YES	YES	YES
4:12	3:12	3:12	3:12	4:12	4:12	4:12
	18-IN. NO. 30 ORGANIC FELT	18-IN. NO. 30 ORGANIC FELT	18-IN. NO. 30 ORGANIC FELT	TYPE 30 FELT "SHAKELINER"	TYPE 30 FELT "SHAKELINER"	
30-LB. FELT						TYPE 30 FELT
4:12	3:12	3:12	3:12	3:12	3:12	4:12
CONTACT ETERNIT	18-IN. NO. 30 ORGANIC FELT	18-IN. NO. 30 ORGANIC FELT	18-IN. NO. 30 ORGANIC FELT	TYPE 30 FELT "SHAKELINER"	TYPE 30 FELT "SHAKELINER"	
2 30-LB. FELTS	NO. 40 FIBERGLASS OR NO. 72 MINERAL CAP SHEET	NO. 40 FIBERGLASS OR NO. 72 MINERAL CAP SHEET	NO. 40 FIBERGLASS OR NO. 72 MINERAL CAP SHEET	TYPE 30 FELT	TYPE 30 FELT	
X	X	X	X	X	X	X
X	X	X	X	X	X	
X	X	X	X	X	X	X
X				X	X	X
X				X	X	X
1984	1980	1995	1997	1993	1993	1995
50,000+	850,000 +	150,000 +	50,000+			
250+	100 +	100 +	100 +	200 ±	200 ±	200 ±
1	NO	NO	NO	NO	NO	NO
CLASS A	CLASS A AND B	CLASS A AND B	CLASS A AND B	CLASS A	CLASS A	CLASS A
				CLASS A	CLASS A	CLASS A
ICBO	BOCA, ICBO, SBCCI, HUD, CITY OF LOS ANGELES	BOCA, ICBO, SBCCI, HUD, CITY OF LOS ANGELES	BOCA, ICBO, SBCCI, HUD, CITY OF LOS ANGELES	ICBO, CITY OF LOS ANGELES, NES	ICBO, CITY OF LOS ANGELES, NES	ICBO, NES
M. SCOTT 800/233-3155	CUSTOMER SERVICE 800/9HARDIE	CUSTOMER SERVICE 800/9HARDIE	CUSTOMER SERVICE 800/9HARDIE	800/347-3373	800/347-3373	800/347-3373
B. NABHOLZ 800/233-3155	TECHNICAL SERVICE 800/9HARDIE	TECHNICAL SERVICE 800/9HARDIE	TECHNICAL SERVICE 800/9HARDIE	541/349-1523	541/349-1523	541/349-1523

# Fiber-Cement

1.	COMPANY NAME	RE-CON BUILDING PRODUCTS INC.
2.	PRODUCT NAME	QUANTUM PLUS PMFC SLATE PANEL
3.	STYLE	
	Simulated Shingle (specific type if applicable)	
	Simulated Shake (specific type if applicable)	
	Simulated Slate (specific type if applicable)	X
	Simulate Tile (specific type if applicable)	
	Other	
	Number of Colors Available	1
4.	AVAILABILITY RESTRICTED REGIONALLY (yes/no)	NO
5.	MATERIAL COMPOSITION	CEMENTITIOUS MATERIALS, CELLULOSE FIBERS
6.	FACTORY-APPLIED COATING (yes/no)	YES
7.	DIMENSIONS AND COVERAGE	
	Dimensions (inches x inches)	48 X 11.5
	Exposure (inches)	9.5
	Headlap (inches)	2
	Pieces Per Roof Square	32
	Bundles Per Square	8
	Weight Per Roof Square (ambient temp.,pounds)	405
	Fasteners Required (nails, staples, or specify)	COIL SIDING NAILS
8.	HIP/RIDGE PIECES AVAILABLE? (yes/no)	YES
9.	SLOPE/INTERLAYMENT-UNDERLAYMENT RECOMMENDATIONS	
	Minimum Slope Recommended for Normal Application (inches per foot)	4:12
	Interlayment Recommended in Normal Application	
	UNDERLAYMENT RECOMMENDED IN NORMAL APPLICATION	TYPE 30 FELT
	Minimum Slope Recommended For Special Application (inches per foot)	4:12
	Interlayment Recommended In Special Application	
	Underlayment Recommended In Special Application	
10A.	RECOMMENDED DECK TYPE:	
	Solid Sheathing	X
	Spaced Sheathing	
10B	RECOMMENDED DECK MATERIAL:	
	Plywood/Wood	X
	Oriented-Strand Board	X
	Waferboard	X
	Other (specify)	
11.	YEAR PRODUCT FIRST SOLD	1995
12.	NUMBER OF SQUARES INSTALLED	
13.	DISTRIBUTION	
	Distributors (number handling product or no)	200 ±
	Direct (number of regional service locations or no)	NO
14.	FIRE/WIND RATINGS	
	Fire Rating(s) Available (per UL Standard 790)	CLASS A
	Fire Rating(s) Available (per ASTM E108)	CLASS A
	Wind Uplift Rating (per UL Standard 580)	
15.	ACCEPTED BY THE FOLLOWING CODES	ICBO, NES
16.	FOR SALES INFORMATION, CONTACT:	800/347-3373
	FOR TECHNICAL INFORMATION, CONTACT:	541/349-1523
17.	SEE APPENDIX IF CHECKED	

NA=not applicable

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# Synthetic

1. COMPANY NAME	AIR VENT INC.	AIR VENT INC.	OWENS CORNING
2. PRODUCT NAME	SHINGLE VENT II	FILTER VENT	MIRA VISTA SHAKE
3.1 STYLE			
A. Simulated Shingle (specific type if applicable)			
B. Simulated Shake (specific type if applicable)			X
C. Simulated Slate (specific type if applicable)			
D. Simulated Tile (specific type if applicable)			
E. Other (specify)	SHINGLE OVER	RIDGE VENT	
F. Number Of Colors Available	4	8	3
3.2 COMPONENT TYPE			
A. Panel			
B. Individual Component	X		X
4. AVAILABILITY RESTRICTED REGIONALLY(yes/no)	NO		YES
5. MATERIAL COMPOSITION	HIGH-DENSITY COPOLYMER	ALUMINUM	SLATE, CLAY, RESIN
6. DIMENSIONS AND COVERAGE			
A. Dimensions (inches x inches)	14 X 48		13.3 X 22, 7.8 X 22, 5.5 X 22
B. Exposure (inches)		5 X 96	10 MAX.
C. Headlap (inches)			12
D. Pieces Per Roof Square			450
E. Weight Per Roof Square (pounds)			NAILS
F. Fasteners Required (nails, staples, or specify)	NAILS		
7. SLOPE/UNDERLAYMENT RECOMMENDATIONS			
A. Minimum Slope Recommended in Normal Application (in/ft)	3:12	3:12	4:12
B. Underlayment Recommended in Normal Application			
C. Minimum Slope Recommended in Special Applications (in/ft)			3:12
D. Underlayment Recommended in Special Application			TYPE 30 UNDERLAYMENT & TYPE
8A. APPROVED DECK TYPES			
Solid Sheathing	X	X	X
Spaced Sheathing	X	X	X
8B. APPROVED DECK MATERIALS			
Plywood/Wood	X	X	X
Oriented Strand Board	X	X	X
Waferboard	X	X	
Other (Specify)			
9. YEAR PRODUCT FIRST SOLD	1988	1984	1996
10. NUMBER OF SQUARES INSTALLED			
11. DISTRIBUTION			
Distributors (number handling product or no)	1,200	1200	
Direct (number of regional service locations or no)	1	1	
12. TECHNICAL INFORMATION			
12A FIRE/WIND RATINGS			
Fired Rating(s) [specify standard(s) and rating(s)]	CLASS C	CLASS A	CLASS A
Wind Uplift Rating(s) [specify standard(s) and rating(s)]	NONE	NONE	
12B TEST RESULTS			
METHOD RESULTS			
METHOD RESULTS			
METHOD RESULTS			
METHOD RESULTS			
METHOD RESULTS			
METHOD RESULTS			
13. ACCEPTED BY THE FOLLOWING CODES			
	DADE CNTY, FL 98-0130.03 BOCA (97-22), TDI (RV-10), ICBO (ER 5070), SBCCI (9528)	DADE CNTY, FL 98-0130.03 BOCA (97-22), TDI (RV-10), ICBO (ER 5070), SBCCI (9528)	ICBO (ER-5209)
14. FOR SALES INFORMATION, CONTACT:			
FOR TECHNICAL INFORMATION, CONTACT:	S. DOUBET 800/247-8368	S. DOUBET 800/247-8368	800/GET-PINK
	S. DOUBET 800/247-8368	S. DOUBET 800/247-8368	800/GET-PINK
15. SEE APPENDIX IF CHECKED			

NA=not applicable



# Appendix

## FIBER-CEMENT ROOF COMPONENTS

### Maxitile, Inc.

Supertile can be used on pitches down to 1:12 on mobile home reroofs. Maxitile products can be used on pitches less than 3:12 if applied over an approved watertight system. Spaced sheathing approved but not recommended unless a strong permeable underlayment is used (e.g., foil).

## Section 3

*Steep-Slope Roofing  
Materials Guide*

**2000**

*Clay and Concrete Tile*

# Information on Section 3: Clay and Concrete Tile

## General Information

Section 3: Clay and Concrete Tile in the 2000 edition on NRCA's *Steep-Slope Roofing Materials Guide* provides a comprehensive listing of clay and concrete tile products commonly used in steep-slope roofing.

Clay tile is produced by baking molded clay into tile. The density of the clay is determined by the length of time and temperature at which it is heated. Tiles may be glazed and may also have surface texture treatment. As a result, there are a wide variety of tile profiles, styles, finishes, and colors available. In addition, each tile may have separate field, ridge, hip, gable, and terminal tiles of various shapes. Installation methods depend upon the nature of the tile being installed, e.g. whether it is two-piece, one-piece, interlocking, flat, and so forth.

The terms used to refer to tile types are not necessarily consistent among manufacturers. Sometimes, a proprietary name is used instead of a generic term that might be more descriptive of the tile product.

Concrete tiles are made of portland cement, sand, and water in varying proportions. The material is mixed and extruded on molds under high pressure. The exposed surface of the tile may be finished with cementitious material colored with synthetic oxide additives. The tiles are then cured to reach the required strength. They generally have lugs on the underside for anchoring to batten strips. There are additional waterlocks, or interlocking ribs on the longitudinal edge, that are for impeding movement and preventing water infiltration.

Like clay tile, there are a wide variety of profiles, styles, finishes, and colors available. Color may be added to the surface of the tile or dispersed throughout, termed "color-through". Special texture may be added in surface treatment. In addition, each tile type may have separate field, ridge, hip, gable, and terminal tiles that are of various shapes.

Concrete tile types can be associated with the roof component that the tile is simulating – whether it be clay tile or shingles, shakes, and slate.

## Specific Information Included in the Guide

Information on tile roof products is presented in the guide in two parts: Clay Tile and Concrete Tile.

For clay tile, specific listing information is as follows:

1. Company name
2. Product name
3. Tile type
4. Tile description
5. Accessory tile available

6. Dimensions and coverage
7. Slope/underlayment recommendations
8. Decks and fastening requirements
9. Year product first sold
10. Number of squares installed
11. Distribution
12. Technical information (Compliance with ASTM C1167)
13. Accepted by the following codes
14. Sales and technical contact information

Reporting of technical information in Item 11 is based on American Society for Testing and Materials (ASTM) standard C1167, titled "Standard Specification for Clay Roof Tiles."

For concrete tile, specific listing information is as follows:

1. Company name
2. Product name
3. Tile type
4. Tile description
5. Accessory tile available
6. Dimensions and coverage
7. Slope/underlayment recommendations
8. Decks and fastening requirements
9. Year product first sold
10. Number of squares installed
11. Distribution
12. Accepted by the following codes
13. Sales and technical contact information

Additional information regarding clay and concrete tile roof systems is provided in *The NRCA Steep-Slope Roofing Manual* and *The NRCA Roofing and Waterproofing Manual*.

# Index to Clay and Concrete

	Clay	Concrete
<b>ALTUSA/INTERCLAY CORP.</b> 6645 N.W. 77th Avenue Miami, FL 33166 305/471-5830 FAX: 305/471-2883 E-mail: Web:	126	
<b>AUBURN TILE INC.</b> 545 W. Main St. P.O. Box 10 Ontario, CA 97162 909/984-2841 FAX: 909/984-1517 E-mail:		146
<b>DANIEL PLATT LTD.</b> c/o NORTHERN ROOF TILE SALES 4408 Milestrip Road, Suite 266 Blasdell, NY 14219 905/627-4035 FAX: 905/627-9647 E-mail:	126	
<b>GLADDING MCBEAN</b> P.O. Box 97 Lincoln, CA 95648 800/964-2529 FAX: 916/645-1723 E-mail: Web:	127	
<b>HEISTERHOLZ</b> c/o HG ROOFING & CONSULTING P.O. Box 406 Lakeville, IN 46536 219/784-2006 FAX: 219/784-3872 E-mail:	129	
<b>HUGUENOT FENAL</b> c/o NORTHERN ROOF TILE SALES 4408 Milestrip Road, Suite 266 Blasdell, NY 14219 905/627-4035 FAX: 905/627-9648 E-mail:	130	
<b>LUDOWICI ROOF TILE INC.</b> P.O. box 69 New Lexington, OH 43764 800/945-8453 (tile) FAX: 740/342-5229 E-mail: Web:	131	

	Clay	Concrete
<b>M.C.A. CLAY ROOF TILE</b> 1985 Sampson Avenue Corona, CA 91719 909/736-9590 or 800/736-6221 FAX: 909/736-6052 E-mail: Web:	139	
<b>MONIER LIFETILE</b> 1 Park Plaza, Suite 900 Irvine, CA 92614 714/756-1605 FAX: 714/756-2401 E-mail: Web: www.monier.com		146
<b>SANDTOFT ROOF TILES</b> c/o NORTHERN ROOF TILE SALES 4408 Milestrip Road, Suite 266 Blasdell, NY 14219 905/627-4035 FAX: 905/627-9648 E-mail: nrts@wchat.on.ca	141	
<b>SANTAFE TILE CORPORATION</b> 10302 NW Sorth River Dr., Bay 16 Medley, FL 33178 305/885-9002 FAX: 305/888-0050 E-mail: Web:	142	
<b>TBF</b> c/o NORTHERN ROOF TILE SALES 4408 Milestrip Road, Suite 266 Blasdell, NY 14219 905/627-4035 FAX: 905/627-9648 E-mail: nrts@wchat.on.ca	143	
<b>TUILERIE DE PONTIGNY ALEONARD</b> c/o NORTHERN ROOF TILE SALES 4408 Milestrip Road, Suite 266 Blasdell, NY 14219 905/627-4035 FAX: 905/627-9648 E-mail: nrts@wchat.on.ca	144	
<b>U. S. TILE COMPANY</b> A Division of Boral Industries Inc. 909 Railroad St., P.O. Box 1509 Corona, CA 92882-1906 909/737-0200 FAX: 909/734-9591 E-mail: clayinfo@ustile.com	145	

# Index to Clay and Concrete

	Clay	Concrete
<b>WESTILE</b> 8311 West Cerder Court Littleton, CO 80125 303/791-9906 FAX: 303/791-9906 E-mail: Web: www.westile.com		155

	Clay	Concrete

# Clay Tile

1.	COMPANY NAME	ALTUSA / INTEC, CORP.	ALTUSA / INTEC, CORP.	DANIEL PLATT LTD.
2.	PRODUCT NAME	ALTUSA S	BARREL	TRITON
3.	TILE TYPE			
	"S" (Spanish) Mission Barrel, One Piece			
	Straight Barrel Mission, Two Piece	X	X	
	Tapered Mission, Two Piece			
	Flat, One Piece			X
	Flat, Interlocking, One Piece			
	Flat Pan and Cover, Two Piece			
4A.	TILE DESCRIPTION			SMOOTH
	Texture (specify or NA)			
4B.	FINISHES	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE
	Number of Colors Available	4 / --	5 / --	3 / --
	Color Availability (regional/national)	4 / --	3 / --	NATIONAL / --
	Custom Colors/Blends Available (yes/no)	NO / --	NO / --	YES / --
	Custom Shapes Available (yes/no)	NO / --	NO / --	YES / --
5.	ACCESSORY TILES AVAILABLE [e.g., ridge, hip, starter] (yes/no)			
6.	DIMENSIONS AND COVERAGE			
	Tile Dimensions (inches x inches)	8-1/2 X 10-1/2	18-1/2 X 10-1/2	10-1/2 X 6-1/2
	Exposed Size (inches x inches)	16 X 9-1/2	15	4-1/2 X 6-1/2
	Pieces Per Roof Square	100	150	550
	Weight Per Roof Square (pounds)	700	800	1550
7.	SLOPE/UNDERLAYMENT RECOMMENDATIONS			
	A. Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12	8:12
	B. Underlayment Recommended In Normal Application	30 LB. FELT	30 OR 40 LB. FELT	30 LB. FELT
	C. Minimum Slope Recommended For Special Applications (inches per foot or NA)	2-1/2:12	4:12	
	D. Underlayment Recommended in Special Application	30 LB. TIN CAP 90 LB. MOPPED	2 30 LB. FELTS NAILED & SOLID MOPPED	
8.	DECKS AND FASTENING RECOMMENDATIONS (Fastening system in normal application or NA)			
	Metal	STAINLESS STEEL SCREWS	STAINLESS STEEL SCREWS	STAINLESS STEEL SCREWS
	Plywood	RING SHANK NAIL & HURRICANE SPIKE	RING SHANK NAIL & HURRICANE SPIKE	RING SHANK NAILS
	Wood Plank			RING SHANK NAILS
	Oriented-Strand Board			
	Waferboard			
	Gypsum / Nailable Concrete			RING SHANK NAILS
	Other (specify)			
9.	YEAR PRODUCT FIRST SOLD	1986	1986	BEFORE 1893
10.	NUMBER OF SQUARES INSTALLED	543,000	435,000	
11.	DISTRIBUTION			
	Distributors (number handling product or no)	60	60	
	Direct (number of regional service locations or no)			
12.	TECHNICAL INFORMATION COMPLIES WITH ASTM C1167-96 STANDARD SPECIFICATION FOR CLAY ROOF TILE (check grade and type or enter none)			
	GRADE 1 Providing resistance to severe frost action	X	X	X
	GRADE 2 Providing resistance to moderate frost action			
	GRADE 3 Providing negligible resistance to any frost action			
	TYPE I High-profile: rise-to-width ratio greater than 1:5	X	X	
	TYPE II Low-profile: rise-to-width ratio equal to or less than 1:5			
	TYPE III All other tiles, including flat			X
13.	ACCEPTED BY THE FOLLOWING CODES	SBCCI, METRO-DADE, BROWARD COUNTY FL.	SBCCI, METRO-DADE, BROWARD COUNTY FL.	
14.	FOR SALES INFORMATION, CONTACT:	305/471-5830	305/471-5830	S. MATTHEWS 905/627-4035
	FOR TECHNICAL INFORMATION, CONTACT:	FAX 305/471-5833	FAX 305/471-5833	S. MATTHEWS 905/627-4035
15.	SEE APPENDIX IF CHECKED			

NA=not applicable

# Clay Tile

DANIEL PLATT LTD.	GLADDING MCBEAN				
HANDCRAFTED	LINCOLN S-TILE	SPANISH S-TILE	CORDOVA	CORDOVA TAPERED CUSTOM	LINCOLN INTERLOCKING
	X	X			
			X		
X				X	
					X
SMOOTH & RUSTIC	SMOOTH	SMOOTH	SMOOTH	TEXTURED	SMOOTH & RUSTIC
NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE
3 / --	2 / CUSTOM	1 / CUSTOM	3 / CUSTOM	-- / CUSTOM	4 / CUSTOM
NATIONAL / --	NATIONAL / NATIONAL				
YES / --	YES / NO	YES / YES	YES / YES	YES / YES	YES / YES
YES / --	YES / YES				
					YES
10-1/2 X 6-1/2	13-1/4 X 20	11-1/4 X 18	8 X 18	VARIED	10 X 14
4-1/2 X 6-1/2	13-1/4 X 17	11-1/4 X 15	8 X 14	VARIED X 14	9 X 11
550	81	107	190	VARIED	145
1550	975	900	900	VARIED	950
8:12	3:12	4:12	4:12	4:12	4:12
30 LB. FELT	30 OR 40 LB. FELT	30 OR 40 LB. FELT	30 OR 40 LB. FELT	30 OR 40 LB. FELT	30 OR 40 LB. FELT
	2:12	3:12	3:12	3:12	3:12
	2 30 LB. FELTS NAILED & SOLID MOPPED	2 30 LB. FELTS NAILED & SOLID MOPPED	2 30 LB. FELTS NAILED & SOLID MOPPED	2 30 LB. FELTS NAILED & SOLID MOPPED	2 30 LB. FELTS NAILED & SOLID MOPPED
STAINLESS STEEL SCREWS	STAINLESS STEEL FASTENING SYSTEM				
RING SHANK NAILS	TILE TIE OR NON-CORROSIVE NAILS	TILE TIE OR NON-CORROSIVE NAILS	TILE TIE OR NON-CORROSIVE NAILS	TILE TIE OR NON-CORROSIVE NAILS	TILE TIE OR NON-CORROSIVE NAILS
RING SHANK NAILS	NA	NA	NA	TILE TIE OR NON-CORROSIVE NAILS	NA
	NA	NA	NA	TILE TIE OR NON-CORROSIVE NAILS	NA
	TILE TIE OR NON-CORROSIVE NAILS				
RING SHANK NAILS	TILE TIE OR NON-CORROSIVE NAILS	TILE TIE OR NON-CORROSIVE NAILS	TILE TIE OR NON-CORROSIVE NAILS	TILE TIE OR NON-CORROSIVE NAILS	TILE TIE OR NON-CORROSIVE NAILS
1996	1875	1875	1875	1875	1875
	50	50	50	50	50
X	X	X	X	X	X
X	X	X	X	X	X
	ICBO (4642)				
S. MATTHEWS 905/627-4035	800/964-2529	800/964-2529	800/964-2529	800/964-2529	800/964-2529
S. MATTHEWS 905/627-4035	800/964-2529	800/964-2529	800/964-2529	800/964-2529	800/964-2529

# Clay Tile

1. COMPANY NAME	GLADDING MCBEAN	GLADDING MCBEAN	GLADDING MCBEAN
2. PRODUCT NAME	LINCOLN GLAZED SHINGLE	ITALIAN PAN AND ITALIAN COVER	BERKELEY PAN AND BERKELEY COVER
3. TILE TYPE			
"S" (Spanish) Mission Barrel, One Piece			
Straight Barrel Mission, Two Piece			
Tapered Mission, Two Piece			
Flat, One Piece			
Flat, Interlocking, One Piece	X		
Flat Pan and Cover, Two Piece		X	X
4A. TILE DESCRIPTION			
Texture (specify or NA)	SMOOTH	SMOOTH	SMOOTH
4B. FINISHES	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE
Number of Colors Available	CUSTOM / CUSTOM	2 / CUSTOM	2 / CUSTOM
Color Availability (regional/national)	NATIONAL / NATIONAL	NATIONAL / NATIONAL	NATIONAL / NATIONAL
Custom Colors/Blends Available (yes/no)	YES / YES	YES / YES	YES / YES
Custom Shapes Available (yes/no)	YES / YES	YES / YES	YES / YES
5. ACCESSORY TILES AVAILABLE [e.g., ridge, hip, starter] (yes/no)	YES / YES	YES	YES
6. DIMENSIONS AND COVERAGE			
Tile Dimensions (inches x inches)	11-1/2 X 15	12 X 18	8-1/2 X 18
Exposed Size (inches x inches)	10-3/4 X 12	12 X 14	11 X 14
Pieces Per Roof Square	114	108	187
Weight Per Roof Square (pounds)	850	1040	1400
7. SLOPE/UNDERLAYMENT RECOMMENDATIONS			
A. Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12	4:12
B. Underlayment Recommended In Normal Application	30 OR 40 LB. FELT	30 OR 40 LB. FELT	30 OR 40 LB. FELT
C. Minimum Slope Recommended For Special Applications (inches per foot or NA)	3:12	3:12	3:12
D. Underlayment Recommended in Special Application	2 30 LB. FELTS NAILED & SOLID MOPPED	2 30 LB. FELTS NAILED & SOLID MOPPED	2 30 LB. FELTS NAILED & SOLID MOPPED
8. DECKS AND FASTENING RECOMMENDATIONS (Fastening system in normal application or NA)			
Metal	STAINLESS STEEL FASTENING SYSTEM	STAINLESS STEEL FASTENING SYSTEM	STAINLESS STEEL FASTENING SYSTEM
Plywood	TILE TIE OR NON-CORROSIVE NAILS	TILE TIE OR NON-CORROSIVE NAILS	TILE TIE OR NON-CORROSIVE NAILS
Wood Plank	NA	NA	NA
Oriented-Strand Board	NA	NA	NA
Waferboard	TILE TIE OR NON-CORROSIVE NAILS	TILE TIE OR NON-CORROSIVE NAILS	TILE TIE OR NON-CORROSIVE NAILS
Gypsum / Nailable Concrete	TILE TIE OR NON-CORROSIVE NAILS	TILE TIE OR NON-CORROSIVE NAILS	TILE TIE OR NON-CORROSIVE NAILS
Other (specify)			
9. YEAR PRODUCT FIRST SOLD	1875	1875	1875
10. NUMBER OF SQUARES INSTALLED			
11. DISTRIBUTION			
Distributors (number handling product or no)			
Direct (number of regional service locations or no)	50	50	50
12. TECHNICAL INFORMATION COMPLIES WITH ASTM C1167-96 STANDARD SPECIFICATION FOR CLAY ROOF TILE (check grade and type or enter none)			
GRADE 1 Providing resistance to severe frost action	X	X	X
GRADE 2 Providing resistance to moderate frost action			
GRADE 3 Providing negligible resistance to any frost action			
TYPE I High-profile: rise-to-width ratio greater than 1:5			
TYPE II Low-profile: rise-to-width ratio equal to or less than 1:5	X	X	X
TYPE III All other tiles, including flat			
13. ACCEPTED BY THE FOLLOWING CODES	ICBO (4642)	ICBO (4642)	ICBO (4642)
14. FOR SALES INFORMATION, CONTACT:	800/964-2529	800/964-2529	800/964-2529
FOR TECHNICAL INFORMATION, CONTACT:	800/964-2529	800/964-2529	800/964-2529
15. SEE APPENDIX IF CHECKED			

NA=not applicable

# Clay Tile

GLADDING MCBEAN	GLADDING MCBEAN	GLADDING MCBEAN	GLADDING MCBEAN	HEISTERHOLZ	HEISTERHOLZ
ITALAIN PAN AND BERKELEY COVER	ITALIAN PAN AND CORDOVA COVER	BERKELEY PAN AND CORDOVA COVER	COTSWOLD	K21	HANSEAT 35
			X		
X	X			X	X
SMOOTH	SMOOTH	SMOOTH	TEXTURED		
NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE			
2 / CUSTOM	2 / CUSTOM	2 / CUSTOM	2 / CUSTOM	6 / 4	6 / 4
NATIONAL / NATIONAL	NATIONAL / NATIONAL	NATIONAL / NATIONAL	NATIONAL / NATIONAL	NATIONAL / NATIONAL	NATIONAL / NATIONAL
YES / YES	YES / YES	YES / YES	YES / YES	NO / NO	NO / NO
YES / YES	YES / YES	YES / YES	YES / YES	NO / NO	NO / NO
YES	YES	YES	YES	YES	YES
8-1/2 X 18 / 12 X 18	12 X 18 / 8 X 18	8-1/2 X 18 / 8 X 18	6-1/2, 7-1/4, 8-1/2 & 9 X 14	17 X 10	17 X 10
15 X 14	14-1/2 X 14	10-3/4 X 14	6-10	14 X 9	14 X 9
138	142	192	308-485	143	142
1200	1080	1250	1510 - 907	975	1036
4:12	4:12	4:12		4.5:12	4.5:12
30 OR 40 LB. FELT	30 OR 40 LB. FELT	30 OR 40 LB. FELT		40 LB. FELT	40 LB. FELT
3:12	3:12	3:12	3:12		
2 30 LB. FELTS NAILED & SOLID MOPPED	2 30 LB. FELTS NAILED & SOLID MOPPED	2 30 LB. FELTS NAILED & SOLID MOPPED	2 30 LB. FELTS NAILED & SOLID MOPPED		
STAINLESS STEEL FASTENING SYSTEM	NAILS/CLIPS	NAILS/CLIPS			
TILE TIE OR NON-CORROSIVE NAILS	NAILS/CLIPS	NAILS/CLIPS			
NA	NA	NA	TILE TIE OR NON-CORROSIVE NAILS	NAILS/CLIPS	NAILS/CLIPS
NA	NA	NA	TILE TIE OR NON-CORROSIVE NAILS	NAILS/CLIPS	NAILS/CLIPS
TILE TIE OR NON-CORROSIVE NAILS	TILE TIE OR NON-CORROSIVE NAILS	TILE TIE OR NON-CORROSIVE NAILS	TILE OR NON-CORROSIVE NAILS	NAILS/CLIPS	NAILS/CLIPS
TILE TIE OR NON-CORROSIVE NAILS	NAILS/CLIPS	NAILS/CLIPS			
1875	1875	1875	1875	1873	1873
				MILLIONS	MILLIONS
				1	1
50	50	50	50	1	1
X	X	X	X	X	X
X	X	X	X	X	X
ICBO (4642)	ICBO (4642)	ICBO (4642)		ICBO (5167), LOS ANGELES COUNTY	ICBO (5167), LOS ANGELES COUNTY
800/964-2529	800/964-2529	800/964-2529	800/964-2529	HG ROOFING 219/784-2006	HG ROOFING 219/784-2006
800/964-2529	800/964-2529	800/964-2529	800/964-2529	HG ROOFING 219/784-2006	HG ROOFING 219/784-2006

# Clay Tile

1. COMPANY NAME	HEISTERHOLZ	HUGUENOT FENAL	HUGUENOT FENAL
2. PRODUCT NAME	K 2000	VALOISE	BEAUVOISE
3. TILE TYPE			
"S" (Spanish) Mission Barrel, One Piece			
Straight Barrel Mission, Two Piece			
Tapered Mission, Two Piece			
Flat, One Piece			
Flat, Interlocking, One Piece	X	X	X
Flat Pan and Cover, Two Piece			
4A. TILE DESCRIPTION		SMOOTH	RUSTIC
Texture (specify or NA)			
4B. FINISHES	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE
Number of Colors Available	6 / --	4 / 3	2 / --
Color Availability (regional/national)	NATIONAL / --	NATIONAL / --	NATIONAL / --
Custom Colors/Blends Available (yes/no)	NO / --	NO / --	NO / --
Custom Shapes Available (yes/no)	NO / --	NO / --	NO / --
5. ACCESSORY TILES AVAILABLE [e.g., ridge, hip, starter] (yes/no)			YES
6. DIMENSIONS AND COVERAGE			
Tile Dimensions (inches x inches)	17 X 10	12-1/2 X 8-1/2	12-1/2 X 9-1/4
Exposed Size (inches x inches)	14 X 9	10-1/2 X 7-1/2	10 X 8-1/2
Pieces Per Roof Square	142	190	185
Weight Per Roof Square (pounds)	1095	950	925
7. SLOPE/UNDERLAYMENT RECOMMENDATIONS			
A. Minimum Slope Recommended For Normal Application (inches per foot)	4.5:12	4:12	4:12
B. Underlayment Recommended In Normal Application	40 LB. FELT	30 LB. FELT	30 LB. FELT
C. Minimum Slope Recommended For Special Applications (inches per foot or NA)			
D. Underlayment Recommended in Special Application			
8. DECKS AND FASTENING RECOMMENDATIONS (Fastening system in normal application or NA)			
Metal	NAILS/CLIPS	STAINLESS STEEL SCREWS	STAINLESS STEEL SCREWS
Plywood	NAILS/CLIPS	RING SHANK NAILS AND CLIP	RINK SHANK NAILS AND CLIP
Wood Plank	NAILS/CLIPS	RING SHANK NAILS AND CLIP	RING SHANK NAILS AND CLIP
Oriented-Strand Board	NAILS/CLIPS		
Waferboard	NAILS/CLIPS		
Gypsum / Nailable Concrete	NAILS/CLIPS	STAINLESS STEEL SCREWS & CLIPS	STAINLESS STEEL SCREWS
Other (specify)			
9. YEAR PRODUCT FIRST SOLD	1873	1982	1981
10. NUMBER OF SQUARES INSTALLED	MILLIONS	880,000	105,000
11. DISTRIBUTION			
Distributors (number handling product or no)	1	35	35
Direct (number of regional service locations or no)	1		
12. TECHNICAL INFORMATION COMPLIES WITH ASTM C1167-96 STANDARD SPECIFICATION FOR CLAY ROOF TILE (check grade and type or enter none)			
GRADE 1 Providing resistance to severe frost action	X	X	X
GRADE 2 Providing resistance to moderate frost action			
GRADE 3 Providing negligible resistance to any frost action			
TYPE I High-profile: rise-to-width ratio greater than 1:5			X
TYPE II Low-profile: rise-to-width ratio equal to or less than 1:5	X		
TYPE III All other tiles, including flat		X	
13. ACCEPTED BY THE FOLLOWING CODES	ICBO (5167), LOS ANGELES COUNTY		
14. FOR SALES INFORMATION, CONTACT:	HG ROOFING 219/784-2006	S. MATTHEWS 905/627-4035	S. MATTHEWS 905/627-4035
FOR TECHNICAL INFORMATION, CONTACT:	HG ROOFING 219/784-2006	S. MATTHEWS 905/627-4035	S. MATTHEWS 905/627-4035
15. SEE APPENDIX IF CHECKED			

NA=not applicable

# Clay Tile

HUGUENOT FENAL	HUGUENOT FENAL	HUGUENOT FENAL	LUDOWICI ROF TILE, INC.	LUDOWICI ROOF TILE, INC.	LUDOWICI ROOF TILE, INC.
ROMANE	H 14	PHALEMPIN	CELADON CERAMIC SLATE	AMERICANA	XL AMERICANA
X	FRENCH BAREL				
		X	X	X	X
SMOOTH	SMOOTH	TEXTURED	NATURAL SLATE	TREE BARK/SANDED	TREE BARK
NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE			
3 / --	3 / --	7 / --	1 / 47	1 / 47	1 / 47
NATIONAL / --	NATIONAL / --	NATIONAL / --	NATIONAL / NATIONAL	NATIONAL / NATIONAL	NATIONAL / NATIONAL
NO / --	NO / --	NO / --	NO / YES	NO / YES	NO / YES
NO / --	NO / --	NO / --	YES / YES	YES / YES	YES / YES
YES	YES	YES	YES	YES	YES
16-3/4 X 11	17 X 10	10-1/2 X 6-1/2	16 X 10-3/4	14 X 9	16 X 10-3/4
13-3/4 X 8-1/2	14 X 8-1/2	4/1/4 X 6-4/2	13-1/4 X 10-1/8	11 X 8-1/4	13 X 10-1/8
120	122	550	108	158	109
950	875	1350	580	800	750
4:12	4:12	6:12	4:12	3:12	3:12
30 LB. FELT	30 LB. FELT	40 LB. FELT	40 LB. FELT	40 LB. FELT	40-LB. FELT
			3:12		
			WINTERGUARD OR BUR EQUIVALENT		
STAINLESS STEEL SCREWS	STAINLESS STEEL SCREWS	STAINLESS STEEL SCREWS	STAINLESS STEEL SHEET METAL SCREWS	STAINLESS STEEL SHEET METAL SCREWS	STAINLESS STEEL SHEET METAL SCREWS
RINK SHANK NAILS AND CLIP	RINK SHANK NAILS AND CLIP	RINK SHANK NAILS AND CLIP	11 GAUGE RING SHANK COPPER NAILS	11 GAUGE RING SHANK COPPER NAILS	11 GAUGE RING SHANK COPPER NAILS
RING SHANK NAILS AND CLIP	RING SHANK NAILS AND CLIP	RING SHANK NAILS AND CLIP	11 GA SMOOTH SHANK COPPER NAILS	11 GA SMOOTH SHANK COPPER NAILS	11 GA SMOOTH SHANK COPPER NAILS
			NA	NA	NA
			NA	NA	NA
STAINLESS STEEL SCREWS	STAINLESS STEEL SCREWS	STAINLESS STEEL SCREWS	SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL	SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL	SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL
			NA	NA	NA
N/A	N/A	N/A	1994	1948	1996
N/A	N/A	N/A	>120,000	>500,000	>10,000
N/A	N/A	N/A	>50	>50	>50
				1	1
X	X	X	X	X	X
X	X	X			
				X	X
			METRO-DADE COUNTY, FL	ICBO (4872), UBC, METRO-DADE COUNTY, FL.	ICBO (4872), UBC, METRO-DADE COUNTY, FL.
S. MATTHEWS 905/627-4035	S. MATTHEWS 905/627-4035	S. MATTHEWS 905/627-4035	800/945-8453	800/945-8453	800/945-8453
S. MATTHEWS 905/627-4035	S. MATTHEWS 905/627-4035	S. MATTHEWS 905/627-4035	800/945-8453	800/945-8453	800/945-8453
			X	X	X

# Clay Tile

1. COMPANY NAME	LUDOWICI ROOF TILE, INC.	LUDOWICI ROOF TILE, INC.	LUDOWICI ROOF TILE, INC.
2. PRODUCT NAME	ANTIQUE	BRITTANY	CALAIS
3. TILE TYPE			
"S" (Spanish) Mission Barrel, One Piece			
Straight Barrel Mission, Two Piece			
Tapered Mission, Two Piece			
Flat, One Piece	X	X	X
Flat, Interlocking, One Piece			
Flat Pan and Cover, Two Piece			
4A. TILE DESCRIPTION	HAND TREATED IRREGULAR	SANDED AND INDENTED	CRATERED/SANDED
Texture (specify or NA)			
4B. FINISHES	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE
Number of Colors Available	1 / 47	1 / 47	1 / 47
Color Availability (regional/national)	NATIONAL / NATIONAL	NATIONAL / NATIONAL	NATIONAL / NATIONAL
Custom Colors/Blends Available (yes/no)	NO / YES	NO / YES	NO / YES
Custom Shapes Available (yes/no)	YES / YES	YES / YES	YES / YES
5. ACCESSORY TILES AVAILABLE [e.g., ridge, hip, starter] (yes/no)	YES	YES	YES
6. DIMENSIONS AND COVERAGE			
Tile Dimensions (inches x inches)	12 X 7	12 X 7	15 X 7
Exposed Size (inches x inches)	5 X 7	5 X 7	6-1/2 X 7
Pieces Per Roof Square	412	412	317
Weight Per Roof Square (pounds)	1650	1900	1600
7. SLOPE/UNDERLAYMENT RECOMMENDATIONS			
A. Minimum Slope Recommended For Normal Application (inches per foot)	5:12	5:12	5:12
B. Underlayment Recommended In Normal Application	40 LB. FELT	40 LB. FELT	40 LB. FELT
C. Minimum Slope Recommended For Special Applications (inches per foot or NA)	3:12	3:12	3:12
D. Underlayment Recommended in Special Application	WINTERGUARD OR BUR EQUIVALENT	WINTERGUARD OR BUR EQUIVALENT	WINTERGUARD OR BUR EQUIVALENT
8. DECKS AND FASTENING RECOMMENDATIONS (Fastening system in normal application or NA)			
Metal	STAINLESS STEEL SHEET METAL SCREWS	STAINLESS STEEL SHEET METAL SCREWS	STAINLESS STEEL SHEET METAL SCREWS
Plywood	11 GAUGE RING SHANK COPPER NAILS	11 GAUGE RING SHANK COPPER NAILS	11 GAUGE RING SHANK COPPER NAILS
Wood Plank	11 GA SMOOTH SHANK COPPER NAILS	11 GA SMOOTH SHANK COPPER NAILS	11 GA SMOOTH SHANK COPPER NAILS
Oriented-Strand Board	NA	NA	NA
Waferboard	NA	NA	NA
Gypsum / Nailable Concrete	SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL	SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL	SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL
Other (specify)	NA	NA	NA
9. YEAR PRODUCT FIRST SOLD	1900	1900	1993
10. NUMBER OF SQUARES INSTALLED	>5,000	>50,000	<5,000
11. DISTRIBUTION			
Distributors (number handling product or no)	>50	>50	>50
Direct (number of regional service locations or no)	1	1	1
12. TECHNICAL INFORMATION COMPLIES WITH ASTM C1167-96 STANDARD SPECIFICATION FOR CLAY ROOF TILE (check grade and type or enter none)			
GRADE 1 Providing resistance to severe frost action	X	X	X
GRADE 2 Providing resistance to moderate frost action			
GRADE 3 Providing negligible resistance to any frost action			
TYPE I High-profile: rise-to-width ratio greater than 1:5			
TYPE II Low-profile: rise-to-width ratio equal to or less than 1:5	X	X	X
TYPE III All other tiles, including flat			
13. ACCEPTED BY THE FOLLOWING CODES	ICBO (4872), UBC, METRO-DADE COUNTY, FL.	ICBO (4872), UBC, METRO-DADE COUNTY, FL.	ICBO (4872), UBC, METRO-DADE COUNTY, FL.
14. FOR SALES INFORMATION, CONTACT:	800/945-8453	800/945-8453	800/945-8453
FOR TECHNICAL INFORMATION, CONTACT:	800/945-8453	800/945-8453	800/945-8453
15. SEE APPENDIX IF CHECKED	X	X	X

NA=not applicable

# Clay Tile

| LUDOWICI ROOF TILE, INC.                          |
|---|---|---|---|---|---|
| CLASSIC   | XL CLASSIC  | COFFEYVILLE ENGLISH                               | COLONIAL  | 8" CONSOSERA                                      | CRUDE   |
|   |   |   |   |   |   |
|   |   |   |   |   |   |
|   |   |   | X   |   | X   |
| X   | X   | X   |   | X   |   |
|   |   |   |   |   |   |
| SMOOTH  | SMOOTH  | SMOOTH  | SANDED & INDENTED                                 |   |   |
| NATURAL / CERAMIC GLAZE                           |
| 1 / 47  | 1 / 47  | 1 / 47  | 1 / 47  | 1 / 47  | 1 / 47  |
| NATIONAL / NATIONAL                               |
| NO / YES  |
| YES / YES   |
YES	YES	YES	YES	YES	YES
14 X 9	16 X 10-7/8	13-1/4 X 8-3/4	14-5/8 X 7-3/8	13 X 8-3/4	12 X 6
11 X 8-1/4	13 X 10-1/8	10-1/8 X 7-3/4	6-5/16 X 7-3/8	10-3/4 X 7-3/4	5 X 6
158	109	182	310	173	480
800	750	1380	1800	1000	1850
3:12	3:12	3:12	5:12	3:12	5:12
40 LB. FELT					
			3:12		3:12
			WINTERGUARD OR BUILT-UP ROOFING		WINTERGUARD OR BUILT-UP ROOFING
STAINLESS STEEL SHEET METAL SCREWS					
11 GAUGE RING SHANK COPPER NAILS					
11 GA SMOOTH SHANK COPPER NAILS					
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL					
NA	NA	NA	NA	NA	NA
1948	1996	1920	1950	1880	1900
>500,000	>20,000	>50,000	>15,000	>10,000	>10,000
50	50	50	50	50	50
1	1	1	1	1	1
X	X	X	X	X	X
X	X	X	X	X	X
ICBO (4872), UBC, METRO-DADE COUNTY, FL.					
800/945-8453	800/945-8453	800/945-8453	800/945-8453	800/945-8453	800/945-8453
800/945-8453	800/945-8453	800/945-8453	800/945-8453	800/945-8453	800/945-8453
X	X	X	X	X	X

# Clay Tile

1.	COMPANY NAME	LUDOWICI ROOF TILE, INC.	LUDOWICI ROOF TILE, INC.	LUDOWICI ROOF TILE, INC.
2.	PRODUCT NAME	18" CUBANA	DESIGNER	EARLY AMERICAN OLD TYPE
3.	TILE TYPE			
	"S" (Spanish) Mission Barrel, One Piece			
	Straight Barrel Mission, Two Piece			
	Tapered Mission, Two Piece	X		
	Flat, One Piece			
	Flat, Interlocking, One Piece		X	X
	Flat Pan and Cover, Two Piece			
4A.	TILE DESCRIPTION			
	Texture (specify or NA)	SMOOTH/SANDED	MULTIPLE	TREE BARK/SANDED
4B.	FINISHES	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE
	Number of Colors Available	1 / 47	1 / 47	1 / 47
	Color Availability (regional/national)	NATIONAL / NATIONAL	NATIONAL / NATIONAL	NATIONAL / NATIONAL
	Custom Colors/Blends Available (yes/no)	NO / YES	NO / YES	NO / YES
	Custom Shapes Available (yes/no)	YES / YES	YES / YES	YES / YES
5.	ACCESSORY TILES AVAILABLE [e.g., ridge, hip, starter] (yes/no)	YES	YES	YES
6.	DIMENSIONS AND COVERAGE			
	Tile Dimensions (inches x inches)	18-3/8 X 8-1/4 TAPERS TO 7	14 X 9	13-3/4 X 8-5/8
	Exposed Size (inches x inches)	15-3/8 X 5-5/8	11 X 8-1/4	10-3/4 X 7-7/8
	Pieces Per Roof Square	163	158	173
1935	Weight Per Roof Square (pounds)	1200	800	825
7.	SLOPE/UNDERLAYMENT RECOMMENDATIONS			
	A. Minimum Slope Recommended For Normal Application (inches per foot)	5:12	3:12	3:12
	B. Underlayment Recommended In Normal Application	40 LB. FELT	40 LB. FELT	40 LB. FELT
	C. Minimum Slope Recommended For Special Applications (inches per foot or NA)	3:12		
	D. Underlayment Recommended in Special Application	WINTERGUARD OR BUR EQUIVALENT		
8.	DECKS AND FASTENING RECOMMENDATIONS (Fastening system in normal application or NA)			
	Metal	STAINLESS STEEL SHEET METAL SCREWS	STAINLESS STEEL SHEET METAL SCREWS	STAINLESS STEEL SHEET METAL SCREWS
	Plywood	11 GAUGE RING SHANK COPPER NAILS	11 GAUGE RING SHANK COPPER NAILS	11 GAUGE RING SHANK COPPER NAILS
	Wood Plank	11 GA SMOOTH SHANK COPPER NAILS	11 GA SMOOTH SHANK COPPER NAILS	11 GA SMOOTH SHANK COPPER NAILS
	Oriented-Strand Board	NA	NA	NA
	Waferboard	NA	NA	NA
	Gypsum / Nailable Concrete	SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL	SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL	SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL
	Other (specify)	NA	NA	NA
9.	YEAR PRODUCT FIRST SOLD	1900	1910	1900
10.	NUMBER OF SQUARES INSTALLED	>5,000	>100,000	>250,000
11.	DISTRIBUTION			
	Distributors (number handling product or no)	>50	>50	>50
	Direct (number of regional service locations or no)	1	1	1
12.	TECHNICAL INFORMATION COMPLIES WITH ASTM C1167-96 STANDARD SPECIFICATION FOR CLAY ROOF TILE (check grade and type or enter none)			
	GRADE 1 Providing resistance to severe frost action	X	X	X
	GRADE 2 Providing resistance to moderate frost action			
	GRADE 3 Providing negligible resistance to any frost action			
	TYPE I High-profile: rise-to-width ratio greater than 1:5	X		
	TYPE II Low-profile: rise-to-width ratio equal to or less than 1:5			
	TYPE III All other tiles, including flat		X	X
13.	ACCEPTED BY THE FOLLOWING CODES	ICBO (4872), UBC, METRO-DADE COUNTY, FL.	ICBO (4872), UBC, METRO-DADE COUNTY, FL.	ICBO (4872), UBC, METRO-DADE COUNTY, FL.
14.	FOR SALES INFORMATION, CONTACT:	800/945-8453	800/945-8453	800/945-8453
	FOR TECHNICAL INFORMATION, CONTACT:	800/945-8453	800/945-8453	800/945-8453
15.	SEE APPENDIX IF CHECKED	X	X	X

NA=not applicable

# Clay Tile

| LUDOWICI ROOF TILE, INC.                          |
|---|---|---|---|---|---|
| FRENCH  | GEORGIAN  | GREEK   | IMPERIAL  | JAMESTOWN   | LANAI   |
|   |   |   |   |   |   |
|   |   |   |   |   |   |
|   | X   |   |   |   |   |
| X   |   |   | X   | X   | X   |
|   |   | X   |   |   |   |
| DEEP FLUTED/SANDED                                | HAND ROUGHED                                      | SMOOTH  | SMOOTH  | HAND ROUGHED                                      | SANDED  |
| NATURAL / CERAMIC GLAZE                           |
| 1 / 47  | 1 / 47  | 1 / 28  | 1 / 47  | 1 / 47  | -- / 4  |
| NATIONAL / NATIONAL                               |
| NO / YES  |
| YES / YES   |
YES	YES	YES	YES	YES	YES
16-1/4 X 9	15 X 8	2-3/4 X P 9-3/4 X C 6-1/2	15 X 10	11 X 8-3/4	14 X 9
13-3/8 X 8-1/8	6-1/2 X 8	10 X 6	12 X 9-1/4	8 X 8	11 X 8-1/4
133	276	240	129	225	158
1025	1635	1250	860	900	800
3:12	5:12	5:12	3:12	3:12	3:12
40 LB. FELT					
	3:12	<5:12			
	WINTERGUARD OR BUR EQUIVALENT	WINTERGUARD OR BUILT-UP ROOFING			
STAINLESS STEEL SHEET METAL SCREWS					
11 GAUGE RING SHANK COPPER NAILS					
11 GA SMOOTH SHANK COPPER NAILS					
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL					
NA	NA	NA	NA	NA	NA
1890	1900	1900	1980	1910	1948
>500,000	>20,000	>5,000	>5,000	>250,000	>500,000
>50	>50	>50	>50	>50	>50
1	1	1	1	1	1
X	X	X	X	X	X
X		X			
	X		X	X	X
ICBO (4872), UBC, METRO-DADE COUNTY, FL.					
800/945-8453	800/945-8453	800/945-8453	800/945-8453	800/945-8453	800/945-8453
800/945-8453	800/945-8453	800/945-8453	800/945-8453	800/945-8453	800/945-8453
X	X	X	X	X	X

# Clay Tile

1. COMPANY NAME	LUDOWICI ROOF TILE, INC.	LUDOWICI ROOF TILE, INC.	LUDOWICI ROOF TILE, INC.
2. PRODUCT NAME	XL LANIA	LIGHTWEIGHT INTERLOCKING	14-1/4" MISSION
3. TILE TYPE			
"S" (Spanish) Mission Barrel, One Piece			
Straight Barrel Mission, Two Piece			X
Tapered Mission, Two Piece			
Flat, One Piece			
Flat, Interlocking, One Piece	X	X	
Flat Pan and Cover, Two Piece			
4A. TILE DESCRIPTION			
Texture (specify or NA)	SANDED	SMOOTH OR SANDED	FINE MACHINE SCORED
4B. FINISHES	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE
Number of Colors Available	-- / 4	1 / 47	1 / 47
Color Availability (regional/national)	NATIONAL / NATIONAL	NATIONAL / NATIONAL	NATIONAL / NATIONAL
Custom Colors/Blends Available (yes/no)	NO / YES	NO / YES	NO / YES
Custom Shapes Available (yes/no)	YES / YES	YES / YES	YES / YES
5. ACCESSORY TILES AVAILABLE [e.g., ridge, hip, starter] (yes/no)	YES	YES	YES
6. DIMENSIONS AND COVERAGE			
Tile Dimensions (inches x inches)	16 X 10-3/4	13-3/4 X 8-5/8	14-1/4 X 8
Exposed Size (inches x inches)	13 X 10-1/8	10-3/4 X 7-7/8	11-1/4 X 5-3/4
Pieces Per Roof Square	109	173	225
Weight Per Roof Square (pounds)	750	825	1250
7. SLOPE/UNDERLAYMENT RECOMMENDATIONS			
A. Minimum Slope Recommended For Normal Application (inches per foot)	3:12	3:12	5:12
B. Underlayment Recommended In Normal Application	40 LB. FELT	40 LB. FELT	40 LB. FELT
C. Minimum Slope Recommended For Special Applications (inches per foot or NA)			3:12
D. Underlayment Recommended in Special Application			WINTERGUARD OR BUR EQUIVALENT
8. DECKS AND FASTENING RECOMMENDATIONS (Fastening system in normal application or NA)			
Metal	STAINLESS STEEL SHEET METAL SCREWS	STAINLESS STEEL SHEET METAL SCREWS	STAINLESS STEEL SHEET METAL SCREWS
Plywood	11 GAUGE RING SHANK COPPER NAILS	11 GAUGE RING SHANK COPPER NAILS	11 GAUGE RING SHANK COPPER NAILS
Wood Plank	11 GA SMOOTH SHANK COPPER NAILS	11 GA SMOOTH SHANK COPPER NAILS	11 GA SMOOTH SHANK COPPER NAILS
Oriented-Strand Board	NA	NA	NA
Waferboard	NA	NA	NA
Gypsum / Nailable Concrete	SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL	SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL	SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL
Other (specify)	NA	NA	NA
9. YEAR PRODUCT FIRST SOLD	1996	1900	1900
10. NUMBER OF SQUARES INSTALLED	>10,000	>100,000	>10,000
11. DISTRIBUTION			
Distributors (number handling product or no)	>50	>50	>50
Direct (number of regional service locations or no)	1	1	1
12. TECHNICAL INFORMATION COMPLIES WITH ASTM C1167-96 STANDARD SPECIFICATION FOR CLAY ROOF TILE (check grade and type or enter none)			
GRADE 1 Providing resistance to severe frost action	X	X	X
GRADE 2 Providing resistance to moderate frost action			
GRADE 3 Providing negligible resistance to any frost action			
TYPE I High-profile: rise-to-width ratio greater than 1:5			
TYPE II Low-profile: rise-to-width ratio equal to or less than 1:5			
TYPE III All other tiles, including flat	X	X	X
13. ACCEPTED BY THE FOLLOWING CODES	ICBO (4872), UBC, METRO-DADE COUNTY, FL.	ICBO (4872), UBC, METRO-DADE COUNTY, FL.	ICBO (4872), UBC, METRO-DADE COUNTY, FL.
14. FOR SALES INFORMATION, CONTACT:	800/945-8453	800/945-8453	800/945-8453
FOR TECHNICAL INFORMATION, CONTACT:	800/945-8453	800/945-8453	800/945-8453
15. SEE APPENDIX IF CHECKED	X	X	X

NA=not applicable

# Clay Tile

| LUDOWICI ROOF TILE, INC.                          |
|---|---|---|---|---|---|
| 16" MISSION                                       | 16" TAPERED MISSION                               | PALM BEACH TAPERED MISSION                        | NORMAN  | PROVINCIAL  | ROMAN   |
|   |   |   |   |   |   |
| X   |   |   |   |   |   |
|   | X   | X   |   |   |   |
|   |   |   | X   | X   |   |
|   |   |   |   |   | X   |
| FINE MACHINE SCORED                               | SMOOTH  | FINE MACHINE SCORED                               | WEATHERED/CRATERED                                | FINE MACHINE SCORED                               | SMOOTH  |
| NATURAL / CERAMIC GLAZE                           |
| 1 / 47  | 1 / 47  | 1 / 47  | - / 1   | 1 / 47  | 1 / 47  |
| NATIONAL / NATIONAL                               |
| NO / YES  | NO / YES  | NO / YES  | NO / NO   | NO / YES  | NO / YES  |
| YES / YES   |
YES	YES	YES	YES	YES	YES
16 X 8	16 X 7 TAPERS TO 4-3/4	18-3/8 X 8 TAPERS TO 6-7/16	15 X 7	15 X 7	12-3/4 X P 9-3/4 X C 6-1/2
13 X 5-3/4	13 X 5-1/4	15-3/8 X 5-3/4	6-1/2 X 7	6-1/2 X 7	10 X 6
192	212	163	317	317	240
1190	1230	1100	1600	1600	1250
5:12	5:12	4:12	5:12	5:12	5:12
40 LB. FELT					
3:12	3:12	3:12	3:12	3:12	3:12
WINTERGUARD OR BUR EQUIVALENT					
STAINLESS STEEL SHEET METAL SCREWS					
11 GAUGE RING SHANK COPPER NAILS					
11 GA SMOOTH SHANK COPPER NAILS					
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL					
NA	NA	NA	NA	NA	NA
1900	1900	1997	1920	1920	1900
>500,000	>500,000	>2,000	>100,000	>50,000	>5,000
>50	>50	>50	>50	>50	>50
1	1	1	1	1	1
X	X	X	X	X	X
X	X	X			X
			X	X	
ICBO (4872), UBC, METRO-DADE COUNTY, FL.					
800/945-8453	800/945-8453	800/945-8453	800/945-8453	800/945-8453	800/945-8453
800/945-8453	800/945-8453	800/945-8453	800/945-8453	800/945-8453	800/945-8453
X	X	X	X	X	X

# Clay Tile

1. COMPANY NAME	LUDOWICI ROOF TILE, INC.	LUDOWICI ROOF TILE, INC.	LUDOWICI ROOF TILE, INC.
2. PRODUCT NAME	18" SBM	CLOSED SHINGLE	FLAT SLAB SHINGLE
3. TILE TYPE			
"S" (Spanish) Mission Barrel, One Piece			
Straight Barrel Mission, Two Piece	X		
Tapered Mission, Two Piece			
Flat, One Piece			X
Flat, Interlocking, One Piece		X	
Flat Pan and Cover, Two Piece			
4A. TILE DESCRIPTION	FINE MACHINE SCORED	SMOOTH/SANDED	SMOOTH/SANDED
Texture (specify or NA)			
4B. FINISHES	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE
Number of Colors Available	1 / 47	1 / 47	1 / 47
Color Availability (regional/national)	NATIONAL / NATIONAL	NATIONAL / NATIONAL	NATIONAL / NATIONAL
Custom Colors/Blends Available (yes/no)	NO / YES	NO / YES	NO / YES
Custom Shapes Available (yes/no)	YES / YES	YES / YES	YES / YES
5. ACCESSORY TILES AVAILABLE [e.g., ridge, hip, starter] (yes/no)	YES	YES	YES
6. DIMENSIONS AND COVERAGE			
Tile Dimensions (inches x inches)	18-3/8 X 8	11 X 8-3/4	12 X 6
Exposed Size (inches x inches)	15-3/8 X 5-3/4	8 X 8	5 X 6
Pieces Per Roof Square	163	225	480
Weight Per Roof Square (pounds)	1165	1130	1300/1780
7. SLOPE/UNDERLAYMENT RECOMMENDATIONS			
A. Minimum Slope Recommended For Normal Application (inches per foot)	5:12	3:12	5:12
B. Underlayment Recommended In Normal Application	40 LB. FELT	40 LB. FELT	40 LB. FELT
C. Minimum Slope Recommended For Special Applications (inches per foot or NA)	3:12		3:12
D. Underlayment Recommended in Special Application	WINTERGUARD OR BUR EQUIVALENT		WINTERGUARD OR BUR EQUIVALENT
8. DECKS AND FASTENING RECOMMENDATIONS (Fastening system in normal application or NA)			
Metal	STAINLESS STEEL SHEET METAL SCREWS	STAINLESS STEEL SHEET METAL SCREWS	STAINLESS STEEL SHEET METAL SCREWS
Plywood	11 GAUGE RING SHANK COPPER NAILS	11 GAUGE RING SHANK COPPER NAILS	11 GAUGE RING SHANK COPPER NAILS
Wood Plank	11 GA SMOOTH SHANK COPPER NAILS	11 GA SMOOTH SHANK COPPER NAILS	11 GA SMOOTH SHANK COPPER NAILS
Oriented-Strand Board	NA	NA	NA
Waferboard	NA	NA	NA
Gypsum / Nailable Concrete	SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL	SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL	SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL
Other (specify)	NA	NA	NA
9. YEAR PRODUCT FIRST SOLD	1996	1900	1900
10. NUMBER OF SQUARES INSTALLED	>10,000	>250,000	>5,000
11. DISTRIBUTION			
Distributors (number handling product or no)	>50	>50	>50
Direct (number of regional service locations or no)	1	1	1
12. TECHNICAL INFORMATION COMPLIES WITH ASTM C1167-96 STANDARD SPECIFICATION FOR CLAY ROOF TILE (check grade and type or enter none)			
GRADE 1 Providing resistance to severe frost action	X	X	X
GRADE 2 Providing resistance to moderate frost action			
GRADE 3 Providing negligible resistance to any frost action			
TYPE I High-profile: rise-to-width ratio greater than 1:5	X		
TYPE II Low-profile: rise-to-width ratio equal to or less than 1:5		X	X
TYPE III All other tiles, including flat			
13. ACCEPTED BY THE FOLLOWING CODES	ICBO (4872), UBC, METRO-DADE COUNTY, FL.	ICBO (4872), UBC, METRO-DADE COUNTY, FL.	ICBO (4872), UBC, METRO-DADE COUNTY, FL.
14. FOR SALES INFORMATION, CONTACT:	800/945-8453	800/945-8453	800/945-8453
FOR TECHNICAL INFORMATION, CONTACT:	800/945-8453	800/945-8453	800/945-8453
15. SEE APPENDIX IF CHECKED	X	X	X

NA=not applicable

# Clay Tile

LUDOWICI ROOF TILE, INC.	M.C.A. CLAY TILE				
SPANISH	18" SPANISH	TILESTONE	WILLIAMSBURG	XL WILLIAMSBURG	ONE-PIECE "S"
X	X				X
		X	X	X	
SMOOTH	SMOOTH/SANDED	STONE	HAND ROUGHED	HAND ROUGHED	SMOOTH
NATURAL / CERAMIC GLAZE					
1 / 47	1 / 47	1 / 47	1 / 47	1 / 47	15 / 12
NATIONAL / NATIONAL					
NO / YES	YES / YES				
YES / YES					
YES	YES	YES	YES	YES	YES
131/4 X 9-3/4	18-3/8 X 9-3/4	11 X 8-3/4	14 X 9	16 X 10-3/4	19 X 14
10-1/4 X 8-1/4	15-3/8 X 8-1/4	8 X 8	11 X 8-1/4	13 X 10-1/8	16 X 12
171	114	225	158	109	75
900	800	900	800	750	788
4:12	4:12	3:12	3:12	3:12	3:12
40 LB. FELT	30 LB. FELT				
3:12	3:12				<3:12
WINTERGUARD OR BUR EQUIVALENT	WINTERGUARD OR BUR EQUIVALENT				2 30 LB. FELTS MOPPED BETWEEN LAYERS
STAINLESS STEEL SHEET METAL SCREWS	SCREW NAILS				
11 GAUGE RING SHANK COPPER NAILS	RING SHANK NAILS				
11 GA SMOOTH SHANK COPPER NAILS	SMOOTH SHANK NAILS				
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	RING SHANK NAILS
SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL					
NA	NA	NA	NA	NA	NA
1900	1996	1900	1925	1996	1985
>500,000	>10,000	>10,000	>500,000	>10,000	1,00,000
>50	>50	>50	>50	>50	240
1	1	1	1	1	NO
X	X	X	X	X	X
X	X				X
		X	X	X	
ICBO (4872), UBC, METRO-DADE COUNTY, FL.	ICBO (4202) LOS ANGELES CNTY, METRO-DADE CNTY, FL.				
800/945-8453	800/945-8453	800/945-8453	800/945-8453	800/945-8453	800/736-6221
800/945-8453	800/945-8453	800/945-8453	800/945-8453	800/945-8453	800/736-6221
X	X	X	X	X	

# Clay Tile

1. COMPANY NAME	M.C.A. CLAY TILE	M.C.A. CLAY TILE	M.C.A. CLAY TILE
2. PRODUCT NAME	STRAIGHT BARREL MISSION	CLASSIC TAPERED MISSION	ORIENTAL
3. TILE TYPE			
"S" (Spanish) Mission Barrel, One Piece			
Straight Barrel Mission, Two Piece	X		
Tapered Mission, Two Piece		X	
Flat, One Piece			
Flat, Interlocking, One Piece			
Flat Pan and Cover, Two Piece			
4A. TILE DESCRIPTION			
Texture (specify or NA)	SMOOTH	SMOOTH	SMOOTH
4B. FINISHES	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE
Number of Colors Available	15 / 12	15 / 12	1 / 10
Color Availability (regional/national)	NATIONAL / NATIONAL	NATIONAL / NATIONAL	NATIONAL / NATIONAL
Custom Colors/Blends Available (yes/no)	YES / YES	YES / YES	YES / YES
Custom Shapes Available (yes/no)	YES / YES	YES / YES	NO / NO
5. ACCESSORY TILES AVAILABLE [e.g., ridge, hip, starter] (yes/no)	YES	YES	YES
6. DIMENSIONS AND COVERAGE			
Tile Dimensions (inches x inches)	19 X 10	19 X 7-1/4 TAPERS TO 6-1/4	12 X 12
Exposed Size (inches x inches)	16 X 13.5	16 X 10	10-1/2 X 9-1/2
Pieces Per Roof Square	135	180	144
Weight Per Roof Square (pounds)	1005	900	864
7. SLOPE/UNDERLAYMENT RECOMMENDATIONS			
A. Minimum Slope Recommended For Normal Application (inches per foot)	3:12	3:12	3:12
B. Underlayment Recommended In Normal Application	30 LB. FELT	30 LB. FELT	30 LB. FELT
C. Minimum Slope Recommended For Special Applications (inches per foot or NA)	<3:12	<3:12	<3:12
D. Underlayment Recommended in Special Application	2 30 LB. FELTS MOPPED BETWEEN LAYERS	2 30 LB. FELTS MOPPED BETWEEN LAYERS	2 30 LB. FELTS MOPPED BETWEEN LAYERS
8. DECKS AND FASTENING RECOMMENDATIONS (Fastening system in normal application or NA)			
Metal	SCREW NAILS SCREWS & CLIPS	SCREW NAILS	SCREW NAILS
Plywood	RING SHANK NAILS	RING SHANK NAILS	RING SHANK NAILS
Wood Plank	SMOOTH SHANK NAILS	SMOOTH SHANK NAILS	SMOOTH SHANK NAILS
Oriented-Strand Board	NA	NA	NA
Waferboard	RING SHANK NAILS	RING SHANK NAILS	RING SHANK NAILS
Gypsum / Nailable Concrete	SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL	SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL	SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL
Other (specify)	NA	NA	NA
9. YEAR PRODUCT FIRST SOLD	1985	1985	1902
10. NUMBER OF SQUARES INSTALLED	500,000	<10,000	>1 MILLION
11. DISTRIBUTION			
Distributors (number handling product or no)	240	240	240
Direct (number of regional service locations or no)	NO	NO	NO
12. TECHNICAL INFORMATION COMPLIES WITH ASTM C1167-96 STANDARD SPECIFICATION FOR CLAY ROOF TILE (check grade and type or enter none)			
GRADE 1 Providing resistance to severe frost action	X	X	X
GRADE 2 Providing resistance to moderate frost action			
GRADE 3 Providing negligible resistance to any frost action			
TYPE I High-profile: rise-to-width ratio greater than 1:5	X	X	
TYPE II Low-profile: rise-to-width ratio equal to or less than 1:5			X
TYPE III All other tiles, including flat			
13. ACCEPTED BY THE FOLLOWING CODES	ICBO (4202) LOS ANGELES COUNTY	ICBO (4202) LOS ANGELES COUNTY	ICBO (4202) LOS ANGELES COUNTY
14. FOR SALES INFORMATION, CONTACT:	800/736-6221	800/736-6221	800/736-6221
FOR TECHNICAL INFORMATION, CONTACT:	800/736-6221	800/736-6221	800/736-6221
15. SEE APPENDIX IF CHECKED			X

NA=not applicable

# Clay Tile

M.C.A. CLAY TILE	M.C.A. CLAY TILE	SANDTOFT ROOF TILES	SANDTOFT ROOF TILES	SANDTOFT ROOF TILES	SANDTOFT ROOF TILES
MF 108 FLAT	TURRET TILE	COUNTY PAN TILE	EUROPA	FLEMISH	GOXHILL HANDMADE
		X	X	X	
	X				
X					X
	SMOOTH	SMOOTH	SMOOTH	SMOOTH	RUSTIC
NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE
1 / 10	15 / CUSTOM	4 / --	6 / --	6 / --	3 / --
NATIONAL / NATIONAL	NATIONAL / NATIONAL	NATIONAL / --	NATIONAL / --	NATIONAL / --	NATIONAL / --
YES / YES	YES / YES	NO / --	NO / --	NO / --	NO / --
NO / NO	YES / YES	NO / --	NO / --	NO / --	NO / --
YES	YES	YES	YES	YES	YES
13-3/4 X 13-3/4	--	14-3/4 X 10-3/4	15 X 10-1/2	15 X 10-1/2	10-1/2 X 6-1/2
11-1/8 X 12	--	12 X 9	12-1/2 X 8-1/2	12-1/2 X 8-1/2	4-1/4 X 6-1/2
108	--	135	135	135	550
850	--	850	850	850	1400
3:12	3:12	4:12	4:12	4:12	8:12
2 PLY 30 LB. FELT	2 PLY 30 LB. FELT	30 LB. FELT	30 LB. FELT	30 LB. FELT	40 LB. FELT
<3:12	<3:12				
2 30 LB. FELTS MOPPED BETWEEN LAYERS	2 30 LB. FELTS MOPPED BETWEEN LAYERS		NA	NA	NA
SCREW NAILS	SCREW NAILS	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL SCREWS	STAINLESS STEEL SCREWS & CIPS
RING SHANK NAILS	RING SHANK NAILS	RING SHANK AND CLIPS	RING SHANK NAILS	RING SHANK NAILS	RING SHANK AND CLIPS
SMOOTH SHANK NAILS	SMOOTH SHANK NAILS	RING SHANK			
NA	NA				
RING SHANK NAILS	RING SHANK NAILS				
SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL	SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAIL	RING SHANK			
NA	NA				
1984	1993	1981	1996	1996	1981
100,000	100,000	450,000	N/A	N/A	26,000
170	240	--	--	--	--
NO	NO	X	X	--	X
X	X	X	X	X	X
	X	X	X		
				X	
X					X
ICBO (4202) LOS ANGELES COUNTY	ICBO (4202) LOS ANGELES COUNTY				
800/736-6221	800/736-6221	S. MATTHEWS 905/627-4035	S. MATTHEWS 905/627-4035	S. MATTHEWS 905/627-4035	S. MATTHEWS 905/627-4035
800/736-6221	800/736-6221	S. MATTHEWS 905/627-4035	S. MATTHEWS 905/627-4035	S. MATTHEWS 905/627-4035	S. MATTHEWS 905/627-4035
X	X				

# Clay Tile

1. COMPANY NAME	SANDTOFT ROOF TILES	SANTA FE TILE CORP.	SANTE FE TILE CORP.
2. PRODUCT NAME	20/20	SANTA FE "S"	SANTA FE MISSION BARREL
3. TILE TYPE			
"S" (Spanish) Mission Barrel, One Piece		X	
Straight Barrel Mission, Two Piece			
Tapered Mission, Two Piece			X
Flat, One Piece			
Flat, Interlocking, One Piece			
Flat Pan and Cover, Two Piece	X		
4A. TILE DESCRIPTION			
Texture (specify or NA)	SMOOTH	SMOOTH/RUSTIC	SMOOTH/RUSTIC
4B. FINISHES	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE
Number of Colors Available	6 / --	1 / 15	1 / 11
Color Availability (regional/national)	NATIONAL / --	NATIONAL / NATIONAL	NATIONAL / NATIONAL
Custom Colors/Blends Available (yes/no)	NO / --	YES / YES	YES / YES
Custom Shapes Available (yes/no)	NO / --	YES / YES	YES / YES
5. ACCESSORY TILES AVAILABLE [e.g., ridge, hip, starter] (yes/no)	YES	YES	YES
6. DIMENSIONS AND COVERAGE			
Tile Dimensions (inches x inches)	14-1/2 X 8-3/4	18 X 11	18 X 9 TAPERS TO 8
Exposed Size (inches x inches)	10-1/2 X 7-1/4	15 X 10	--
Pieces Per Roof Square	186	96	260
Weight Per Roof Square (pounds)	900	672	864
7. SLOPE/UNDERLAYMENT RECOMMENDATIONS			
A. Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12	4:12
B. Underlayment Recommended In Normal Application	30 LB. FELT	30 OR 40 LB. FELT	30 OR 40 LB. FELT
C. Minimum Slope Recommended For Special Applications (inches per foot or NA)	N/A	3:12	3:12
D. Underlayment Recommended in Special Application		2 30 LB. FELTS MOPPED BETWEEN LAYERS	2 30 LB. FELTS MOPPED BETWEEN LAYERS
8. DECKS AND FASTENING RECOMMENDATIONS (Fastening system in normal application or NA)			
Metal	STAINLESS STEEL	STAINLESS STEEL SCREWS	STAINLESS STEEL SCRES
Plywood	RING SHANK	RING SHANK NAIL & HURRICANE SPIKE	RING SHANK NAIL & HURRICANE SPIKE
Wood Plank		SMOOTH SHANK NAILS	SMOOTH SHANK NAILS
Oriented-Strand Board		NA	NA
Waferboard		RING SHANK NAILS	RING SHANK NAILS
Gypsum / Nailable Concrete		SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAILS	SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAILS
Other (specify)			
9. YEAR PRODUCT FIRST SOLD	1998	1954	1954
10. NUMBER OF SQUARES INSTALLED	N/A	750,000	730,000
11. DISTRIBUTION			
Distributors (number handling product or no)	--	75	75
Direct (number of regional service locations or no)	X	--	--
12. TECHNICAL INFORMATION COMPLIES WITH ASTM C1167-96 STANDARD SPECIFICATION FOR CLAY ROOF TILE (check grade and type or enter none)			
GRADE 1 Providing resistance to severe frost action	X	X	X
GRADE 2 Providing resistance to moderate frost action			
GRADE 3 Providing negligible resistance to any frost action			
TYPE I High-profile: rise-to-width ratio greater than 1:5		X	X
TYPE II Low-profile: rise-to-width ratio equal to or less than 1:5			
TYPE III All other tiles, including flat	X		
13. ACCEPTED BY THE FOLLOWING CODES		METRO-DADE COUNTY, FL.	METRO-DADE COUNTY, FL.
14. FOR SALES INFORMATION, CONTACT:	S. MATTHEWS 905/627-4035	D. BERNAL 305/885-9002	D. BERNAL 305/885-9002
FOR TECHNICAL INFORMATION, CONTACT:	S. MATTHEWS 905/627-4035	D. BERNAL 305/885-9002	D. BERNAL 305/885-9002
15. SEE APPENDIX IF CHECKED			

NA=not applicable

# Clay Tile

SANTE FE TILE CORP.	TBF TILE				
SANTA FE "ROYAL"	ROMANE	ROMAN CANAL	CANAL 40	CANAL 50	RESIDENCE
	X	X			BARREL TILE
			X	X	
X					
SMOOTH/RUSTIC	SMOOTH	SMOOTH	SMOOTH	SMOOTH	SMOOTH AND RUSTIC
NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE
1 / 15	13 / 26	16 / 26	15 / 26	15 / 26	7 / 26
NATIONAL / NATIONAL	NATIONAL / NATIONAL	NATIONAL / NATIONAL	NATIONAL / NATIONAL	NATIONAL / NATIONAL	NATIONAL / NATIONAL
YES / YES	NO / NO				
YES / YES	NO / NO				
YES	YES	YES	YES	YES	YES
18 X 11	17 X 11-1/4	17-3/4 X 11-5/8	16 X 7-1/2	18-1/2 X 7-1/4	12-1/2 X 16
15 X 10	14-1/4 X 8-1/4	15 X 8-1/2	10-1/2	14-1/2	10 X 15
96	121	112	316	232	96
672	950	950	1350	1150	950
4:12	4:12	4:12	4:12	4:12	4:12
30 OR 40 LB. FELT	30 LB. FELT	30 LB. FELT	30 LB. FELT	30 LB. FELT	40 LB. FELT
3:12					
2 30 LB. FELTS MOPPED BETWEEN LAYERS					
STAINLESS STEEL SCREWS	STEAINLESS STEEL SCREWS	STAINLESS STEEL SCREWS	STAINLESS STEEL SCREWS	STAINLESS STEEL SCREWS	STAINLESS STEEL SCREWS
RING SHANK NAIL & HURRICANE SPIKE	RING SHANK				
SMOOTH SHANK NAILS					
NA	NA	NA	NA		
RING SHANK NAILS					
SPIRAL THREAD STAINLESS STEEL/SILICON BRONZE NAILS					
1954	1950	1956	1960	1960	1970
75,000	N/A	N/A	N/A	N/A	N/A
75	--	--	--	--	--
--	--	--	--	X	X
X	X	X	X	X	X
X				X	X
METRO-DADE COUNTY, FL.					
D. BERNAL 305/885-9002	S. MATTHEWS 905/627-4035				
D. BERNAL 305/885-9002	S. MATTHEWS 905/527-4035				

# Clay Tile

1. COMPANY NAME	TBF TILE	TUILERIE DE PONTIGNY ALEONARD	TUILERIE DE PONTIGNY ALEONARD
2. PRODUCT NAME	LA GAULOISE	MONUMENT HISTORIQUE	GLAZED
3. TILE TYPE			
"S" (Spanish) Mission Barrel, One Piece			
Straight Barrel Mission, Two Piece			
Tapered Mission, Two Piece			
Flat, One Piece		X	X
Flat, Interlocking, One Piece	X		
Flat Pan and Cover, Two Piece			
4A. TILE DESCRIPTION			
Texture (specify or NA)	SMOOTH	N/A	N/A
4B. FINISHES	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE
Number of Colors Available	2 / 2	3 / --	14 / --
Color Availability (regional/national)	NATIONAL / NATIONAL	NATIONAL / --	NATIONAL / --
Custom Colors/Blends Available (yes/no)	NO / NO	YES / --	YES / --
Custom Shapes Available (yes/no)	NO / NO	YES / --	YES / --
5. ACCESSORY TILES AVAILABLE [e.g., ridge, hip, starter] (yes/no)	YES	YES	YES
6. DIMENSIONS AND COVERAGE			
Tile Dimensions (inches x inches)	16-1.2 X 19	13 X 6-3/4	11-3/4 X 6-3/4
Exposed Size (inches x inches)	12-1/2 X 8-1/2	5-1/2 X 6-3/4	4-3/4 X 6-3/4
Pieces Per Roof Square	140	390	430
Weight Per Roof Square (pounds)	1050	1500	1570
7. SLOPE/UNDERLAYMENT RECOMMENDATIONS			
A. Minimum Slope Recommended For Normal Application (inches per foot)	4:12	10:12	10:12
B. Underlayment Recommended In Normal Application	40 LB. FELT	40 LB. FELT	40 LB. FELT
C. Minimum Slope Recommended For Special Applications (inches per foot or NA)			
D. Underlayment Recommended in Special Application			
8. DECKS AND FASTENING RECOMMENDATIONS (Fastening system in normal application or NA)			
Metal	STAINLESS STEEL	BATTEN SEAM	BATTEN SEAM
Plywood	RING SHANK		
Wood Plank			
Oriented-Strand Board			
Waferboard			
Gypsum / Nailable Concrete			
Other (specify)			
9. YEAR PRODUCT FIRST SOLD	1996	1800	1800
10. NUMBER OF SQUARES INSTALLED	N/A	N/A	N/A
11. DISTRIBUTION			
Distributors (number handling product or no)	--	--	--
Direct (number of regional service locations or no)	X	X	X
12. TECHNICAL INFORMATION COMPLIES WITH ASTM C1167-96 STANDARD SPECIFICATION FOR CLAY ROOF TILE (check grade and type or enter none)			
GRADE 1 Providing resistance to severe frost action	X	X	X
GRADE 2 Providing resistance to moderate frost action			
GRADE 3 Providing negligible resistance to any frost action			
TYPE I High-profile: rise-to-width ratio greater than 1:5			
TYPE II Low-profile: rise-to-width ratio equal to or less than 1:5			
TYPE III All other tiles, including flat	X	X	X
13. ACCEPTED BY THE FOLLOWING CODES			
14. FOR SALES INFORMATION, CONTACT:	S. MATTHEWS 905/627-4035	S. MATTHEWS 905/627-4035	S. MATTHEWS 905/627-4035
FOR TECHNICAL INFORMATION, CONTACT:	S. MATTHEWS 905/527-4035	S. MATTHEWS 905/527-4035	S. MATTHEWS 905/527-4035
15. SEE APPENDIX IF CHECKED			

NA=not applicable

# Clay Tile

TUILERIE DE PONTIGNY ALEONARD	U.S. TILE CO.	U.S. TILE CO.	U.S. TILE CO.	U.S. TILE CO.
PATRIMONY	CLAY MAX TWIN-S LIGHTWEIGHT	TAPERED MISSION TILE	"S" TILE	CLAYLITE LIGHTWEIGHT "S" TILE
			X	X
		X		
X	X			
N/A	SMOOTH AND RUSTIC	SMOOTH AND RUSTIC	SMOOTH AND RUSTIC	SMOOTH
NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE	NATURAL / CERAMIC GLAZE
3 / --	9 / --	18 / --	18 / -	6 / -
NATIONAL / --	NATIONAL / -	REGIONAL / REGIONAL	REGIONAL / REGIONAL	REGIONAL /
NO / --	-- / --	YES / NO	YES / YES	NO /
YES / --	-- / --	YES / NO	NO / NO	NO /
YES	YES	YES	YES	YES
10-1/2 X 6-1/2	13 X 15	8 X 8	13 X 18	13 X 18
4-1/4 X 6-1/2	12 X 15	8 X 15	11 X 15	11 X 15
550	88	172	88	88
1500	580	1,000	800	595
10:12	3:12	3:12	3:12	3:12
40 LB. FELT	TYPE 30 FELT	TYPE 30 FELT	TYPE 30 FELT	TYPE 30 FELT
	<3:12	<3:12	<3:12	<3:12
	BUILT-UP ROOF	BUILT-UP ROOF	BUILT-UP ROOF	BUILT-UP ROOF
BATTEN SEAM	TILE TIE SYSTEM	TILE TIE SYSTEM	TILE TIE SYSTEM	TILE TIE SYSTEM
	NAILS	NAILS	NAIL	NAILS
	NAILS	NAILS	NAILS	NAILS
	NAILS	NAILS	NAILS	NAILS
	NAILS	NAILS	NAILS	NAILS
	TILE TIE SYSTEM	TILE TIE SYSTEM	TILE TIE SYSTEM	TILE TIE SYSTEM
1800	1995	1974	1974	1993
N/A	800,000	1.6 MILLION	3.4 MILLION	500,000
--	170	170	170	170
X	NO	NO	NO	NO
X	X			
		X	X	X
		X	X	X
	X			
X				
	ICBO (3523) LARR (24045)	ICBO (3523) LARR (24045)	ICBO (3523) LARR (24045)	ICBO (3523) LARR (24045)
S. MATTHEWS 905/627-4035	909/737-0200	909/737-0200	909/737-0200	909/737-0200
S. MATTHEWS 905/527-4035	909/737-0200	909/737-0200	909/737-0200	909/737-0200

# Concrete Tile

1.	COMPANY NAME	AUBURN TILE INC.	AUBURN TILE INC.	MONIER LIFETILE	MONIER LIFETILE
2.	PRODUCT NAME	AUBURN TILE REGULAR WEIGHT	AUBURN LITE 500 SERIES	GOLD RUSH SERIES ESPANA MISSION	100 SERIES ESPANA MISSION
3.	TILE TYPE				
	"S" (SPANISH) MISSION BARREL			X	X
	DOUBLE "S"				
	FLAT, SHINGLE- (SLATE-) SHAPE	X	X		
	FLAT, SHAKE-SHAPE				
	FLAT, RIBBED				
4.	TILE DESCRIPTION				
	Textured (yes or no)			NO	NO
	Color Production (surface or through-color)	THROUGH-COLOR	THROUGH-COLOR	SURFACE	SURFACE
	Number Of Colors Available	30	30		
	Color Availability (regional/national)	REGIONAL		NATIONAL	NATIONAL
	Custom Colors/Blens AvailableE (yes/no)	YES	YES	YES	YES
5.	ACCESSORY TILES AVAILABLE [e.g., ridge, hip, starter] (yes/no)				
6.	DIMENSIONS AND COVERAGE				
	Tile Dimensions (inches x inches)	15 X 9 1/4	15 X 9 1/4	17 X 12 3/8	17 X 12 3/8
	Minimum Headlap (inches)	3	3	3	3
	Exposure (inches)	12	12	14	14
	Pieces Per Roof Square	145	145	89	89
	Weight Per Roof Square (pounds)	1050	783	890	890
7.	SLOPE/UNDERLAYMENT RECOMMENDATIONS				
	Minimum Slope Recommended For Normal Application (inches per foot)	3:12	3:12	3:12	3:12
	Underlayment Recommended In Normal Application	2 30-LB. FELTS	2 30-LB. FELTS	30-LB FELT	30-LB FELT
	Minimum Slope Recommended For Speical Application (inches per foot)	NA	NA	< 3:12	< 3:12
	Underlayment Recommended In Special Application			2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS	2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS
8A.	RECOMMENDED DECKS AND FASTENING REQUIREMENTS				
	DECK TYPES				
	Solid Sheathing	X	X	X	X
	Spaced Sheathing				
8B.	DECK MATERIAL				
	Plywood/Wood	X	X	X	X
	Oriented Strand Board			X	X
	Waferboard				
	Other (specify)				
8C.	FASTENING REQUIREMENTS				
	1. Battens Required [at given slope(s), no, or NA]				
	a. Solid Sheathing	7:12	7:12	< 3:12 AND > 7:12	< 3:12 AND > 7:12
	b. Spaced Sheathing			NA	NA
	2. Nailing Requirements, Field Tiles				
	a. Solid/Spaced Sheathing With Battens [slope(s) or NA]				
	not required			3:12 TO 5:12	3:12 TO 5:12
	each tile, alternate rows			> 5:12 TO 12:12	> 5:12 TO 12:12
	each tile			12:12 AND OVER	12:12 AND OVER
	b. Solid/Spaced Sheathing Without Battens [slope(s) or NA]				
	not required				
	each tile, alternate rows				
	each tile			3:12 AND ABOVE	3:12 AND ABOVE
9.	YEAR PRODUCT FIRST SOLD				
10.	NUMBER OF SQUARES INSTALLED				
11.	DISTRIBUTION				
	Distributors (number handling product or no)	150	150	150	150
	Direct (number of regional service locations or no)	NO	NO	NO	NO
12.	ACCEPTED BY THE FOLLOWING CODES	ICBO (2310)	ICBO (2310)	ICBO (2656), SBCCI BOCA	ICBO (2656), SBCCI BOCA
13A	FOR SALES INFORMATION, CONTACT	J. MANSOOR 909/984-2841	J. MANSOOR 909/984-2841	B. SESULKA 909/822-4407	B. SESULKA 909/822-4407
13B.	FOR TECHNICAL INFORMATION, CONTACT	U. HELFERICH 909/984-2841	U. HELFERICH 909/984-2841	J. VANDEWATER 909/428-4438	J. VANDEWATER 909/428-4438
14.	SEE APPENDIX IF CHECKED				

NA=not applicable

# Concrete Tile

| MONIER LIFETILE                                    |
|--|--|--|--|--|--|--|
| COLONIAL SLATE                                     | CHATEAU  | SUPERSHAKE   | CLASSIC CAPRI                                      | SIERRA SHAKE                                       | BLENDED MISSION                                    | BLENDED SHINGLE                                    |
|  |  |  |  |  |  |  |
| X  |  |  | X  |  | X  | X  |
|  | X  | X  |  | X  |  |  |
|  |  |  |  |  |  |  |
| NO SURFACE   | YES SURFACE  | YES THROUGH-COLOR                                  | NO THROUGH-COLOR                                   | YES THROUGH-COLOR                                  | NO THROUGH-COLOR                                   | YES THROUGH-COLOR                                  |
| NATIONAL YES                                       |
|  |  |  |  |  |  |  |
| 17 X 12 3/8  |
3	3	3	3	3	3	3
14	14	14	14	14	14	14
89	93.5	93.5	93.5	93.5	93.5	93.5
900	950	950	950	950	950	950
3:12	3:12	3:12	3:12	3:12	3:12	3:12
30-LB FELT						
< 3:12	< 3:12	< 3:12	< 3:12	< 3:12	< 3:12	< 3:12
2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS	2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS	2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS	2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS	2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS	2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS	2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS
X	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X	X
< 3:12 AND > 7:12						
NA						
3:12 TO 5:12						
> 5:12 TO 12:12						
12:12 AND OVER						
3:12 AND ABOVE						
150	150	150	150	150	150	150
NO						
ICBO (2656), SBCCI BOCA						
B. SESULKA 909/822-4407						
J. VANDEWATER 909/428-4438						

# Concrete Tile

1.	COMPANY NAME	MONIER LIFETILE	MONIER LIFETILE	MONIER LIFETILE	MONIER LIFETILE
2.	PRODUCT NAME	SANTA FE MISSION	SANTA FE SHINGLE	CLASSIC MISSION	TAOS MISSION
3.	TILE TYPE				
	"S" (SPANISH) MISSION BARREL	X		X	X
	DOUBLE "S"				
	FLAT, SHINGLE- (SLATE-) SHAPE		X		
	FLAT, SHAKE-SHAPE				
	FLAT, RIBBED				
4.	TILE DESCRIPTION				
	Textured (yes or no )	NO	YES	YES	YES
	Color Production (surface or through-color)	THROUGH-COLOR	THROUGH-COLOR	THROUGH-COLOR	THROUGH-COLOR
	Number Of Colors Available				
	Color Availability (regional/national)	NATIONAL	NATIONAL	NATIONAL	NATIONAL
	Custom Colors/Blens AvailableE (yes/no)	YES	YES	YES	YES
5.	ACCESSORY TILES AVAILABLE [e.g., ridge, hip, starter] (yes/no)				
6.	DIMENSIONS AND COVERAGE				
	Tile Dimensions (inches x inches)	17 X 12 3/8			
	Minimum Headlap (inches)	3	3	3	3
	Exposure (inches)	14	14	14	14
	Pieces Per Roof Square	89	89	89	89
	Weight Per Roof Square (pounds)	890	890	890	890
7.	SLOPE/UNDERLAYMENT RECOMMENDATIONS				
	Minimum Slope Recommended For Normal Application (inches per foot)	3:12	3:12	3:12	3:12
	Underlayment Recommended In Normal Application	30-LB FELT	30-LB FELT	30-LB FELT	30-LB FELT
	Minimum Slope Recommended For Speical Application (inches per foot)	< 3:12	< 3:12	< 3:12	< 3:12
	Underlayment Recommended In Special Application	2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS	2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS	2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS	2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS
8A.	RECOMMENDED DECKS AND FASTENING REQUIREMENTS				
	DECK TYPES				
	Solid Sheathing	X	X	X	X
	Spaced Sheathing				
8B.	DECK MATERIAL				
	Plywood/Wood	X	X	X	X
	Oriented Strand Board	X	X	X	X
	Waferboard				
	Other (specify)				
8C.	FASTENING REQUIREMENTS				
	1. Battens Required [at given slope(s), no, or NA]				
	a. Solid Sheathing	< 3:12 AND > 7:12			
	b. Spaced Sheathing	NA	NA	NA	NA
	2. Nailing Requirements, Field Tiles				
	a. Solid/Spaced Sheathing With Battens [slope(s) or NA]				
	not required	3:12 TO 5:12	3:12 TO 5:12	3:12 TO 5:12	3:12 TO 5:12
	each tile, alternate rows	> 5:12 TO 12:12			
	each tile	12:12 AND OVER	12:12 AND OVER	12:12 AND OVER	12:12 AND OVER
	b. Solid/Spaced Sheathing Without Battens [slope(s) or NA]				
	not required				
	each tile, alternate rows				
	each tile	3:12 AND ABOVE	3:12 AND ABOVE	3:12 AND ABOVE	3:12 AND ABOVE
9.	YEAR PRODUCT FIRST SOLD				
10.	NUMBER OF SQUARES INSTALLED				
11.	DISTRIBUTION				
	Distributors (number handling product or no)	150	150	150	150
	Direct (number of regional service locations or no)	NO	NO	NO	NO
12.	ACCEPTED BY THE FOLLOWING CODES	ICBO (2656), SBCCI BOCA	ICBO (2656), SBCCI BOCA	ICBO (2656), SBCCI BOCA	ICBO (2656), SBCCI BOCA
13A.	FOR SALES INFORMATION, CONTACT	B. SESULKA 909/822-4407	B. SESULKA 909/822-4407	B. SESULKA 909/822-4407	B. SESULKA 909/822-4407
13B.	FOR TECHNICAL INFORMATION, CONTACT	J. VANDEWATER 909/428-4438	J. VANDEWATER 909/428-4438	J. VANDEWATER 909/428-4438	J. VANDEWATER 909/428-4438
14.	SEE APPENDIX IF CHECKED				

NA=not applicable

# Concrete Tile

| MONIER LIFETILE                                    |
|--|--|--|--|--|--|--|
| TAOS SHINGLE                                       | COUNTRY SLATE                                      | COUNTY SHINGLE                                     | TRULITE LTWT CONCRETE TILE                         |
|  |  |  | X  |  |  | X  |
| X  | X  | X  |  | X  |  |  |
|  |  |  |  |  | X  |  |
| YES  | YES  |  | NO   | NO   | NO   | NO   |
| THROUGH-COLOR                                      | THROUGH-COLOR                                      | THROUGH-COLOR                                      | SURFACE  | SURFACE  | SURFACE  | THROUGH-COLOR                                      |
| NATIONAL YES                                       | NATIONAL YES                                       | NATIONAL YES                                       | REGIONAL NO  | REGIONAL NO  | REGIONAL NO  | REGIONAL NO  |
|  |  |  | YES  | YES  | YES  | YES  |
| 17 X 12 3/8  |
3	3	3	3	3	3	3
14	14	14	14	14	14	14
89	93.5	93.5	89	93.5	94	89
890	1,035	1,035	595	595	650	595
3:12	3:12	3:12	3:12	3:12	3:12	3:12
30-LB FELT	30-LB FELT	30-LB FELT	TYPE-30 FELT	TYPE-30 FELT	TYPE-30 FELT	TYPE-30 FELT
< 3:12	< 3:12	< 3:12	< 3:12	< 3:12	< 3:12	< 3:12
2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS	2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS	2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS	2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS	2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS	2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS	2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS
X	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X	X
< 3:12 AND > 7:12						
NA	NA	NA	NA	NA		NA
3:12 TO 5:12						
> 5:12 TO 12:12						
12:12 AND OVER						
3:12 AND ABOVE						
150	150	150	150	150	150	150
NO						
ICBO (2656), SBCCI BOCA						
B. SESULKA 909/822-4407	B. SESULKA 909/822-4407	B. SESULKA 909/822-4407	P. SULLIVAN 909/822-4407	P. SULLIVAN 909/822-4407	P. SULLIVAN 909/822-4407	P. SULLIVAN 909/822-4407
J. VANDEWATER 909/428-4438						
					X	

# Concrete Tile

1.	COMPANY NAME	MONIER LIFETILE	MONIER LIFETILE	MONIER LIFETILE	MONIER LIFETILE
2.	PRODUCT NAME	TRULITE LTWT CONCRETE TILE	TRULITE LTWT CONCRETE TILE	COUNTRY SPLIT-SHINGLE	COUNTRY SPLIT-SHAKE
3.	TILE TYPE				
	"S" (SPANISH) MISSION BARREL				
	DOUBLE "S"	X			
	FLAT, SHINGLE- (SLATE-) SHAPE			X	X
	FLAT, SHAKE-SHAPE		X		
	FLAT, RIBBED				
4.	TILE DESCRIPTION				
	Textured (yes or no )	NO	NO		
	Color Production (surface or through-color)	THROUGH-COLOR	THROUGH-COLOR	THROUGH-COLOR	THROUGH-COLOR
	Number Of Colors Available				
	Color Availability (regional/national)	REGIONAL	REGIONAL	NATIONAL	NATIONAL
	Custom Colors/Blens AvailableE (yes/no)	NO	NO		
5.	ACCESSORY TILES AVAILABLE [e.g., ridge, hip, starter] (yes/no)	YES	YES	YES	YES
6.	DIMENSIONS AND COVERAGE				
	Tile Dimensions (inches x inches)	17 X 12 3/8			
	Minimum Headlap (inches)	3	3	3	3
	Exposure (inches)	14	14	14	14
	Pieces Per Roof Square	93.5	94	93.5	93.5
	Weight Per Roof Square (pounds)	595	650	1,035	1,035
7.	SLOPE/UNDERLAYMENT RECOMMENDATIONS				
	Minimum Slope Recommended For Normal Application (inches per foot)	3:12	3:12	3:12	3:12
	Underlayment Recommended In Normal Application	TYPE-30 FELT	TYPE-30 FELT	TYPE-30 FELT	TYPE-30 FELT
	Minimum Slope Recommended For Speical Application (inches per foot)	< 3:12	< 3:12	< 3:12	< 3:12
	Underlayment Recommended In Special Application	2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS	2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS	2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS	2 15-LB FELTS HOT MOPPED, VERTICAL COUNTER BATTENS
8A.	RECOMMENDED DECKS AND FASTENING REQUIREMENTS				
	DECK TYPES				
	Solid Sheathing	X	X		
	Spaced Sheathing			X	X
8B.	DECK MATERIAL				
	Plywood/Wood	X	X	X	X
	Oriented Strand Board	X	X	X	X
	Waferboard				
	Other (specify)				
8C.	FASTENING REQUIREMENTS				
	1. Battens Required [at given slope(s), no, or NA]				
	a. Solid Sheathing	< 3:12 AND > 7:12			
	b. Spaced Sheathing	NA		NA	NA
	2. Nailing Requirements, Field Tiles				
	a. Solid/Spaced Sheathing With Battens [slope(s) or NA]				
	not required	3:12 TO 5:12	3:12 TO 5:12	3:12 TO 5:12	3:12 TO 5:12
	each tile, alternate rows	> 5:12 TO 12:12			
	each tile	12:12 AND OVER	12:12 AND OVER	12:12 AND OVER	12:12 AND OVER
	b. Solid/Spaced Sheathing Without Battens [slope(s) or NA]				
	not required				
	each tile, alternate rows				
	each tile	3:12 AND ABOVE	3:12 AND ABOVE	3:12 AND ABOVE	3:12 AND ABOVE
9.	YEAR PRODUCT FIRST SOLD				
10.	NUMBER OF SQUARES INSTALLED				
11.	DISTRIBUTION				
	Distributors (number handling product or no)	150	150	150	150
	Direct (number of regional service locations or no)	NO	NO	NO	NO
12.	ACCEPTED BY THE FOLLOWING CODES	ICBO (2656), SBCCI BOCA	ICBO (2656), SBCCI BOCA	ICBO (2656), SBCCI BOCA	ICBO (2656), SBCCI BOCA
13A	FOR SALES INFORMATION, CONTACT	P. SULLIVAN 909/822-4407	P. SULLIVAN 909/822-4407	B. SESULKA 909/822-4407	B. SESULKA 909/822-4407
13B.	FOR TECHNICAL INFORMATION, CONTACT	J. VANDEWATER 909/428-4438	J. VANDEWATER 909/428-4438	J. VANDEWATER 909/428-4438	J. VANDEWATER 909/428-4438
14.	SEE APPENDIX IF CHECKED		X		

NA=not applicable

# Concrete Tile

MONIER LIFETILE	MONIER LIFETILE	MONIER LIFETILE	MONIER LIFETILE	MONIER LIFETILE	MONIER LIFETILE	MONIER LIFETILE
MISSION "S"	MISSION "S" DESERT	VILLA	VILLA	PREMIUM DURALITE VILLA	SHAKE	SHAKE
X	X					
		X	X	X		
					X	X
NO	NO	NO	NO	NO	YES	YES
SURFACE	THROUGH-COLOR	SURFACE	THROUGH-COLOR	THROUGH-COLOR	SURFACE	THROUGH-COLOR
60	30	30	18	6	12	15
NATIONAL	NATIONAL	NATIONAL	NATIONAL	NATIONAL	NATIONAL	NATIONAL
YES	YES	YES	YES	YES	YES	YES
YES	YES	YES	YES	YES	YES	YES
16 1/2 X 13	16 1/2 X 13	16 1/2 X 13				
3	3	3	3	3	3	3
13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2
90	90	90	90	90	90	90
900	900	800	800	540	900	900
3:12	3:12	3:12	3:12	3:12	3:12	3:12
30-OR 40-LB FELT	30-OR 40-LB FELT	30-OR 40-LB FELT				
< 3:12	< 3:12	< 3:12	< 3:12	< 3:12	< 3:12	< 3:12
2 30-LB FELTS NAILED, SOLID MOPPED	30-LB FELT + 90-LB. FELT, NAILED, SOLID MOPPED	30-LB FELT + 90-LB. FELT, NAILED, SOLID MOPPED	30-LB FELT + 90-LB. FELT, NAILED, SOLID MOPPED			
X	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X	X
< 3:12 AND > 7:12	< 3:12 & > 7:12	< 3:12 & > 7:12	< 3:12 & > 7:12	< 3:12 & > 7:12	< 3:12 & > 7:12	< 3:12 & > 7:12
NA	NA	NA	NA	NA	NA	NA
3:12 TO > 5:12		3:12 TO > 5:12	3:12 TO > 5:12			
5:12 TO 12:12	5:12 TO 12:12	5:12 TO 12:12	5:12 TO 12:12		5:12 TO 12:12	5:12 TO 12:12
12:12 AND OVER	12:12 AND OVER	12:12 AND OVER	12:12 AND OVER	ALL	12:12 AND OVER	12:12 AND OVER
ALL	ALL	ALL	ALL	ALL	ALL	ALL
1982	1982	1968	1968			
> 3 MILLION	> 1 MILLION	> 2 MILLION	> 1 MILLION	> 400,000	> 2,000,000	> 2,000,000
8	8	10	10	2	10	10
ICBO, SBCCI, BOCA, METRO-DADE CNTY	ICBO, SBCCI, BOCA, METRO-DADE CNTY	ICBO, SBCCI, BOCA, METRO-DADE CNTY	ICBO, SBCCI, BOCA, METRO-DADE CNTY	ICBO (2093)	ICBO (2093), SBCCI, BOCA METRO-DADE CNTY	ICBO (2093), SBCCI, BOCA METRO-DADE CNTY
D. HUISKEN 714/756-1605	D. HUISKEN 714/756-1605	D. HUISKEN 714/756-1605				
D. HUISKEN 714/756-1605	D. HUISKEN 714/756-1605	D. HUISKEN 714/756-1605				

# Concrete Tile

1.	COMPANY NAME	MONIER LIFETILE	MONIER LIFETILE	MONIER LIFETILE	MONIER LIFETILE
2.	PRODUCT NAME	PREMIUM DURALITE SHAKE	CLASSIC 100	CLASSIC 100	SLATE
3.	TILE TYPE				
	"S" (SPANISH) MISSION BARREL				
	DOUBLE "S"				
	FLAT, SHINGLE- (SLATE-) SHAPE				X
	FLAT, SHAKE-SHAPE				
	FLAT, RIBBED	X	X	X	
4.	TILE DESCRIPTION				
	Textured (yes or no)	YES	NO	NO	NO
	Color Production (surface or through-color)	THROUGH-COLOR	SURFACE	THROUGH-COLOR	SURFACE
	Number Of Colors Available	3	8	6	5
	Color Availability (regional/national)	NATIONAL	NATIONAL	NATIONAL	NATIONAL
	Custom Colors/Blens AvailableE (yes/no)	YES	NO	NO	YES
5.	ACCESSORY TILES AVAILABLE [e.g., ridge, hip, starter] (yes/no)	YES	YES	YES	YES
6.	DIMENSIONS AND COVERAGE				
	Tile Dimensions (inches x inches)	16 1/2 X 13			
	Minimum Headlap (inches)	3	3	3	3
	Exposure (inches)	13 1/2	13 1/2	13 1/2	13 1/2
	Pieces Per Roof Square	90	90	90	90
	Weight Per Roof Square (pounds)	740	900	900	900
7.	SLOPE/UNDERLAYMENT RECOMMENDATIONS				
	Minimum Slope Recommended For Normal Application (inches per foot)	3:12	3:12	3:12	3:12
	Underlayment Recommended In Normal Application	30-OR 40-LB FELT	30-OR 40-LB FELT	30-OR 40-LB FELT	30-OR 40-LB FELT
	Minimum Slope Recommended For Speical Application (inches per foot)	< 3:12	< 3:12	< 3:12	< 3:12
	Underlayment Recommended In Special Application	30-LB FELT + 90-LB. FELT, NAILED, SOLID MOPPED			
8A.	RECOMMENDED DECKS AND FASTENING REQUIREMENTS				
	DECK TYPES				
	Solid Sheathing	X	X	X	X
	Spaced Sheathing				
8B.	DECK MATERIAL				
	Plywood/Wood	X	X	X	X
	Oriented Strand Board	X	X	X	X
	Waferboard				
	Other (specify)				
8C.	FASTENING REQUIREMENTS				
	1. Battens Required [at given slope(s), no, or NA]				
	a. Solid Sheathing	< 3:12 & > 7:12	< 3:12 & > 7:12	< 3:12 & > 7:12	< 3:12 & > 7:12
	b. Spaced Sheathing	NA	NA	NA	NA
	2. Nailing Requirements, Field Tiles				
	a. Solid/Spaced Sheathing With Battens [slope(s) or NA]				
	not required	3:12 TO > 5:12			
	each tile, alternate rows	5:12 TO 12:12	5:12 TO 12:12	5:12 TO 12:12	5:12 TO 12:12
	each tile	12:12 AND OVER	12:12 AND OVER	12:12 AND OVER	12:12 AND OVER
	b. Solid/Spaced Sheathing Without Battens [slope(s) or NA]				
	not required				
	each tile, alternate rows				
	each tile	ALL	ALL	ALL	ALL
9.	YEAR PRODUCT FIRST SOLD				
10.	NUMBER OF SQUARES INSTALLED	> 200,000	> 200,000	> 200,000	> 500,000
11.	DISTRIBUTION				
	Distributors (number handling product or no)				
	Direct (number of regional service locations or no)	2	1	1	10
12.	ACCEPTED BY THE FOLLOWING CODES	ICBO (2093)	ICBO (2093), SBCCI, BOCA METRO-DADE CNTY	ICBO (2093), SBCCI, BOCA METRO-DADE CNTY	ICBO (2093), SBCCI, BOCA METRO-DADE CNTY
13A.	FOR SALES INFORMATION, CONTACT	D. HUISKEN 714/756-1605	D. HUISKEN 714/756-1605	D. HUISKEN 714/756-1605	D. HUISKEN 714/756-1605
13B.	FOR TECHNICAL INFORMATION, CONTACT	D. HUISKEN 714/756-1605	D. HUISKEN 714/756-1605	D. HUISKEN 714/756-1605	D. HUISKEN 714/756-1605
14.	SEE APPENDIX IF CHECKED				

NA=not applicable

# Concrete Tile

MONIER LIFETILE	MONIER LIFETILE					
ROMA	ROMA	SLATE	HOMESTEAD	HOMESTEAD	SPLIT SHAKE	VANGUARD ROLL
X	X					X
		X				
			X	X	X	
NO	NO	NO	YES	YES	YES	YES
SURFACE	THROUGH-COLOR	THROUGH-COLOR	SURFACE	THROUGH-COLOR	THROUGH-COLOR	THROUGH-COLOR
12	15	5	12	36	5	17
NATIONAL	NATIONAL	NATIONAL	NATIONAL	NATIONAL	NATIONAL	REGIONAL
YES	NO	NO	YES	YES	YES	YES
YES	YES	YES	YES	YES	YES	YES
16 1/2 X 13	16 1/2 X 13					
3	3	3	3	3	3	3
13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	14
90	90	90	90	90	90	90
800	800	800	900	900	900	810
3:12	3:12	3:12	3:12	3:12	3:12	3:12
30-OR 40-LB FELT	43-LB BASE SHEET					
< 3:12	< 3:12	< 3:12	< 3:12	< 3:12	< 3:12	2:12
30-LB FELT + 90-LB. FELT, NAILED, SOLID MOPPED	30-LB FELT + 90-LB. FELT, NAILED, SOLID MOPPED	30-LB FELT + 90-LB. FELT, NAILED, SOLID MOPPED	30-LB FELT + 90-LB. FELT, NAILED, SOLID MOPPED	30-LB FELT + 90-LB. FELT, NAILED, SOLID MOPPED	30-LB FELT + 90-LB. FELT, NAILED, SOLID MOPPED	30-LB FELT + 90-LB FELT, HOT MOPPED
X	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X	
< 3:12 & > 7:12	< 3:12 & > 7:12	< 3:12 & > 7:12	< 3:12 & > 7:12	< 3:12 & > 7:12	< 3:12 & > 7:12	> 7:12
NA	NA	NA	NA	NA	NA	NA
3:12 TO > 5:12						
5:12 TO 12:12						
12:12 AND OVER	ALL					
ALL	ALL	ALL	ALL	ALL	ALL	ALL
1965	1985	1972	1978	1978	1980	1988
> 200,000	400,000	800,000	> 1.5 MILLION	> 1.5 MILLION	> 100,000	50,000
3	3	10	10	10	3	4
ICBO (2093)	ICBO (2093)	ICBO (2093), SBCCI, BOCA METRO-DADE CNTY	SBCCI, METRO-DADE COUNTY			
D. HUISKEN 714/756-1605	D. BALDWIN 407/338-8200					
D. HUISKEN 714/756-1605	R. MOODY 407/338-8200					

# Concrete Tile

1.	COMPANY NAME	MONIER LIFETILE	MONIER LIFETILE	MONIER LIFETILE	MONIER LIFETILE
2.	PRODUCT NAME	VANGUARD FLAT	VANGUARD FLAT	BERMUDA FLAT	BERMUDA FLAT
3.	TILE TYPE				
	"S" (SPANISH) MISSION BARREL				
	DOUBLE "S"				
	FLAT, SHINGLE- (SLATE-) SHAPE	X			X
	FLAT, SHAKE-SHAPE		X	X	
	FLAT, RIBBED				
4.	TILE DESCRIPTION				
	Textured (yes or no )	YES	NO	YES	YES
	Color Production (surface or through-color)	THROUGH-COLOR	THROUGH-COLOR	THROUGH-COLOR	SURFACE
	Number Of Colors Available	10	10	50	1
	Color Availability (regional/national)	REGIONAL	REGIONAL	REGIONAL	REGIONAL
	Custom Colors/Blens AvailableE (yes/no)	NO	NO	YES	
5.	ACCESSORY TILES AVAILABLE [e.g., ridge, hip, starter] (yes/no)	YES	YES	YES	YES
6.	DIMENSIONS AND COVERAGE				
	Tile Dimensions (inches x inches)	16 1/2 X 13	16 1/2 X 13	16 X 9	16 X 9
	Minimum Headlap (inches)			2	2
	Exposure (inches)			14	14
	Pieces Per Roof Square			120	120
	Weight Per Roof Square (pounds)	990	990	960	960
7.	SLOPE/UNDERLAYMENT RECOMMENDATIONS				
	Minimum Slope Recommended For Normal Application (inches per foot)	3:12	3:12	3:12	3:12
	Underlayment Recommended In Normal Application	43-LB BASE SHEET	43-LB BASE SHEET	30-LB FELT + 90-LB FELT, HOT MOPPED	30-LB FELT + 90-LB FELT, HOT MOPPED
	Minimum Slope Recommended For Speical Application (inches per foot)	2:12	2:12	2:12	2:12
	Underlayment Recommended In Special Application	30-LB FELT + 90-LB FELT, HOT MOPPED			
8A.	RECOMMENDED DECKS AND FASTENING REQUIREMENTS				
	DECK TYPES				
	Solid Sheathing	X	X	X	X
	Spaced Sheathing				
8B.	DECK MATERIAL				
	Plywood/Wood	X	X	X	X
	Oriented Strand Board				
	Waferboard				
	Other (specify)				
8C.	FASTENING REQUIREMENTS				
	1. Battens Required [at given slope(s), no, or NA]				
	a. Solid Sheathing	> 7:12	> 7:12	> 7:12	> 7:12
	b. Spaced Sheathing				
	2. Nailing Requirements, Field Tiles				
	a. Solid/Spaced Sheathing With Battens [slope(s) or NA]				
	not required				
	each tile, alternate rows				
	each tile	ALL	ALL	NA	NA
	b. Solid/Spaced Sheathing Without Battens [slope(s) or NA]				
	not required				
	each tile, alternate rows				
	each tile	ALL	ALL	NA	NA
9.	YEAR PRODUCT FIRST SOLD	1988	1988	1958	1958
10.	NUMBER OF SQUARES INSTALLED	15,000	15,000	> 3 MILLION	> 1 MILLION
11.	DISTRIBUTION				
	Distributors (number handling product or no)				
	Direct (number of regional service locations or no)	4	4	4	4
12.	ACCEPTED BY THE FOLLOWING CODES	SBCCI, METRO-DADE COUNTY	SBCCI, METRO-DADE COUNTY	SBCCI, METRO-DADE COUNTY	SBCCI, METRO-DADE COUNTY
13A.	FOR SALES INFORMATION, CONTACT	D. BALDWIN 407/338-8200	D. BALDWIN 407/338-8200	D. BALDWIN 407/338-8200	D. BALDWIN 407/338-8200
13B.	FOR TECHNICAL INFORMATION, CONTACT	R. MOODY 407/338-8200	R. MOODY 407/338-8200	R. MOODY 407/338-8200	R. MOODY 407/338-8200
14.	SEE APPENDIX IF CHECKED			X	X

NA=not applicable

# Concrete Tile

MONIER LIFETILE	WESTILE LITTLETON, CO	WESTILE LITTLETON, CO				
BARREL	BARREL	SPANISH "S"	SPANISH "S"	CEDARLITE	SLATE	FEATHER-STONE SLATE / SHAKE
X	X	X	X			
					X	X
				X		X
YES	NO	NO	YES	YES	NO	YES
THROUGH-COLOR	THROUGH-COLOR	THROUGH-COLOR	THROUGH-COLOR	THROUGH-COLOR	THROUGH-COLOR	THROUGH-COLOR
20	20	50	50	4	18	8
REGIONAL	REGIONAL	REGIONAL	REGIONAL	NATIONAL	REGIONAL	REGIONAL
YES		YES	YES	YES	YES	YES
YES		YES	YES	YES	NO	NO
18 X 9	18 X 19	16 X 9	16 X 9	13 1/2 X 13 1/2	13 X 16 1/2	13 X 16 1/2
2 1/2	2 1/2	2 1/2	2 1/2	3	3	3
15 1/2	15 1/2	13 1/2	13 1/2	10	13 1/2	13 1/2
140	140	105	105	120	88	88
1,050	1,050	890	890	< 600	950	690
3:12	3:12	3:12	3:12	3:12	3:12	3:12
30-LB FELT + 90-LB FELT, HOT MOPPED	30-LB FELT + 90-LB FELT, HOT MOPPED	43-LB BASE SHEET	43-LB BASE SHEET	30-LB FELT	30-LB FELT	30-LB FELT
2:12	2:12	2:12	2:12	< 3:12	< 3:12	< 3:12
30-LB FELT + 90-LB FELT, HOT MOPPED	2 30-LB FELTS NAILED AND SOLID MOPPED	2 15-LB HOT MOPPED & COUNTER BATTS	2 15-LB HOT MOPPED & COUNTER BATTS			
X	X	X	X	X	X	X
X	X	X	X	X	X	X
				X		
> 7:12	> 7:12	> 7:12	> 7:12	NA	7:12 ABOVE	7:12 ABOVE
				NA	NA	NA
NA	NA	ALL	ALL	NA	3:12 TO >5:12 5:12 TO >12:12 12:12 AND OVER	ALL PITCHES
					NA	NA
					NA	NA
NA	NA	ALL	ALL	ALL	NA	NA
1958	1958	1965	1965	1995	1982	1993
> 1 MILLION	> 1 MILLION	> 1 MILLION	> 1 MILLION	150,000		
				200	60	62
4	4	4	4	NO	NO	NO
SBCCI, METRO-DADE COUNTY	SBCCI, METRO-DADE COUNTY	SBCCI, METRO-DADE COUNTY	SBCCI, METRO-DADE COUNTY	ICBO 2093 SCCI, SFBC	ICBO 3984	ICBO 3984
D. BALDWIN 407/338-8200	D. BALDWIN 407/338-8200	D. BALDWIN 407/338-8200	D. BALDWIN 407/338-8200	M. SUZANSKI 714/756-1605		
R. MOODY 407/338-8200	R. MOODY 407/338-8200	R. MOODY 407/338-8200	R. MOODY 407/338-8200	D. HUISKEN 714/756-1605	G. MANLOVE 800/433-8453	G. MANLOVE 800/433-8453
X	X					

# Concrete Tile

1.	COMPANY NAME	WESTILE LITTLETON, CO	WESTILE LITTLETON, CO	WESTILE LITTLETON, CO	WESTILE CASA GRANDE, AZ
2.	PRODUCT NAME	SERIES #2000 DOUBLE ROMAN	SHAKE	DOUBLE NOTCHED	DUBLIN SLATE
3.	TILE TYPE				
	"S" (SPANISH) MISSION BARREL				
	DOUBLE "S"	X			
	FLAT, SHINGLE- (SLATE-) SHAPE			X	X
	FLAT, SHAKE-SHAPE		X	X	
	FLAT, RIBBED				
4.	TILE DESCRIPTION				
	Textured (yes or no)	NO	YES		NO
	Color Production (surface or through-color)	THROUGH-COLOR	THROUGH-COLOR	THROUGH-COLOR	SURFACE / CT
	Number Of Colors Available	12	6	24	
	Color Availability (regional/national)	REGIONAL	REGIONAL	REGIONAL	REGIONAL
	Custom Colors/Blens AvailableE (yes/no)	YES	NO	NO	NO
5.	ACCESSORY TILES AVAILABLE [e.g., ridge, hip, starter] (yes/no)	NO	NO	YES	YES
6.	DIMENSIONS AND COVERAGE				
	Tile Dimensions (inches x inches)	13 X 16 1/2	13 X 16 1/2	13 X 16 1/2	17 X 12 3/8
	Minimum Headlap (inches)	3	3	4 1/2	3
	Exposure (inches)	13 1/2	13 1/2	12	14
	Pieces Per Roof Square	90	88	100	94
	Weight Per Roof Square (pounds)	900	950	1050	1080
7.	SLOPE/UNDERLAYMENT RECOMMENDATIONS				
	Minimum Slope Recommended For Normal Application (inches per foot)	3:12	3:12	8:12 ABOVE	3:12
	Underlayment Recommended In Normal Application	30-LB FELT	30-LB FELT	30-LB FELT	30-LB FELT
	Minimum Slope Recommended For Speical Application (inches per foot)	<3:12	<3:12		<3:12
	Underlayment Recommended In Special Application	2 15-LB HOT MOPPED & COUNTER BATTS	2 15-LB HOT MOPPED & COUNTER BATTS		2 15-LB HOT MOPPED & COUNTER BATTS
8A.	RECOMMENDED DECKS AND FASTENING REQUIREMENTS				
	DECK TYPES				
	Solid Sheathing	X	X	X	X
	Spaced Sheathing				
8B.	DECK MATERIAL			X	X
	Plywood/Wood	X	X		X
	Oriented Strand Board				
	Waferboard				
	Other (specify)				
8C.	FASTENING REQUIREMENTS				
	1. Battens Required [at given slope(s), no, or NA]				
	a. Solid Sheathing	7:12 ABOVE	7:12 ABOVE	X	<3:12 & >7:12
	b. Spaced Sheathing	NA	NA		NA
	2. Nailing Requirements, Field Tiles				
	a. Solid/Spaced Sheathing With Battens [slope(s) or NA]				
	not required	3:12 TO >5:12	3:12 TO >5:12	NA	3:12 TO >5:12
	each tile, alternate rows	5:12 TO >12:12	5:12 TO >12:12		5:12 TO > 12:12
	each tile	12:12 AND OVER	12:12 AND OVER		12:12 AND OVER
	b. Solid/Spaced Sheathing Without Battens [slope(s) or NA]				
	not required	NA	NA	NA	
	each tile, alternate rows	NA	NA	NA	
	each tile	NA	NA	NA	3:12 & ABOVE
9.	YEAR PRODUCT FIRST SOLD	1982	1982	1998	1999
10.	NUMBER OF SQUARES INSTALLED				
11.	DISTRIBUTION				
	Distributors (number handling product or no)	60	60	60	60
	Direct (number of regional service locations or no)				NO
12.	ACCEPTED BY THE FOLLOWING CODES	ICBO 3984	ICBO 3984	ICBO 3984	ICBO 3984
13A.	FOR SALES INFORMATION, CONTACT				
13B.	FOR TECHNICAL INFORMATION, CONTACT	G. MANLOVE 800/433-8453	G. MANLOVE 800/433-8453	G. MANLOVE 800/433-8453	T. HUMPHREY 800/562-8500
14.	SEE APPENDIX IF CHECKED				

NA=not applicable

# Concrete Tile

WESTILE CASA GRANDE, AZ	WESTILE CASA GRANDE, AZ	WESTILE CASA GRANDE, AZ	WESTILE FT LAUDERDALE, FL	WESTILE FT LAUDERDALE, FL	WESTILE CORONA, CA	WESTILE CORONA, CA
DUBLIN SHAKE	CORONADA	SIERRA MISSION	VERONA	SLATE	SLATE	SHAKE
		X				
	X		X			
				X	X	
X						X
YES CT	NO SURFACE / CT	NO SURFACE / CT	NO SURFACE / CT	NO SURFACE / CT	NO SURFACE / CT	NO SURFACE / CT
REGIONAL NO	REGIONAL NO	REGIONAL NO	REGIONAL NO	REGIONAL NO	REGIONAL NO	REGIONAL NO
YES	YES	YES	YES	YES		
17 X 12 3/8 3 14 94 1080	17 X 12 3/8 3 14 94 980	17 X 12 3/8 3 14 89 390	13 X 16 1/2 3 13 1/2 90 850	13 X 16 1/2 3 13 1/2 90 1050	13 X 16 1/2 3 13 1/2 90 1035	13 X 16 1/2 3 13 1/2 90 1035
3:12 30-LB FELT	3:12 30-LB FELT	3:12 30-LB FELT	3:12 30 OR 40-LB FELT	3:12 30 OR 40-LB FELT	3:12 30 LB FELT	3:12 30 LB FELT
<3:12	<3:12	<3:12	<3:12	<3:12	<3:12	<3:12
2 15-LB HOT MOPPED & COUNTER BATTS	2 15-LB HOT MOPPED & COUNTER BATTS	2 15-LB HOT MOPPED & COUNTER BATTS	30-LB & 90-LB FELT NAILED, SOLID MOPPED	30-LB & 90-LB FELT NAILED, SOLID MOPPED	2 15-LB FELTS MOPPED & COUNTER BATTS	2 15-LB FELTS MOPPED & COUNTER BATTS
X	X	X	X	X	X	X
X X	X X	X X	X X	X X	X X	X X
<3:12 & >7:12 NA	<3:12 & >7:12 NA	<3:12 & >7:12 NA	<3:12 & >7:12 NA	<3:12 & >7:12 NA	<3:12 & >7:12 NA	<3:12 & >7:12 NA
3:12 TO >5:12	3:12 TO >5:12	3:12 TO >5:12	3:12 TO >5:12 5:12 TO 12:12 12:12 AND ABOVE	3:12 TO >5:12 5:12 TO 12:12 12:12 AND ABOVE	<3:12 TO >5:12 5:12 TO 12:12 12:12 AND ABOVE	<3:12 TO >5:12 5:12 TO 12:12 12:12 AND ABOVE
3:12 & ABOVE 1999	3:12 & ABOVE 1999	3:12 & ABOVE 1999	1999	1999	1999	1999
60 NO	60 NO	60 NO	6	6		
ICBO 3984	ICBO 3984	ICBO 3984	SBCCI METRO-DADE COUNTY, FL	SBCCI METRO-DADE COUNTY, FL	ICBO 3984	ICBO 3984
T. HUMPHREY 800/562-8500	T. HUMPHREY 800/562-8500	T. HUMPHREY 800/562-8500	F. FERRER 800/938-8453	F. FERRER 800/938-8453		

# Concrete Tile

1.	COMPANY NAME	WESTILE CORONA, CA	WESTILE CORONA, CA
2.	PRODUCT NAME	VERONA	MISSION
3.	TILE TYPE		
	"S" (SPANISH) MISSION BARREL		
	DOUBLE "S"	X	
	FLAT, SHINGLE- (SLATE-) SHAPE		
	FLAT, SHAKE-SHAPE		
	FLAT, RIBBED		
4.	TILE DESCRIPTION		
	Textured (yes or no)	NO	NO
	Color Production (surface or through-color)	SURFACE / CT	SURFACE / CT
	Number Of Colors Available	24	
	Color Availability (regional/national)	REGIONAL	REGIONAL
	Custom Colors/Blens AvailableE (yes/no)	NO	NO
5.	ACCESSORY TILES AVAILABLE [e.g., ridge, hip, starter] (yes/no)		
6.	DIMENSIONS AND COVERAGE		
	Tile Dimensions (inches x inches)	13 X 16 1/2	13 X 16 1/2
	Minimum Headlap (inches)	3	3
	Exposure (inches)	13 1/2	13 1/2
	Pieces Per Roof Square	90	90
	Weight Per Roof Square (pounds)	850	945
7.	SLOPE/UNDERLAYMENT RECOMMENDATIONS		
	Minimum Slope Recommended For Normal Application (inches per foot)	3:12	3:12
	Underlayment Recommended In Normal Application	30 LB FELT	30 LB FELT
	Minimum Slope Recommended For Speical Application (inches per foot)	<3:12	<3:12
	Underlayment Recommended In Special Application	2 15-LB FELTS HOT MOPPED & COUNTER BATTS	2 15-LB FELTS HOT MOPPED & COUNTER BATTS
8A.	RECOMMENDED DECKS AND FASTENING REQUIREMENTS		
	DECK TYPES		
	Solid Sheathing	X	X
	Spaced Sheathing		
8B.	DECK MATERIAL	X	X
	Plywood/Wood	X	X
	Oriented Strand Board		
	Waferboard		
	Other (specify)		
8C.	FASTENING REQUIREMENTS		
	1. Battens Required [at given slope(s), no, or NA]		
	a. Solid Sheathing	<3:12 & >7:12	<3:12 & >7:12
	b. Spaced Sheathing	NA	NA
	2. Nailing Requirements, Field Tiles		
	a. Solid/Spaced Sheathing With Battens [slope(s) or NA]		
	not required	<3:12 TO >5:12	<3:12 TO >5:12
	each tile, alternate rows	5:12 TO 12:12	5:12 TO 12:12
	each tile	12:12 AND ABOVE	12:12 AND ABOVE
	b. Solid/Spaced Sheathing Without Battens [slope(s) or NA]		
	not required		
	each tile, alternate rows		
	each tile		
9.	YEAR PRODUCT FIRST SOLD	1999	1999
10.	NUMBER OF SQUARES INSTALLED		
11.	DISTRIBUTION		
	Distributors (number handling product or no)		
	Direct (number of regional service locations or no)		
12.	ACCEPTED BY THE FOLLOWING CODES	ICBO 3984	ICBO 3984
13A.	FOR SALES INFORMATION, CONTACT		
13B.	FOR TECHNICAL INFORMATION, CONTACT		
14.	SEE APPENDIX IF CHECKED		

NA=not applicable

# Appendix

## CLAY/CONCRETE TILE

### Daniel Platt Ltd.

A range of English style shingle tiles, Triton smooth machine finished or handcrafted which are irregular and distressed.

A full range of fittings available such as valley tiles and Arris style hip tiles. These tiles can be laid directly to the deck or on a double batten system. Custom sizes and finishes available.

### Huguenot Fenal

A wide range of profiled tiles are offered, especially flat interlocking such as the Beauvoise with a 1/2" butt or Valoise with a 1-1/2" Abook style butt.

All pressed tiles are deep side and headlocks for maximum weather protection and fast installation. These tiles can be laid straight to the deck but a double batten seam is recommended.

The Phalempin range of shingle tiles offers a double water channel and the Tradition range has a textured multi-color blend finish.

### Ludowici Roof Tile, Inc.

A large range of standard tiles and historical patterns are available in a variety of surface finishes, in 47 colors. Ludowici also has custom color matching capabilities for all tiles and trim items produced. All tile patterns and styles are available with trim fittings for nearly every roof configuration.

All tiles are impervious to freeze-thaw cycles, heat, moisture, efflorescence, and meet or exceed ASTM C 1167-96, Grade 1, and most have Metro-Dade County and ICBO approvals. The tiles have an average of 1% or less water absorption.

Ludowici's design department specializes in conical roof application developed specifically per each individual roof.

### M.C.A. Clay Roof Tile

All tiles manufactured by M.C.A. have an ASTM Grade 1 rating and are available in a wide variety of flashed, glazed, custom and blended colors. Oriental tile is a low-profile AS-shaped tile. Turret Tile are custom-size barrel tile that graduate in size to fit any size and pitch of turret. The manufacturer designs each system according to the individual turret roof or fan-shaped application.

### Monier Lifetile

MidSpan Battens are required at all pitches on Trulite flat tile. Bermuda Flat tiles and Barrel tile are mortar set only products. Cedarlite requires one screw, or, two fasteners per tile.

### Sandtoft Roof Tiles Ltd.

England's largest independent clay tile manufacturer. New profiles available, all pressed with side and headlocks for maximum weather protection and fast installation.

The Goxhill handmade shingle tile replicates the Tudor/Elizabethan look.

All tiles can be laid directly to the deck but a double batten system is always recommended.

### TBF

France's largest clay tile manufacturer. All tiles are pressed, with deep side and headlocks for maximum weather protection.

Weathered color blends available, premixed in the pallet with a vast range of fittings.

Although tiles can be laid directly to the deck, a double batten system is recommended.

### Tuilerie de Pontigny Aleonard

Shingle style clay tiles, hand finished in the old fashioned French way, Patrimony tiles are available in a three size, three color blend for the instant old ACountry Cottage look.

Monument Historique tile is available in up to 5 sizes all with an aged weathered look. All tiles are best installed on a double batten system. Custom fittings as well as turret tiles are available.

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## Section 4

*Steep-Slope Roofing  
Materials Guide*

**2000**

*Metal Panels*

## Information on Section 4: Metal Panels

### General Information

Section 4: Metal Panels in the 2000 edition of NRCA's *Steep-Slope Roofing Materials Guide* is a comprehensive listing of metal panel products commonly used in steep-slope roofing.

Metal panel roof systems are traditionally divided into two categories: structural metal panels and architectural metal panels. Generally, structural metal panel roof systems are installed on low-slope roofs, that is roofs with slopes less than 3:12 (14 degrees). Architectural metal panel roof systems are generally installed on steep-slope roof systems, that is roofs with slopes of 3:12 (14 degrees) or greater. Structural metal panel roof systems can support structural loads without being applied over separate roof decks. Architectural metal panel roof systems are applied over structural roof decks that resist structural loads.

Information on metal panel roof systems, both structural metal panels and architectural metal panels, used in steep-slope roof assemblies is contained in the guide.

### Specific Information Included in the Guide

Specific listing information for metal panel products is as follows:

1. Company name
2. Product name
3. Configuration
4. System recommendations
5. Panel configuration
6. Individual component configuration
7. Manufacturer/product data
8. ASTM E 331 water penetration
9. ASTM E 283 air infiltration
10. UL fire ratings for any specification (UL 790)
11. FM/UL wind uplift ratings

Additional information regarding metal panel roof systems is provided in *The NRCA Metal Roofing Manual* or *The NRCA Roofing and Waterproofing Manual, Fourth Edition*.

# Index to Metal Panels

Metal Panels	
<b>ARS INDUSTRIES, INC.</b> 9609 Parkway East, Suite E Birmingham, AL 35215 205/836-6777 FAX: 205/836-4090 E-mail: Web:	166
<b>ATAS INTERNATIONAL INC.</b> 6612 Snowdrift Road Allentown, PA 18106 610/395-8445 FAX: 610/395-9342 E-mail: info@atas.com Web:	166
<b>BERRIDGE MANUFACTURING CO.</b> 1720 Maury Street Houston, TX 77026 713/223-4971 FAX: 713/236-9422 E-mail: sales@berridge.com Web:	169
<b>CLASSIC PRODUCTS, INC.</b> P.O. Box 701 Piqua, OH 45356 800/543-8938 FAX: 937/773-9261 E-mail: info@classicroof.com Web:	171
<b>DECRA ROOFING SYSTEM/ TASMAN ROOFING, INC.</b> 1230 Railroad Street Corona, CA 91720 909/272-8180 FAX: 909/272-4476 E-mail:	173
<b>DURA-LOC ROOFING SYSTEMS</b> Box 220 Courtland, ON CANADA N0J 1E0 519/688-2200 FAX: 519/688-2201 E-mail:	173
<b>GERARD ROOFING TECHNOLOGIES</b> 955 Columbia Street Brea, CA 92821-2923 714/529-0407 or 800/23-roofs FAX: 714/529-6643 E-mail: info@gerardusa.com Web:	175

Metal Panels	
<b>MBCI</b> P.O. Box 38217 Houston, TX 77238 281/445-8555 FAX: 281/445-1791 E-mail: Web: www.mbc.com	176
<b>MCELROY METAL CO.</b> 1500 Hamilton Road Bossier City, LA 71111 318/747-8000 FAX: 318/747-8029 E-mail: dowens@softdisk.com Web:	177
<b>METAL SALES MFG. GROUP</b> 7800 Satte Road 60 Sellersburg, IN 47172 812/246-0819 FAX: 812/246-0829 E-mail: Web: www.mtlsales.com	179
<b>MET-TILE INC.</b> P.O. Box 4268 Ontario, CA 91761 909/947-0311 FAX: 909/947-1510 E-mail: met-tile@met-tile.com Web: www.met-tile.com/roof	181
<b>OWENS CORNING</b> One Owens Corning Parkway Toledo, OH 43659 419/248-8000 FAX 419/248-7354 E-mail: owenscorning.com Web:	181
<b>PERFECTION, THE VERY BEST IN BUILDING PRODUCTS</b> P.O. Box 1524 Piqua, OH 45356 888/788-2427 or 937/778-5117 FAX: 937/778-5116 E-mail: info@perfectionusa.com	182
<b>PETERSEN ALUMINUM CORP.</b> 1005 Tonne Road Elk Grove, IL 60007 800/323-1960 FAX: 800/722-7150 E-mail: Web: www.pac-clad.com	183

# Index to Metal Panels

Metal Panels

<b>SPRINGHOUSE INC.</b> 97 Thames Road, East Exeter, ON CANADA N0M 1S3 519/235-1566 FAX: 519/235-2852 E-mail:	186
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Metal Panels

<b>VINCENT METAL GOODS</b> 455 85th Avenue NW P.O. Box 360 Minneapolis, MN 55433 612/717-9000 FAX: 612/717-7184 E-mail:	187
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# Metal Panels

1. COMPANY NAME	ARS INDUSTRIES, INC.	ATAS INTERNATIONAL INC.
2. PRODUCT NAME	SSC	PC SNAP-ON SEAM/BATTEN
3. CONFIGURATION		
3.1 STYLE		
A. Simulated Shingle (specific type if applicable)		
B. Simulated Shake (specific type if applicable)		
C. Simulated Slate (specific type if applicable)		
D. Simulated Tile (specific type if applicable)		
E. Other (specify type)	SNAP-ON BATTEN STANDING SEAM	SNAP-ON SEAM/SNAP-ON BATTEN STANDING SEAM
3.2 COMPONENT TYPE AND SIZE		
A. Panel [width (in.), maximum length (ft.)]	12, 16, 18, 20, 24 X 50	12-1/2, 15-1/4 X 65
B. Individual (dimensions: inches x inches)		
3.3 MATERIALS, THICKNESSES, AND FINISHES		
GALVANIZED STEEL (ga.):	Thicknesses 22, 26 Finishes KYNAR 500, SILICON POLYESTER, MILL	24 KYNAR 500
STAINLESS STEEL (ga.)	Thicknesses 22, 26 Finishes KYNAR 500, SILICON POLYESTER, MILL	
GALVALUME (ga.)	Thicknesses 22, 26 Finishes KYNAR 500, SILICON POLYESTER, MILL	
ALUMINIZED STEEL (ga.)	Thicknesses 22, 26 Finishes KYNAR 500, SILICON POLYESTER, MILL	
ALUMINUM (in.)	Thicknesses 0.19, 0.32, 0.40 Finishes KYNAR 500, SILICON POLYESTER, MILL	0.032, 0.040 KYNAR 500
COPPER (oz.)	Thicknesses 16, 20 Finishes MILL	16 --
TERNE METAL (ga.)	Thicknesses 22, 26 Finishes MILL	
ZINC (ga.)	Thicknesses -- Finishes --	
4. SYSTEMS RECOMMENDATIONS		
Min. Slope Recommended In Normal Application (in. per ft.)	3:12	3:12
Min. Slope Recommended In Special Application (in. per ft.)	--	3:12
DECK TYPES		
Solid Deck, Wood	X	X
Spaced Sheathing, Wood	X	
Decking Not Required	X	
Underlayment Recommended (type or NA)	30 LB. FELT OR EQUIVALENT	30 LB. FELT
5. PANEL CONFIGURATION (For components in item 3.2A above; for individual components, see item 6.)		
5.1 INTERLOCKING METHOD, HEIGHT (inches), AND SEAM SEALANT	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)
Overlapped		
Interlocked		
Slip Locked	1 / F, E	
Snap Together		1-1/4 / N
5.2 FASTENING METHOD		
Through Fastened (exposed or concealed, specify)		
Clip (exposed or concealed, specify)	CONCEALED	CONCEALED
6. INDIVIDUAL COMPONENT CONFIGURATION (For components in item 3.2B above; for panels, see item 5.)		
6.1 DIMENSIONS		
Weight Per Roof Square (pounds)		
Exposure (inches)		
Coverage (approx. no. of pieces per square at listed exposure)		
6.2 INSTALLATION PROCESSING		
Through-Fastened (exposed or concealed, specify)		
Kind(s) Of Fastener Required (nails, staples, screws, NA)		
Number Of Fasteners Per Piece (number or NA)		
Seam Snap-In Or Interlock (specify or NA)		
Adhesive/Sealant Required (yes/no)		
Support Battens Required (yes/no)		
7. MANUFACTURER/PRODUCT DATA		
Year Product First Sold	1980	1979
Number of Squares Installed	1 MILLION +	> 100,000
Method Of Distribution (distributors, direct)	DISTRIBUTORS, DIRECT	DISTRIBUTORS
Number Of Rgional Service Locations	1	2
Licensed Applicator Agreement (yes/no)	YES	NO
For Sales Information, Contact	C. LEVERETT 205/836-6777	J. BUSH 610/395-8446
For Technical Information, Contact	M. WEED 205/836-6777	J. BUSH 610/395-8446
8. ASTM E331 WATER PENETRATION TEST RESULTS (results or none)	--	NONE
9. ASTM E1646 WATER PENETRATION TEST RESULTS (results or none)		
10. ASTM E283 AIR INFILTRATION TEST RESULTS (results or none)	--	NONE
11. ASTM E1680 AIR INFILTRATION TEST RESULTS (results or none)		
10. UL FIRE RATINGS FOR ANY SPECIFICATION (per UL 790)	CLASS A	CLASS A
11. FM/UL WIND UPLIFT RATING FOR ANY SPECIFICATION	--	UL-90
12. SEE APPENDIX IF CHECKED		X

NA=not applicable

# Metal Panels

ATAS INTERNATIONAL INC.	ATAS INTERNATIONAL INC.	ATAS INTERNATIONAL INC.	ATAS INTERNATIONAL INC.
TECHO TILE	DUTCH SEAM MRD	MONARCH ROOF MRB	ADVANTA SHINGLE
			X
SPANISH			
	STANDING SEAM	BATTEN SEAM STANDING SEAM	
39 X 13	11, 15, 19 X 65	12, 16 X 70	1 12 X 26
24 KYNAR 500	24, 22 KYNAR 500	24 KYNAR 500	29 KYNAR 500
0.032 KYNAR 500	0.032, 0.040 KYNAR 500 16 --	0.032, 0.40, 0.50 KYNAR 500	
3:12 3:12	2:12 2:12	2:12 2:12	3:12 3:12
X X	X X X	X X X	X
30 LB. FELT	30 LB. FELT	30 LB. FELT	30 LB. FELT
HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None) 2 / N	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None) 2 / F	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)
	1-1/2 / F		
EXPOSED	CONCEALED	CONCEALED	CONCEALED
			80 12 X 36 33
1992 > 100,000	1991 > 100,000	1979 > 100,000	1999 > 100,000
DISTRIBUTORES 2 NO	DISTRIBUTORES 2 NO	DISTRIBUTORES 2 NO	DISTRIBUTORES 3 YES
J. BUSH 610/395-8446	J. BUSH 610/395-8446	J. BUSH 610/395-8446	J. BUSH 610/395-8446
J. BUSH 610/395-8446	J. BUSH 610/395-8446	J. BUSH 610/395-8446	J. BUSH 610/395-8446
NONE	NO LEAKAGE @ 12 PSF (69 MPH)	--	
NONE	0.08 CFM/ft <sup>2</sup> @ 1.57 PSF (25 MPH)	0.13 CFM PER SQ FT @ 4.00 PSF	
NONE	CLASS A	CLASS A	
NONE	UL-90	UL-90	
X	X	X	X

# Metal Panels

1. COMPANY NAME	ATAS INTERNATIONAL INC.	ATAS INTERNATIONAL INC.
2. PRODUCT NAME	SCANROOF	GRANTILE
3. CONFIGURATION		
3.1 STYLE		
A. Simulated Shingle (specific type if applicable)		
B. Simulated Shake (specific type if applicable)		
C. Simulated Slate (specific type if applicable)		
D. Simulated Tile (specific type if applicable)	SCANDINAVIAN	TILE
E. Other (specify type)		
3.2 COMPONENT TYPE AND SIZE		
A. Panel [width (in.), maximum length (ft.)]	16-1/2 X 13 -10/12	46 X 1.33
B. Individual (dimensions: inches x inches)		
3.3 MATERIALS, THICKNESSES, AND FINISHES		
GALVANIZED STEEL (ga.):	Thicknesses 24 Finishes KYNAR 500	26 STONE COATED
STAINLESS STEEL (ga.)	Thicknesses Finishes	
GALVALUME (ga.)	Thicknesses Finishes	
ALUMINIZED STEEL (ga.)	Thicknesses Finishes	
ALUMINUM (in.)	Thicknesses Finishes	
COPPER (oz.)	Thicknesses Finishes	
TERNE METAL (ga.)	Thicknesses Finishes	
ZINC (ga.)	Thicknesses Finishes	
4. SYSTEMS RECOMMENDATIONS		
Min. Slope Recommended In Normal Application (in. per ft.)	3:12	3:12
Min. Slope Recommended In Special Application (in. per ft.)	2:12	3:12
DECK TYPES		
Solid Deck, Wood	X	X
Spaced Sheathing, Wood	X	X
Decking Not Required	X	
Underlayment Recommended (type or NA)	30 LB. FELT	30 LB. FELT
5. PANEL CONFIGURATION (For components in item 3.2A above; for individual components, see item 6.)		
5.1 INTERLOCKING METHOD, HEIGHT (inches), AND SEAM SEALANT	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)
Overlapped	2 / N	1 / N
Interlocked		
Slip Locked		
Snap Together		
5.2 FASTENING METHOD		
Through Fastened (exposed or concealed, specify)		
Clip (exposed or concealed, specify)	EXPOSED AND CONCEALED	EXPOSED
6. INDIVIDUAL COMPONENT CONFIGURATION (For components in item 3.2B above; for panels, see item 5.)		
6.1 DIMENSIONS		
Weight Per Roof Square (pounds)		
Exposure (inches)		
Coverage (approx. no. of pieces per square at listed exposure)		
6.2 INSTALLATION PROCESSING		
Through-Fastened (exposed or concealed, specify)		
Kind(s) Of Fastener Required (nails, staples, screws, NA)		
Number Of Fasteners Per Piece (number or NA)		
Seam Snap-In Or Interlock (specify or NA)		
Adhesive/Sealant Required (yes/no)		
Support Battens Required (yes/no)		
7. MANUFACTURER/PRODUCT DATA		
Year Product First Sold	1980	1994
Number of Squares Installed	> 100,000	> 100,000
Method Of Distribution (distributors, direct)	DISTRIBUTORS	DISTRIBUTORS
Number Of Rgional Service Locations	2	2
Licensed Applicator Agreement (yes/no)	NO	NO
For Sales Information, Contact	J. BUSH 610/395-8446	J. BUSH 610/395-8446
For Technical Information, Contact	J. BUSH 610/395-8446	J. BUSH 610/395-8446
8. ASTM E331 WATER INFILTRATION TEST RESULTS	--	--
9. ASTM E283 AIR INFILTRATION TEST RESULTS	--	--
10. UL FIRE RATINGS FOR ANY SPECIFICATION (per UL 790)	CLASS A	--
11. FM/UL WIND UPLIFT RATING FOR ANY SPECIFICATION	UL-90	--
12. SEE APPENDIX IF CHECKED	X	X

NA=not applicable

# Metal Panels

ATAS INTERNATIONAL INC.	ATAS INTERNATIONAL INC.	ATAS INTERNATIONAL INC.	BERRIDGE MANUFACTURING CO
PERMA SHAKE	STANDING SEAM SHINGLE	CASTLE TOP	BERMUDA ROOF PANEL
HAND SPLIT			
	STANDING SEAM WITH TRANSVERSE SEAM	DIAMOND SHAPE	"BERMUDA" STYLE HORIZONTAL PLANK
10 X 5	16 X 3-5	16 X 16	11 X UNLIMITED
28 CERAMASTAR 950	29		24 KYNAR 500, HYLAR 5000
			24 KYNAR 500, HYLAR 5000
			24
		0.032 KYNAR 500	
		16	16
		0.02	
3:12	3:12	3:12	3:12
3:12	3:12	3:12	
X	X	X	X
X			X
			X
30 LB. FELT	30 LB. FELT	30 LB. FELT	30 LB. FELT
HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)
1-3/8 / N			1 / F
	1-1/8 / N		
CONCEALED	CONCEALED		CONCEALED
		78	
		NAILS	
		NA	
		NO	
		NO	
1995 > 100,000	1995 > 100,000	1995 > 100	1992 > 10,000
DISTRIBUTORS	DISTRIBUTORS	DISTRIBUTORS	DISTRIBUTORS, DIRECT
2	2	2	7
NO	NO	NO	YES
J. BUSH 610/395-8446	J. BUSH 610/395-8446	J. BUSH 610/395-8446	D. DOYLE 800/231-8127
J. BUSH 610/395-8446	J. BUSH 610/395-8446	J. BUSH 610/395-8446	B. MARKS 800/231-8127
NONE	NONE		NONE
NONE	NONE		NONE
NONE	NONE		CLASS A
NONE	NONE		UL-90
			X

# Metal Panels

1.	COMPANY NAME	BERRIDGE MANUFACTURING CO	BERRIDGE MANUFACTURING CO.
2.	PRODUCT NAME	RUSTIC SHAKE SHINGLE	SPANISH TILE
3.	CONFIGURATION		
3.1	STYLE		
	A. Simulated Shingle (specific type if applicable)		
	B. Simulated Shake (specific type if applicable)	CEDAR SHAKE	
	C. Simulated Slate (specific type if applicable)		
	D. Simulated Tile (specific type if applicable)		SPANISH
	E. Other (specify type)		
3.2	COMPONENT TYPE AND SIZE		
	A. Panel [width (in.), maximum length (ft.)]		9 X 40
	B. Individual (dimensions: inches x inches)	12 X 24	8 X 17
3.3	MATERIALS, THICKNESSES, AND FINISHES		
	GALVANIZED STEEL (ga.):	Thicknesses 24 Finishes KYNAR 500, HYLAR 5000	24 KYNAR 500, HYLAR 5000
	STAINLESS STEEL (ga.)	Thicknesses 24 Finishes	24
	GALVALUME (ga.)	Thicknesses 24 Finishes KYNAR 500, HYLAR 5000	24 KYNAR 500, HYLAR 5000
	ALUMINIZED STEEL (ga.)	Thicknesses Finishes	
	ALUMINUM (in.)	Thicknesses Finishes	
	COPPER (oz.)	Thicknesses 16 Finishes	16
	TERNE METAL (ga.)	Thicknesses Finishes	
	ZINC (ga.)	Thicknesses Finishes	
4.	SYSTEMS RECOMMENDATIONS		
	Min. Slope Recommended In Normal Application (in. per ft.)	3:12	3:12
	Min. Slope Recommended In Special Application (in. per ft.)		
	DECK TYPES*		
	Solid Deck, Wood	X	X
	Spaced Sheathing, Wood	X	X
	Decking Not Required		X
	Underlayment Recommended (type or NA)	30 LB. FELT	NA
5.	PANEL CONFIGURATION (For components in item 3.2A above; for individual components, see item 6.)		
5.1	INTERLOCKING METHOD, HEIGHT (inches), AND SEAM SEALANT	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)
	Overlapped		2 / N
	Interlocked		
	Slip Locked		
	Snap Together		
5.2	FASTENING METHOD		
	Through Fastened (exposed or concealed, specify)		CONCEALED
	Clip (exposed or concealed, specify)		
6.	INDIVIDUAL COMPONENT CONFIGURATION (For components in item 3.2B above; for panels, see item 5.)		
6.1	DIMENSIONS		
	Weight Per Roof Square (pounds)	155	256
	Exposure (inches)	12 X 24	8 X 16
	Coverage (approx. no. of pieces per square at listed exposure)	50	100
6.2	INSTALLATION PROCESSING		
	Through-Fastened (exposed or concealed, specify)	CONCEALED	CONCEALED
	Kind(s) Of Fastener Required (nails, staples, screws, NA)	NAILS	SCREWS
	Number Of Fasteners Per Piece (number or NA)	2	1
	Seam Snap-In Or Interlock (specify or NA)	INTERLOCK	NA
	Adhesive/Sealant Required (yes/no)	NO	NO
	Support Battens Required (yes/no)	NO	NO
7.	MANUFACTURER/PRODUCT DATA		
	Year Product First Sold	1970	1970
	Number of Squares Installed	> 10,000	> 20,000
	Method Of Distribution (distributors, direct)	DISTRIBUTORS, DIRECT	DISTRIBUTORS, DIRECT
	Number Of Rgional Service Locations	7	7
	Licensed Applicator Agreement (yes/no)	YES	YES
	For Sales Information, Contact	D. DOYLE 800/231-8127	D. DOYLE 800/231-8127
	For Technical Information, Contact	B. MARKS 800/231-8127	B. MARKS 800/231-8127
8.	ASTM E331 WATER INFILTRATION TEST RESULTS	NONE	NONE
9.	ASTM E283 AIR INFILTRATION TEST RESULTS	NONE	NONE
10.	UL FIRE RATINGS FOR ANY SPECIFICATION (per UL 790)	CLASS A	CLASS A
11.	FM/UL WIND UPLIFT RATING FOR ANY SPECIFICATION	NONE	NONE
12.	SEE APPENDIX IF CHECKED		

NA=not applicable

# Metal Panels

BERRIDGE MANUFACTURING CO.	BERRIDGE MANUFACTURING CO.	BERRIDGE MANUFACTURING CO.	CLASSIC PRODUCTS, INC.
VICTORIAN SHINGLE	CLASSIC SHINGLE	S-TILE	RUSTIC SHINGLE
FLAT W/ SCULPTURED DESIGN-RESORATION	FLAT W/SCULPTURED DESIGN-RESORATION		X
		S-TILE	
9 X 12	9 X 12	32-11/16 X 40	12 X 24
24 KYNAR 500, HYLAR 5000	24 KYNAR 500, HYLAR 5000	24 KYNAR 500, HYLAR 5000	
24	24		
24 KYNAR 500, HYLAR 5000	24 KYNAR 500, HYLAR 5000	24 KYNAR 500, HYLAR 5000	
			0.019 KYNAR
16	16		
6:12	6:12	3:12	3:12
			3:12
X	X	X	X
		X	
		X	
30 LB. FELT	30 LB. FELT	30 LB. FELT	30 LB. FELT
HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None) - / N	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None) 1-1/2 / E	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)
		EXPOSED	
151	151		40
9 X 12	9 X 12		12 X 24
133	133		50
CONCEALED NAILS	CONCEALED NAILS		CONCEALED NAILS
2	2		2
INTERLOCK	INTERLOCK		INTERLOCK
NO	NO		NO
NO	NO		NO
1970	1970	1993	1960
> 1,000	> 1,000	--	> 750,000
DISTRIBUTORS, DIRECT	DISTRIBUTORS, DIRECT	DISTRIBUTORS, DIRECT	DISTRIBUTORS
7	7	7	--
YES	YES	YES	NO
D. DOYLE 800/231-8127	D. DOYLE 800/231-8127	D. DOYLE 800/231-8127	J. KNIFE 800/543-8938
B. MARKS 800/231-8127	B. MARKS 800/231-8127	B. MARKS 800/231-8127	D. MILLER 800/543-8939
NONE	NONE	NONE	NONE
NONE	NONE	NONE	NONE
CLASS A	CLASS A	CLASS A	CLASS A, B AND C
NONE	NONE	--	NONE

# Metal Panels

1.	COMPANY NAME	CLASSIC PRODUCTS, INC.	CLASSIC PRODUCTS, INC.
2.	PRODUCT NAME	ROUGH SHAKE	CHATEAU SLATE
3.	CONFIGURATION		
3.1	STYLE		
	A. Simulated Shingle (specific type if applicable)		
	B. Simulated Shake (specific type if applicable)	X	
	C. Simulated Slate (specific type if applicable)		X
	D. Simulated Tile (specific type if applicable)		
	E. Other (specify type)		
3.2	COMPONENT TYPE AND SIZE		
	A. Panel [width (in.), maximum length (ft.)]		
	B. Individual (dimensions: inches x inches)	12 X 60	8 X 12
3.3	MATERIALS, THICKNESSES, AND FINISHES		
	GALVANIZED STEEL (ga.):	Thicknesses	28
		Finishes	KYNAR
	STAINLESS STEEL (ga.)	Thicknesses	
		Finishes	
	GALVALUME (ga.)	Thicknesses	
		Finishes	
	ALUMINIZED STEEL (ga.)	Thicknesses	
		Finishes	
	ALUMINUM (in.)	Thicknesses 0.019	0.019 , 0.032
		Finishes KYNAR	KYNAR
	COPPER (oz.)	Thicknesses	12
		Finishes	
	TERNE METAL (ga.)	Thicknesses	
		Finishes	
	ZINC (ga.)	Thicknesses	
		Finishes	
4.	SYSTEMS RECOMMENDATIONS		
	Min. Slope Recommended In Normal Application (in. per ft.)	3:12	3:12
	Min. Slope Recommended In Special Application (in. per ft.)	3:12	3:12
	DECK TYPES		
	Solid Deck, Wood	X	
	Spaced Sheathing, Wood		
	Decking Not Required		
	Underlayment Recommended (type or NA)	30 LB. FELT	30 LB. FELT
5.	PANEL CONFIGURATION (For components in item 3.2A above; for individual components, see item 6.)		
5.1	INTERLOCKING METHOD, HEIGHT (inches), AND SEAM SEALANT	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)
	Overlapped		
	Interlocked		
	Slip Locked		
	Snap Together		
5.2	FASTENING METHOD		
	Through Fastened (exposed or concealed, specify)		
	Clip (exposed or concealed, specify)		
6.	INDIVIDUAL COMPONENT CONFIGURATION (For components in item 3.2B above; for panels, see item 5.)		
6.1	DIMENSIONS		
	Weight Per Roof Square (pounds)	38	45 ALUMINUM; 105 STEEL, COPPER
	Exposure (inches)	12 X 60	8 X 12
	Coverage (approx. no. of pieces per square at listed exposure)	20	132
6.2	INSTALLATION PROCESSING		
	Through-Fastened (exposed or concealed, specify)	CONCEALED	CONCEALED
	Kind(s) Of Fastener Required (nails, staples, screws, NA)	NAILS	NAILS
	Number Of Fasteners Per Piece (number or NA)	5	2
	Seam Snap-In Or Interlock (specify or NA)	INTERLOCK	INTERLOCK
	Adhesive/Sealant Required (yes/no)	NO	NO
	Support Battens Required (yes/no)	NO	NO
7.	MANUFACTURER/PRODUCT DATA		
	Year Product First Sold	1964	1992
	Number of Squares Installed	> 750,000	5,000
	Method Of Distribution (distributors, direct)	DISTRIBUTORS	DISTRIBUTORS
	Number Of Rgional Service Locations	--	--
	Licensed Applicator Agreement (yes/no)	NO	NO
	For Sales Information, Contact	J. KNIFE 800/543-8938	J. KNIFE 800/543-8938
	For Technical Information, Contact	D. MILLER 800/543-8939	D. MILLER 800/543-8939
8.	ASTM E331 WATER INFILTRATION TEST RESULTS	NONE	NONE
9.	ASTM E283 AIR INFILTRATION TEST RESULTS	NONE	NONE
10.	UL FIRE RATINGS FOR ANY SPECIFICATION (per UL 790)	NONE	NONE
11.	FM/UL WIND UPLIFT RATING FOR ANY SPECIFICATION	NONE	NONE
12.	SEE APPENDIX IF CHECKED		

NA=not applicable

# Metal Panels

DECRA ROOFING SYSTEMS/TASMAN ROOFING	DECRA ROOFING SYSTEMS/TASMAN ROOFING	DECRA ROOFING SYSTEMS/TASMAN ROOFING	DURA-LOC ROOFING SYSTEMS
DECRA TILE	DECRA SHAKE	DECRA SLATE	CONTINENTAL
	HAND SPLIT SHAKE		
SPANISH BARREL		SLATE	X
16-1/2 X 52-1/4	13-1/2 X 53	15-1/2 X 51-1/2	16 X 48
26 STONE CHIP	26 STONE CHIP	26 STONE CHIP	0.019 COLORED GRANULES
3:12	3:12	3:12	4:12
2-1/2:12	2-1/2:12	2-1/2:12	2:12
X	X	X	X
X	X	X	X
X	X	X	X
			30 LB.. FELT
HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)
140	140	140	125
14-1/2 X 49-1/2	12-5/8 X 50	12-5/8 X 49-1/4	16
20	22.4	23.1	20
EXPOSED NAIL OR SCREW	EXPOSED NAIL OR SCREW	EXPOSED NAIL OR SCREW	EXPOSED NAILS, SCREWS
4	4	4	3
INTERLOCK	INTERLOCK	INTERLOCK	INTERLOCK
NO	NO	NO	NO
YES	YES	YES	YES
1957	1992	1996	1984
--	--	--	--
DIRECT	DIRECT	DIRECT	DISTRIBUTORS
12	12	12	15
YES	YES	YES	YES
M.R. TWEDEL 817/695-1090	M.R. TWEDEL 817/695-1090	M.R. TWEDEL 817/695-1090	J. WOOD 800/265-9357
J. MILLER 909/292-8180	J. MILLER 909/292-8180	J. MILLER 909/292-8180	J. WIEBE 800/265-9357
--	--	--	NO LEAKAGE @ 12 PSF
--	--	--	NONE
CLASS A, B, C	CLASS A, B, C	--	CLASS A
--	--	--	UL-90
X	X	X	

# Metal Panels

1. COMPANY NAME	DURA-LOC ROOFING SYSTEMS	DURA-LOC ROOFING SYSTEMS
2. PRODUCT NAME	IMPRESSIONS	SHADOWLINE
3. CONFIGURATION		
3.1 STYLE		
A. Simulated Shingle (specific type if applicable)	X	
B. Simulated Shake (specific type if applicable)		
C. Simulated Slate (specific type if applicable)		X
D. Simulated Tile (specific type if applicable)		
E. Other (specify type)		
3.2 COMPONENT TYPE AND SIZE		
A. Panel [width (in.), maximum length (ft.)]		
B. Individual (dimensions: inches x inches)	16 X 48	16 X 48
3.3 MATERIALS, THICKNESSES, AND FINISHES		
GALVANIZED STEEL (ga.):	Thicknesses	
	Finishes	
STAINLESS STEEL (ga.)	Thicknesses	
	Finishes	
GALVALUME (ga.)	Thicknesses 0.015	0.019
	Finishes KYNAR, CLEAR ACRYLIC	COLORED GRANULES
ALUMINIZED STEEL (ga.)	Thicknesses	
	Finishes	
ALUMINUM (in.)	Thicknesses	
	Finishes	
COPPER (oz.)	Thicknesses	
	Finishes	
TERNE METAL (ga.)	Thicknesses	
	Finishes	
ZINC (ga.)	Thicknesses	
	Finishes	
4. SYSTEMS RECOMMENDATIONS		
Min. Slope Recommended In Normal Application (in. per ft.)	4:12	4:12
Min. Slope Recommended In Special Application (in. per ft.)	2:12	2:12
DECK TYPES		
Solid Deck, Wood	X	X
Spaced Sheathing, Wood	X	X
Decking Not Required	X	X
Underlayment Recommended (type or NA)	30 LB.. FELT	30 LB. FELT
5. PANEL CONFIGURATION (For components in item 3.2A above; for individual components, see item 6.)		
5.1 INTERLOCKING METHOD, HEIGHT (inches), AND SEAM SEALANT	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)
Overlapped		
Interlocked		
Slip Locked		
Snap Together		
5.2 FASTENING METHOD		
Through Fastened (exposed or concealed, specify)		
Clip (exposed or concealed, specify)		
6. INDIVIDUAL COMPONENT CONFIGURATION (For components in item 3.2B above; for panels, see item 5.)		
6.1 DIMENSIONS		
Weight Per Roof Square (pounds)	80	125
Exposure (inches)	16	16
Coverage (approx. no. of pieces per square at listed exposure)	20	20
6.2 INSTALLATION PROCESSING		
Through-Fastened (exposed or concealed, specify)	EXPOSED	EXPOSED
Kind(s) Of Fastener Required (nails, staples, screws, NA)	SCREWS	NAILS, SCREWS
Number Of Fasteners Per Piece (number or NA)	5	3
Seam Snap-In Or Interlock (specify or NA)	INTERLOCK	INTERLOCK
Adhesive/Sealant Required (yes/no)	NO	NO
Support Battens Required (yes/no)	NO	YES
7. MANUFACTURER/PRODUCT DATA		
Year Product First Sold	1997	1994
Number of Squares Installed	--	--
Method Of Distribution (distributors, direct)	DISTRIBUTION ONLY	DISTRIBUTORS, DIRECT
Number Of Regional Service Locations	20	15
Licensed Applicator Agreement (yes/no)	NO	YES
For Sales Information, Contact	J. WOOD 800/265-9357	J. WOOD 800/265-9357
For Technical Information, Contact	J. WIEBE 800/265-9357	J. WIEBE 800/265-9357
8. ASTM E331 WATER INFILTRATION TEST RESULTS	NO LEAKAGE	NO LEAKAGE @ 12 PSF
9. ASTM E283 AIR INFILTRATION TEST RESULTS	NONE	NONE
10. UL FIRE RATINGS FOR ANY SPECIFICATION (per UL 790)	CLASS A	CLASS A
11. FM/UL WIND UPLIFT RATING FOR ANY SPECIFICATION	UL-90	UL-90
12. SEE APPENDIX IF CHECKED		

NA=not applicable

# Metal Panels

DURA-LOC ROOFING SYSTEMS	GERARD ROOFING TECHNOLOGIES	GERARD ROOFING TECHNOLOGIES	MBCI
SHAKE	GERARD SHAKE	GERARD TILE	CRAFTSMAN SERIES "HB" PROFILE
THICK SPLIT SHAKE	X		
		X	
			STANDING SEAM: SEPARATE PAN AND BATTEN
16 X 48	44-3/4 X 15-1/2	45-3/4 X 15-1/2	12, 16-1/2 X 40
	26 STONE COATED	26 STONE COATED	
0.019 COLORED GRANULES	26 STONE COATED	26 STONE COATED	22, 24, 26 BARE-SIGNATURE SERIES 200,300, 300 METALLIC
4:12	2-1/2 : 12	2-1/2 : 12	3:12
2:12	2-1/2 : 12	2-1/2 : 12	3:12
X	X	X	X
X	X	X	
X	X	X	
30 LB. FELT	30 LB. FELT	30 LB. FELT	30 LB. FELT
HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)
	1 / N	1 / N	
			2 / F
			CONCEALED
125	140	140	
16	42-3/4 X 14-1/2	43-3/4 X 14-1/2	
20	23.2	22.6	
EXPOSED NAILS, SCREWS	EXPOSED NAILS OR SCREWS	EXPOSED NAILS OR SCREWS	
3	5	5	
INTERLOCK	INTERLOCK	INTERLOCK	
NO	NO	NO	
YES	YES	YES	
1995	1989	1971	1983
--	> 200,000	> 1 MILLION	--
DISTRIBUTORS, DIRECT	DIRECT	DIRECT	DIRECT
5	4	4	21
YES	NO	NO	YES
J. WOOD 800/265-9357	J. T. BROWN 800/841-3213	J. T. BROWN 800/841-3213	W. DICKINSON
J. WIEBE 800/265-9357	J. T. BROWN 800/841-3213	J. T. BROWN 800/841-3213	T. WOLFE
NO LEAKAGE @ 12 PSF	--	--	4 PSF - LEAKAGE RATE / NONE
NONE	--	--	4 PSF - LEAKAGE RATE / 0.035 (16-1/2"), 0.048 (12")
CLASS A	CLASS A, B, C	CLASS A, B, C	--
UL-90			UL-90

# Metal Panels

1. COMPANY NAME		MBCI	MBCI
2. PRODUCT NAME		CRAFTSMAN SERIES "SB" PROFILE	CRAFTSMAN "LB" PROFILE
3. CONFIGURATION			
3.1 STYLE			
A. Simulated Shingle (specific type if applicable)			
B. Simulated Shake (specific type if applicable)			
C. Simulated Slate (specific type if applicable)			
D. Simulated Tile (specific type if applicable)			
E. Other (specify type)		STANDING SEAM: SEPARATE PAN AND BATTEN	STANDING SEAM: SEPARATE PAN AND BATTEN
3.2 COMPONENT TYPE AND SIZE			
A. Panel [width (in.), maximum length (ft.)]		12, 16-1/2 X 40	12, 16-1/2 X 40
B. Individual (dimensions: inches x inches)			
3.3 MATERIALS, THICKNESSES, AND FINISHES			
GALVANIZED STEEL (ga.):		Thicknesses	
		Finishes	
STAINLESS STEEL (ga.)		Thicknesses	
		Finishes	
GALVALUME (ga.)		Thicknesses	22, 24, 26
		Finishes	BARE-SIGNATURE SERIES 200,300, 300 METALLIC
ALUMINIZED STEEL (ga.)		Thicknesses	
		Finishes	
ALUMINUM (in.)		Thicknesses	
		Finishes	
COPPER (oz.)		Thicknesses	
		Finishes	
TERNE METAL (ga.)		Thicknesses	
		Finishes	
ZINC (ga.)		Thicknesses	
		Finishes	
4. SYSTEMS RECOMMENDATIONS			
Min. Slope Recommended In Normal Application (in. per ft.)		3:12	3:12
Min. Slope Recommended In Special Application (in. per ft.)		3:12	3:12
DECK TYPES			
Solid Deck, Wood		X	X
Spaced Sheathing, Wood			
Decking Not Required			
Underlayment Recommended (type or NA)		30 LB. FELT	30 LB. FELT
5. PANEL CONFIGURATION (For components in item 3.2A above; for individual components, see item 6.)			
5.1 INTERLOCKING METHOD, HEIGHT (inches), AND SEAM SEALANT		HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)
Overlapped			
Interlocked			
Slip Locked			
Snap Together		1 / F	2 / F
5.2 FASTENING METHOD			
Through Fastened (exposed or concealed, specify)			
Clip (exposed or concealed, specify)		CONCEALED	CONCEALED
6. INDIVIDUAL COMPONENT CONFIGURATION (For components in item 3.2B above; for panels, see item 5.)			
6.1 DIMENSIONS			
Weight Per Roof Square (pounds)			
Exposure (inches)			
Coverage (approx. no. of pieces per square at listed exposure)			
6.2 INSTALLATION PROCESSING			
Through-Fastened (exposed or concealed, specify)			
Kind(s) Of Fastener Required (nails, staples, screws, NA)			
Number Of Fasteners Per Piece (number or NA)			
Seam Snap-In Or Interlock (specify or NA)			
Adhesive/Sealant Required (yes/no)			
Support Battens Required (yes/no)			
7. MANUFACTURER/PRODUCT DATA			
Year Product First Sold		1983	1983
Number of Squares Installed		--	--
Method Of Distribution (distributors, direct)		DIRECT	DIRECT
Number Of Rgional Service Locations		21	21
Licensed Applicator Agreement (yes/no)		NO	NO
For Sales Information, Contact		W. DICKINSON	W. DICKINSON
For Technical Information, Contact		T. WOLFE	T. WOLFE
8. ASTM E331 WATER INFILTRATION TEST RESULTS		4 PSF - LEAKAGE RATE / NONE	4 PSF - LEAKAGE RATE / NONE
9. ASTM E283 AIR INFILTRATION TEST RESULTS		4 PSF - LEAKAGE RATE / 0.035 (16-1/2"), 0.048 (12")	4 PSF - LEAKAGE RATE / 0.035 (16-1/2"), 0.048 (12")
10. UL FIRE RATINGS FOR ANY SPECIFICATION (per UL 790)		--	--
11. FM/UL WIND UPLIFT RATING FOR ANY SPECIFICATION		UL-90	UL-90
12. SEE APPENDIX IF CHECKED			

NA=not applicable

# Metal Panels

MBCI	MCELROY METAL INC.	MCELROY METAL INC	MCELROY METAL INC.
LOKSEAM	MAXIMA	MERIDIAN	MEDALLION I
STANDING SEAM: VERTICAL LEG PANEL	STANDING SEAM: VERTICAL LEG PANEL	STANDING SEAM	STANDING SEAM: BATTEN CAP
12, 16, 18 X 50	16, 18, 24 X 40		12 X 40
22, 24, 26 BARE-SIGNATURE SERIES 200,300, METALLIC	24 BARE KYNAR 500	26 SILICONIZED POLYESTER, KYNAR 500, BARE	24 SILICONIZED POLYESTER, KYNAR 500, BARE
3:12	1/4 : 12	3:12	3:12
3:12			
X		X	X
X			
X	X		
		30-LB FELT	30 LB. FELT
HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)
1-3/4 / F	2-1/16, 3-1/6 / F	1 / N	1 / N
		CONCEALED	CONCEALED
CONCEALED			
1990	1997	1998	1990
--	--		--
DIRECT	DISTRIBUTORS, DIRECT	DISTRIBUTORS, DIRECT	DISTRIBUTORS, DIRECT
21	20	20	20
NO	NO	NO	NO
W. DICKINSON	K. GIESEKE 800/950-6531	K. GIESEKE 800/950-6531	K. GIESEKE 800/950-6531
T. WOLFE	E. OSTEN 800/950-6531	E. OSTEN 800/950-6531	E. OSTEN 800/950-6531
1.57 PSF-LEAKAGE RATE / NONE	NO LEAKAGE @ 12 PSF		NO LEAKAGE @ 12 PSF
1.57 PSF-LEAKAGE RATE / 0.009 (18"), 0.012 (12"), 0.016 (10")	0.021 CFM/L. FT @ 12 PSF		0.005 @ 1.57 PSF 0.006 CFM/SQ FT @ 6.24 PSF
--	NONE		NONE
UL-90	UL-125		UL-90

# Metal Panels

1. COMPANY NAME	MCELROY METAL INC.	MCELROY METAL INC.
2. PRODUCT NAME	MEDALLION 2	MEDALLION-LOK
3. CONFIGURATION		
3.1 STYLE		
A. Simulated Shingle (specific type if applicable)		
B. Simulated Shake (specific type if applicable)		
C. Simulated Slate (specific type if applicable)		
D. Simulated Tile (specific type if applicable)		
E. Other (specify type)	STANDING SEAM: BATTEN CAP	STANDING SEAM
3.2 COMPONENT TYPE AND SIZE		
A. Panel [width (in.), maximum length (ft.)]	12 X 40	16 X 40
B. Individual (dimensions: inches x inches)		
3.3 MATERIALS, THICKNESSES, AND FINISHES		
GALVANIZED STEEL (ga.):	Thicknesses Finishes	
STAINLESS STEEL (ga.)	Thicknesses Finishes	
GALVALUME (ga.)	Thicknesses Finishes	24 SILICONIZED POLYESTER, KYNAR 500, BARE
ALUMINIZED STEEL (ga.)	Thicknesses Finishes	
ALUMINUM (in.)	Thicknesses Finishes	
COPPER (oz.)	Thicknesses Finishes	
TERNE METAL (ga.)	Thicknesses Finishes	
ZINC (ga.)	Thicknesses Finishes	
4. SYSTEMS RECOMMENDATIONS		
Min. Slope Recommended In Normal Application (in. per ft.)	3:12	3:12
Min. Slope Recommended In Special Application (in. per ft.)		
DECK TYPES		
Solid Deck, Wood	X	
Spaced Sheathing, Wood		
Decking Not Required		X
Underlayment Recommended (type or NA)	30 LB. FELT	
5. PANEL CONFIGURATION (For components in item 3.2A above; for individual components, see item 6.)		
5.1 INTERLOCKING METHOD, HEIGHT (inches), AND SEAM SEALANT	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)
Overlapped		
Interlocked		
Slip Locked		
Snap Together	1-1/2 / N	1-3/4 / F
5.2 FASTENING METHOD		
Through Fastened (exposed or concealed, specify)		
Clip (exposed or concealed, specify)	CONCEALED	CONCEALED
6. INDIVIDUAL COMPONENT CONFIGURATION (For components in item 3.2B above; for panels, see item 5.)		
6.1 DIMENSIONS		
Weight Per Roof Square (pounds)		
Exposure (inches)		
Coverage (approx. no. of pieces per square at listed exposure)		
6.2 INSTALLATION PROCESSING		
Through-Fastened (exposed or concealed, specify)		
Kind(s) Of Fastener Required (nails, staples, screws, NA)		
Number Of Fasteners Per Piece (number or NA)		
Seam Snap-In Or Interlock (specify or NA)		
Adhesive/Sealant Required (yes/no)		
Support Battens Required (yes/no)		
7. MANUFACTURER/PRODUCT DATA		
Year Product First Sold	1990	1993
Number of Squares Installed	--	--
Method Of Distribution (distributors, direct)	DISTRIBUTORS, DIRECT	DISTRIBUTORS, DIRECT
Number Of Rgional Service Locations	20	20
Licensed Applicator Agreement (yes/no)	NO	NO
For Sales Information, Contact	K. GIESEKE 800/950-6531	K. GIESEKE 800/950-6531
For Technical Information, Contact	E. OSTEN 800/950-6531	E. OSTEN 800/950-6531
8. ASTM E331 WATER INFILTRATION TEST RESULTS	NO LEAKAGE @ 12 PSF	NONE
9. ASTM E283 AIR INFILTRATION TEST RESULTS	0.005 @ 1.57 PSF 0.02 CFM/SQ FT @ 6.24 PSF	NONE
10. UL FIRE RATINGS FOR ANY SPECIFICATION (per UL 790)	NONE	NONE
11. FM/UL WIND UPLIFT RATING FOR ANY SPECIFICATION	UL-90	UL-90
12. SEE APPENDIX IF CHECKED		

NA=not applicable

# Metal Panels

MCELROY METAL INC.	METAL SALES MANUFACTURING CORP.	METAL SALES MANUFACTURING CORP.	METAL SALES MANUFACTURING CORP.
MERIDIAN	PRO-LOC I, II, III	STILE	5V CRIPM
		CLAY TILE	
STANDING SEAM	STANDING SEAM: INTEGRAL BATTEN		ARCHITECTURAL
	12, 15, 18 X 40	39.4 X 20	26 X 40
	26 BARE, COLORFAST 25	26 KYNAR 500 (PVF2)	
26 SILICONIZED POLYESTER, KYNAR 500, BARE	24 BARE, KYNAR 500 (PVF2)		26 BARE, COLORFAST 25
3:12	3:12	3:12	3:12
X	X	X	X
30 LB. FELT	30 LB. FELT	30 LB. FELT	30 LB. FELT
HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)
	1-1/2, 1-7/8, 2 / N	1-3/16 / N	1/2 / N
1 / N			
CONCEALED		EXPOSED	EXPOSED
	CONCEALED		
1998	1989	1983	1968
	--	--	--
DISTRIBUTORS, DIRECT	DISTRIBUTORS, DIRECT	DISTRIBUTORS, DIRECT	DISTRIBUTORS, DIRECT
20	12	12	12
NO	--	--	--
K. GIESEKE 800/950-6531	D. CUNNINGHAM	D. CUNNINGHAM	D. CUNNINGHAM
E. OSTEN 800/950-6531	D. KIRCHGESSNER	D. KIRCHGESSNER	D. KIRCHGESSNER
NONE	NONE	NONE	NONE
NONE	NONE	NONE	NONE
NONE	NONE	CLASS A	NONE
NONE	UL-90	NONE	NONE

# Metal Panels

1.	COMPANY NAME	METAL SALES MANUFACTURING CORP.	METAL SALES MANUFACTURING CORP.
2.	PRODUCT NAME	PRO-PANEL II	MINI, MAXI BATTEN
3.	CONFIGURATION		
3.1	STYLE		
	A. Simulated Shingle (specific type if applicable)		
	B. Simulated Shake (specific type if applicable)		
	C. Simulated Slate (specific type if applicable)		
	D. Simulated Tile (specific type if applicable)		
	E. Other (specify type)	CORRUGATED	STANDING SEAM: PAN AND BATTEN
3.2	COMPONENT TYPE AND SIZE		
	A. Panel [width (in.), maximum length (ft.)]	38 X 40	12, 16, 18 X 40
	B. Individual (dimensions: inches x inches)		
3.3	MATERIALS, THICKNESSES, AND FINISHES		
	GALVANIZED STEEL (ga.):	Thicknesses 26, 28 Finishes COLORFAST 25	26 BARE, COLORFAST 25
	STAINLESS STEEL (ga.)	Thicknesses Finishes	
	GALVALUME (ga.)	Thicknesses 26, 28 Finishes BARE	24 BARE, KYNAR 500 (PVF2)
	ALUMINIZED STEEL (ga.)	Thicknesses Finishes	
	ALUMINUM (in.)	Thicknesses Finishes	
	COPPER (oz.)	Thicknesses Finishes	
	TERNE METAL (ga.)	Thicknesses Finishes	
	ZINC (ga.)	Thicknesses Finishes	
4.	SYSTEMS RECOMMENDATIONS		
	Min. Slope Recommended In Normal Application (in. per ft.)	3:12	3:12
	Min. Slope Recommended In Special Application (in. per ft.)		
	DECK TYPES		
	Solid Deck, Wood		X
	Spaced Sheathing, Wood		
	Decking Not Required	X	
	Underlayment Recommended (type or NA)	30 LB. FELT	30 LB. FELT
5.	PANEL CONFIGURATION (For components in item 3.2A above; for individual components, see item 6.)		
5.1	INTERLOCKING METHOD, HEIGHT (inches), AND SEAM SEALANT	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)
	Overlapped	5/8 / N	
	Interlocked		
	Slip Locked		
	Snap Together		1, 1-1/2 / N
5.2	FASTENING METHOD		
	Through Fastened (exposed or concealed, specify)	EXPOSED	
	Clip (exposed or concealed, specify)		CONCEALED
6.	INDIVIDUAL COMPONENT CONFIGURATION (For components in item 3.2B above; for panels, see item 5.)		
6.1	DIMENSIONS		
	Weight Per Roof Square (pounds)		
	Exposure (inches)		
	Coverage (approx. no. of pieces per square at listed exposure)		
6.2	INSTALLATION PROCESSING		
	Through-Fastened (exposed or concealed, specify)		
	Kind(s) Of Fastener Required (nails, staples, screws, NA)		
	Number Of Fasteners Per Piece (number or NA)		
	Seam Snap-In Or Interlock (specify or NA)		
	Adhesive/Sealant Required (yes/no)		
	Support Battens Required (yes/no)		
7.	MANUFACTURER/PRODUCT DATA		
	Year Product First Sold	--	1993
	Number of Squares Installed	--	--
	Method Of Distribution (distributors, direct)	DISTRIBUTORS, DIRECT	DISTRIBUTORS, DIRECT
	Number Of Rgional Service Locations	12	12
	Licensed Applicator Agreement (yes/no)	--	--
	For Sales Information, Contact	D. CUNNINGHAM	D. CUNNINGHAM
	For Technical Information, Contact	D. KIRCHGESSNER	D. KIRCHGESSNER
8.	ASTM E331 WATER INFILTRATION TEST RESULTS	NONE	NO LEAKAGE
9.	ASTM E283 AIR INFILTRATION TEST RESULTS	NONE	.004 CFM/SQ FT
10.	UL FIRE RATINGS FOR ANY SPECIFICATION (per UL 790)	NONE	NONE
11.	FM/UL WIND UPLIFT RATING FOR ANY SPECIFICATION	NONE	UL-90
12.	SEE APPENDIX IF CHECKED		

NA=not applicable



# Metal Panels

1. COMPANY NAME	OWENS CORNING	PERFECTION: THE VERY BEST IN BUILDING PRODUCTS
2. PRODUCT NAME	MIRA VISTA DESIGNER METAL	COUNTRY MANOR SHAKE
3. CONFIGURATION		
3.1 STYLE		
A. Simulated Shingle (specific type if applicable)	X	
B. Simulated Shake (specific type if applicable)		X
C. Simulated Slate (specific type if applicable)		
D. Simulated Tile (specific type if applicable)		
E. Other (specify type)		
3.2 COMPONENT TYPE AND SIZE		
A. Panel [width (in.), maximum length (ft.)]		
B. Individual (dimensions: inches x inches)	12 X 34	12 X 48
3.3 MATERIALS, THICKNESSES, AND FINISHES		
GALVANIZED STEEL (ga.):	Thicknesses Finishes	
STAINLESS STEEL (ga.)	Thicknesses Finishes	
GALVALUME (ga.)	Thicknesses Finishes	.019 KYNAR 500
ALUMINIZED STEEL (ga.)	Thicknesses Finishes	
ALUMINUM (in.)	Thicknesses Finishes	0.019 KYNAR
COPPER (oz.)	Thicknesses Finishes	.0216
TERNE METAL (ga.)	Thicknesses Finishes	
ZINC (ga.)	Thicknesses Finishes	
4. SYSTEMS RECOMMENDATIONS		
Min. Slope Recommended In Normal Application (in. per ft.)	3:12	3:12
Min. Slope Recommended In Special Application (in. per ft.)		4:12
DECK TYPES		
Solid Deck, Wood	X	X
Spaced Sheathing, Wood		
Decking Not Required		
Underlayment Recommended (type or NA)	NO. 30 FELT OR 2 NO. 15 FELT	30 LB. FELT
5. PANEL CONFIGURATION (For components in item 3.2A above; for individual components, see item 6.)		
5.1 INTERLOCKING METHOD, HEIGHT (inches), AND SEAM SEALANT	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)
Overlapped		
Interlocked		
Slip Locked		
Snap Together		
5.2 FASTENING METHOD		
Through Fastened (exposed or concealed, specify)		
Clip (exposed or concealed, specify)		
6. INDIVIDUAL COMPONENT CONFIGURATION (For components in item 3.2B above; for panels, see item 5.)		
6.1 DIMENSIONS		
Weight Per Roof Square (pounds)	106	45
Exposure (inches)	32.5 X 11.5	12 X 48
Coverage (approx. no. of pieces per square at listed exposure)	39	25
6.2 INSTALLATION PROCESSING		
Through-Fastened (exposed or concealed, specify)	CONCEALED	CONCEALED
Kind(s) Of Fastener Required (nails, staples, screws, NA)	NAILS	NAILS OR SCREWS
Number Of Fasteners Per Piece (number or NA)	2	4
Seam Snap-In Or Interlock (specify or NA)	INTERLOCK	INTERLOCK
Adhesive/Sealant Required (yes/no)	NO	NO
Support Battens Required (yes/no)	NO	NO
7. MANUFACTURER/PRODUCT DATA		
Year Product First Sold	1995	1996
Number of Squares Installed		>35,000
Method Of Distribution (distributors, direct)	DISTRIBUTORS	DISTRIBUTORS
Number Of Rgional Service Locations		2
Licensed Applicator Agreement (yes/no)		YES
For Sales Information, Contact	800/GET-PINK	E. VORESS 888/788-2427
For Technical Information, Contact	800/GET-PINK	D. MILLER 888/788-2427
8. ASTM E331 WATER INFILTRATION TEST RESULTS		NONE
9. ASTM E283 AIR INFILTRATION TEST RESULTS		NONE
10. UL FIRE RATINGS FOR ANY SPECIFICATION (per UL 790)	CLASS A	CLASSES A, B, C
11. FM/UL WIND UPLIFT RATING FOR ANY SPECIFICATION	UL-997	UL-580
12. SEE APPENDIX IF CHECKED	X	

NA=not applicable

# Metal Panels

PETERSEN ALUMINUM CORP. INTEGRAL BATTEN	PETERSEN ALUMINUM CORP. REDI-ROOF STANDING SEAM	PETERSEN ALUMINUM CORP. REDI-ROOF BATTEN	PETERSEN ALUMINUM CORP. SNAP-ON STANDING SEAM
STANDING SEAM: INTEGRAL BATTEN SEAM	STANDING SEAM	STANDING SEAM SNAP-ON BATTEN	STANDING SEAM
11-18 X 40	12-20 X 40	12-18 X 45	12-18 X 40
24 KYNAR 500	24 KYNAR 500	24 KYNAR 500	24 KYNAR 500
0.032 KYNAR 500	0.032 KYNAR 500	0.032 KYNAR 500	0.032 KYNAR 500
3:12	3:12	3:12	3:12
3:12	3:12	3:12	3:12
X	X	X	X
X	X	X	X
30 LB. FELT	30 LB. FELT	30 LB. FELT	30 LB. FELT
HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)
1-1/2 / N	1-1/2 / N		
		1-1/2 / N	1-1/2 / N
CONCEALED	CONCEALED	CONCEALED	CONCEALED
1978 > 100,000	1978 > 100,000	1978 > 100,000	1978 > 100,000
DISTRIBUTORS, DIRECT	DISTRIBUTORS, DIRECT	DISTRIBUTORS, DIRECT	DISTRIBUTORS, DIRECT
4	4	4	4
NO	NO	NO	NO
800/323-1960	800/323-1960	800/323-1960	800/323-1960
800/323-1960	800/323-1960	800/323-1960	800/323-1960
NO LEAKAGE @ 12 PSF			
0.008 CFM/SQ FT @ 1.57 PSF	0.004 CFM/SQ FT @ 1.57 PSF	0.004 CFM/SQ FT @ 1.57 PSF	0.004 CFM/SQ FT @ 1.57 PSF
CLASS A	CLASS A	CLASS A	CLASS A
UL-90	UL-90	UL-90	UL-90

# Metal Panels

1. COMPANY NAME	PETERSEN ALUMINUM CORP.	PETERSEN ALUMINUM CORP.
2. PRODUCT NAME	FLUSH PANEL	REVEAL PANEL
3. CONFIGURATION		
3.1 STYLE		
A. Simulated Shingle (specific type if applicable)		
B. Simulated Shake (specific type if applicable)		
C. Simulated Slate (specific type if applicable)		
D. Simulated Tile (specific type if applicable)		
E. Other (specify type)	STANDING SEAM	STANDING SEAM
3.2 COMPONENT TYPE AND SIZE		
A. Panel [width (in.), maximum length (ft.)]	7-18 X 40	7-18 X 40
B. Individual (dimensions: inches x inches)		
3.3 MATERIALS, THICKNESSES, AND FINISHES		
GALVANIZED STEEL (ga.):	Thicknesses 22, 24 Finishes KYNAR 500	22, 24 KYNAR 500
STAINLESS STEEL (ga.)	Thicknesses Finishes	
GALVALUME (ga.)	Thicknesses Finishes	
ALUMINIZED STEEL (ga.)	Thicknesses Finishes	
ALUMINUM (in.)	Thicknesses 0.032 Finishes KYNAR 500	0.032 KYNAR 500
COPPER (oz.)	Thicknesses Finishes	
TERNE METAL (ga.)	Thicknesses Finishes	
ZINC (ga.)	Thicknesses Finishes	
4. SYSTEMS RECOMMENDATIONS		
Min. Slope Recommended In Normal Application (in. per ft.)	--	--
Min. Slope Recommended In Special Application (in. per ft.)	--	--
DECK TYPES		
Solid Deck, Wood	X	X
Spaced Sheathing, Wood	X	X
Decking Not Required		
Underlayment Recommended (type or NA)	30 LB. FELT	30 LB. FELT
5. PANEL CONFIGURATION (For components in item 3.2A above; for individual components, see item 6.)		
5.1 INTERLOCKING METHOD, HEIGHT (inches), AND SEAM SEALANT	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)
Overlapped		
Interlocked	1 / N	1 / N
Slip Locked		
Snap Together		
5.2 FASTENING METHOD		
Through Fastened (exposed or concealed, specify)	CONCEALED	CONCEALED
Clip (exposed or concealed, specify)		
6. INDIVIDUAL COMPONENT CONFIGURATION (For components in item 3.2B above; for panels, see item 5.)		
6.1 DIMENSIONS		
Weight Per Roof Square (pounds)		
Exposure (inches)		
Coverage (approx. no. of pieces per square at listed exposure)		
6.2 INSTALLATION PROCESSING		
Through-Fastened (exposed or concealed, specify)		
Kind(s) Of Fastener Required (nails, staples, screws, NA)		
Number Of Fasteners Per Piece (number or NA)		
Seam Snap-In Or Interlock (specify or NA)		
Adhesive/Sealant Required (yes/no)		
Support Battens Required (yes/no)		
7. MANUFACTURER/PRODUCT DATA		
Year Product First Sold	1978	1978
Number of Squares Installed	> 100,000	> 100,000
Method Of Distribution (distributors, direct)	DISTRIBUTORS, DIRECT	DISTRIBUTORS, DIRECT
Number Of Rgional Service Locations	4	4
Licensed Applicator Agreement (yes/no)	NO	NO
For Sales Information, Contact	800/323-1960	800/323-1960
For Technical Information, Contact	800/323-1960	800/323-1960
8. ASTM E331 WATER INFILTRATION TEST RESULTS	NONE	NONE
9. ASTM E283 AIR INFILTRATION TEST RESULTS	NONE	NONE
10. UL FIRE RATINGS FOR ANY SPECIFICATION (per UL 790)	NONE	NONE
11. FM/UL WIND UPLIFT RATING FOR ANY SPECIFICATION	NONE	NONE
12. SEE APPENDIX IF CHECKED		

NA=not applicable

# Metal Panels

PETERSEN ALUMINUM CORP.	PETERSEN ALUMINUM CORP.	PETERSEN ALUMINUM CORP.	PETERSEN ALUMINUM CORP.
SNAP-ON BATTEN	INTEGRAL STANDING SEAM	HIGH SNAP-ON STANDING SEAM	SNAP-CLAD
STANDING SEAM SNAP-ON BATTEN	STANDING SEAM	STANDING SEAM	STANDING SEAM
12-18 X 40	11-18 X 40	11-18 X 40	10-18 X 45
24 KYNAR 500	24 KYNAR 500	24 KYNAR 500	22, 24 KYNAR 500
0.032 KYNAR 500	0.032 KYNAR 500	0.032 KYNAR 500	0.032 KYNAR 500
3:12	3:12	3:12	2:12
3:12	3:12	3:12	2:12
X	X	X	X
X	X	X	X
			X
30 LB. FELT	30 LB. FELT	30 LB. FELT	30 LB. FELT
HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)
	1-1/2 / N		1-3/4 / F
1-1/2 / N		1-1/2 / N	
CONCEALED	CONCEALED	CONCEALED	CONCEALED
1978 > 100,000	1978 > 100,000	1978 > 100,000	1993 > 100,000
DISTRIBUTORS, DIRECT	DISTRIBUTORS, DIRECT	DISTRIBUTORS, DIRECT	DISTRIBUTORS, DIRECT
4	4	4	4
NO	NO	NO	NO
800/323-1960	800/323-1960	800/323-1960	800/323-1960
800/323-1960	800/323-1960	800/323-1960	800/323-1960
NONE	NO LEAKAGE @ 12 PSF	NO LEAKAGE @ 12 PSF	NO LEAKAGE @ 12 PSF
NONE	0.02 CFM/SQ FT @ 1.57 PSF	0.005 CFM/SQ FT @ 1.57 PSF	0.005 CFM/SQ FT @ 1.57 PSF
CLASS A	CLASS A	CLASS A	CLASS A
NONE	UL-90	UL-90	UL-90

# Metal Panels

1.	COMPANY NAME	SPRINGHOUSE INC.	SPRINGHOUSE INC.
2.	PRODUCT NAME	SPRINGHOUSE SHINGLES	SPRINGHOUSE SHINGLES
3.	CONFIGURATION		
3.1	STYLE		
	A. Simulated Shingle (specific type if applicable)		
	B. Simulated Shake (specific type if applicable)	X	
	C. Simulated Slate (specific type if applicable)		X
	D. Simulated Tile (specific type if applicable)		
	E. Other (specify type)		
3.2	COMPONENT TYPE AND SIZE		
	A. Panel [width (in.), maximum length (ft.)]		
	B. Individual (dimensions: inches x inches)	11-1/2 X 34-1/2	11-1/2 X 34-1/2
3.3	MATERIALS, THICKNESSES, AND FINISHES		
	GALVANIZED STEEL (ga.):	Thicknesses 29 Finishes KYNAR	29 KYNAR
	STAINLESS STEEL (ga.)	Thicknesses 29 Finishes DULL	29 DULL
	GALVALUME (ga.)	Thicknesses Finishes	
	ALUMINIZED STEEL (ga.)	Thicknesses Finishes	
	ALUMINUM (in.)	Thicknesses Finishes	
	COPPER (oz.)	Thicknesses 12,16 Finishes NATURAL, LEAD COATED, PRE-PATINA	12,16 NATURAL, LEAD COATED, PRE-PATINA
	TERNE METAL (ga.)	Thicknesses Finishes	
	ZINC (ga.)	Thicknesses 0.020, 0.027 Finishes PRE-PATINA, GRAY, BLACK	0.020, 0.027 PRE-PATINA, GRAY, BLACK
4.	SYSTEMS RECOMMENDATIONS		
	Min. Slope Recommended In Normal Application (in. per ft.)	4:12	4:12
	Min. Slope Recommended In Special Application (in. per ft.)	--	--
	DECK TYPES		
	Solid Deck, Wood	X	X
	Spaced Sheathing, Wood	X	X
	Decking Not Required		
	Underlayment Recommended (type or NA)	30 LB. FELT	30 LB. FELT
5.	PANEL CONFIGURATION (For components in item 3.2A above; for individual components, see item 6.)		
5.1	INTERLOCKING METHOD, HEIGHT (inches), AND SEAM SEALANT	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)	HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)
	Overlapped		
	Interlocked		
	Slip Locked		
	Snap Together		
5.2	FASTENING METHOD		
	Through Fastened (exposed or concealed, specify)		
	Clip (exposed or concealed, specify)		
6.	INDIVIDUAL COMPONENT CONFIGURATION (For components in item 3.2B above; for panels, see item 5.)		
6.1	DIMENSIONS		
	Weight Per Roof Square (pounds)	80 STEEL	80 STEEL
	Exposure (inches)	10	10
	Coverage (approx. no. of pieces per square at listed exposure)	42	42
6.2	INSTALLATION PROCESSING		
	Through-Fastened (exposed or concealed, specify)	CONCEALED	CONCEALED
	Kind(s) Of Fastener Required (nails, staples, screws, NA)	NAILS, SCREWS	NAILS, SCREWS
	Number Of Fasteners Per Piece (number or NA)	5	5
	Seam Snap-In Or Interlock (specify or NA)		
	Adhesive/Sealant Required (yes/no)		
	Support Battens Required (yes/no)		
7.	MANUFACTURER/PRODUCT DATA		
	Year Product First Sold	1996	1996
	Number of Squares Installed	--	--
	Method Of Distribution (distributors, direct)	DISTRIBUTORS, DIRECT	DISTRIBUTORS, DIRECT
	Number Of Rgional Service Locations	--	--
	Licensed Applicator Agreement (yes/no)	NO	NO
	For Sales Information, Contact	519/235-1566	519/235-1566
	For Technical Information, Contact	519/235-1566	519/235-1566
8.	ASTM E331 WATER INFILTRATION TEST RESULTS		
9.	ASTM E283 AIR INFILTRATION TEST RESULTS		
10.	UL FIRE RATINGS FOR ANY SPECIFICATION (per UL 790)		
11.	FM/UL WIND UPLIFT RATING FOR ANY SPECIFICATION		
12.	SEE APPENDIX IF CHECKED		

NA=not applicable

# Metal Panels

VINCENT METALS
COLORKLAD SYSTEM I
STANDING SEAM
12, 16, 18, 22 X 40
24 KYNAR 500
24, 26 MILL
0.032 KYNAR 500
16, 20 MILL
24, 26, 28, 30 MILL
3:12
X
30 LB. FELT
HEIGHT (inches) / SEAM SEALANT (F = Factory Applied; E = Field applied; N = None)
1, 1-1/2 / E
CONCEALED
1969
--
DISTRIBUTORS
45
NO
R. OEHME
R. OEHME
NONE
NONE
NONE

# Appendix

## METAL PANELS

### **Atas International, Inc.**

Atas International, Inc. produces a wide range of panel styles for the residential roofing market, from simulated roof tiles to conventional standing seam profiles. Most materials are offered in the fluoropolymer Kynar 500 coating system. More than twenty standard colors are offered in this system, which is designed to give long life with excellent chalk and fade resistance. Contact ATAS for more information and technical assistance.

### **Berridge Manufacturing Company**

The Berridge Bermuda Roof Panel may be formed on site in continuous lengths using a Berridge portable roll former and Berridge coil material.

### **Decra Roofing Systems/Tasman Roofing**

Wind-driven rain and static uplift tests have been conducted successfully at Construction Research Laboratories in Miami, Fla. and Center for Approval Engineering in St. Petersburg, Fla. for Metro-Dade County, Fla. approval. Copies of testing are available for Decra tile and shake roofing systems. Both systems are installed by approved applicators and carry a 50-year material warranty. Decra roofing systems are guaranteed to withstand winds up to 120 mph when properly installed. For installations between 22:12 and 3:12, underlayment is required. Decra roofing systems are light enough to install directly over most existing roofs.

## Section 5

*Steep-Slope Roofing  
Materials Guide*

**2000**

*Wood Shakes and Shingles*

# Information on Section 5: Wood Shakes and Shingles

## General Information

Section 5: Wood Shakes and Shingles in the 2000 edition of NRCA's *Steep-Slope Roofing Materials Guide* is a comprehensive listing of wood shake and shingle products commonly used in steep-slope roofing.

Wood roofing products are generally separated into two categories: cedar shakes and shingles, and wood fiber panels.

Shakes and shingles are manufactured from western red cedar, cypress, pine and redwood trees. Wood shingles are sawn on both sides and have an even taper and uniform thickness. The industry terms *Perfection* and *Royal*, when applied to shingles, mean nothing more than 18-inch (460 mm) and 24-inch (610 mm), respectively. Shakes are split from logs and reshaped by manufacturers for commercial use. They are thicker at the butt end than shingles; generally one or both surfaces are split in order to obtain a textured effect. The split and resawn shake has a split face and sawn back. The taper-sawn shake has a natural taper and is sawn on both sides. Cedar shakes and shingles are available pressure treated with fire retardants and chemical preservatives, for increased fire protection and to prevent premature rot and decay in some climates. Cedar shakes and shingles are installed over both spaced and solid sheathing and mechanically fastened. Shakes are installed using felt interlays that act as baffles against wind-driven material and increase insulating values.

Pine shakes are made from southern yellow pine and are taper-sawn. They are also available pressure-treated with preservatives to protect against decay and insects. They may be installed over spaced or solid sheathing and are mechanically fastened. Interlayment felts are required.

The category of wood fiber covers those products made of wood fibers, bonded together under heat and pressure to form shakes or shingles. Because of the size of the components, they are classified as panels rather than individual shakes or shingles. They are mechanically fastened over spaced or solid sheathing.

## Specific Information Included in the Guide

Specific listing information for wood shake and shingle products is as follows:

1. Company name
2. Product name
3. Wood species
4. Product style and size
5. Availability
6. Dimensions and coverage
7. Hip/ridge pieces available

8. Slope and underlayment/interlayment recommendations
9. Recommended decks
10. Year product first sold
11. Number of squares installed
12. Distribution
13. Fire ratings
14. Accepted by the following codes
15. Sales and technical information contacts

Additional information regarding wood shake and shingle roof systems is provided in *The NRCA Steep Roofing Manual* and *The NRCA Roofing and Waterproofing Manual*.

# Index to Wood Shakes and Shingles

Wood Shakes  
and Shingles

<b>GREEN RIVER LOG SALES</b> P.O. Box 515 Sumas, WA 98295 800/663-8707 FAX: 604/820-3872	194
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Wood Shakes  
and Shingles

<b>TAMARK MANUFACTURING, LLC</b> 508 Stella Avenue; P.O. Box 1386 Savannah, GA 31402 912/232-0786 FAX: 912/232-7826 E-mail: sales@lifepine.com Web: www.lifepine.com	197
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# Wood Shakes and Shingles

1.	COMPANY NAME	GREEN RIVER LOG SALES LTD.	GREEN RIVER LOG SALES LTD.	GREEN RIVER LOG SALES LTD.
2.	PRODUCT NAME	BLACK HAWK	BLACK HAWK	GREEN RIVER
3.	WOOD SPECIES	WESTERN RED CEDAR	WESTERN RED CEDAR	WESTERN RED CEDAR
4.	PRODUCT STYLE AND SIZE			
4A.	CEDAR			
	Shake, Split And Resawn, 24-Inch (24 IN. X 1/2 IN.)	X		X
	Shake, Split And Resawn, 24-Inch (24 IN. X 3/4 IN.)		X	
	Shake, Taper-Sawn, 18-Inch			
	Shake, Taper-Sawn, 24-Inch			
	Shingle, Perfection 18-Inch			
	Shingle, Royal 24-Inch			
4B.	PINE			
	Shake, Taper-Sawn, 18-Inch X 13/16-Inch			
	Shake, Taper-Sawn 24-Inch X 13/16-Inch			
	Shingle, Royal 24-Inch			
4C.	WOOD FIBER			
	Panel, 12 IN. X 48 IN. X 7/16 IN.			
	Panel, 12 IN. X 40 IN. X 1/2 IN.			
5.	AVAILABILITY RESTRICTED REGIONALLY (yes/no)	NO	NO	
6.	DIMENSIONS AND COVERAGE			
	Maximum Exposure (inches)	10	10	10
	Headlap (inches)	14	14	14
	Weight Per Roof Square (at ambient temperature, pounds)	380 ±	250 ±	380 ±
	Fasteners Required (nails, staples, or specify)	NAILS OR STAPLES	NAILS OR STAPLES	NAILS OR STAPLES
7.	HIP/RIDGE PIECES AVAILABLE (yes/no)			YES
8.	SLOPE/INTERLAYMENT-UNDERLAYMENT RECOMMENDATIONS			
	Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12	4:12
	Interlayment Recommended In Normal Application	TYPE-30 FELT	TYPE-30 FELT	TYPE-30 FELT
	Underlayment Recommended In Normal Application	NONE	NONE	NONE
	Minimum Slope Recommended For Special Application (inches per foot)			
	Interlayment Recommended In Special Application			
	Underlayment Recommended In Special Application			
9.	RECOMMENDED DECKS			
9A.	TYPES			
	Solid Sheathing	X	X	X
	Spaced Sheathing	X	X	X
9B.	MATERIAL			
	Plywood/Wood	X	X	X
	Oriented-Strand Board	X	X	X
	Waferboard	X	X	X
	Other (specify)			
10.	YEAR PRODUCT FIRST SOLD	1985	1985	1969
11.	NUMBER OF SQUARES INSTALLED	160,000	275,000	800,000
12.	DISTRIBUTION			
	DISTRIBUTORS (number handling product or no)	400 ±	400 ±	400 ±
	DIRECT (number of regional service locations or no)	NO	NO	NO
13.	FIRE RATINGS			
	Fire Rating(s) Available (per UL Standard 790)			
	Fire Ratings(s) Available (per ASTM E108)			
14.	ACCEPTED BY THE FOLLOWING CODES	ICBO BOCA SBCCI	ICBO BOCA SBCCI	ICBO BOCA SBCCI
15.	FOR SALES INFORMATION, CONTACT:	D. KNOTT 800/663-8707	D. KNOTT 800/663-8707	D. KNOTT 800/663-8707
	FOR TECHNICAL INFORMATION, CONTACT:	D. KNOTT 800/663-8707	D. KNOTT 800/663-8707	D. KNOTT 800/663-8707
16.	SEE APPENDIX IF CHECKED			

NA=not applicable

# Wood Shakes and Shingles

| GREEN RIVER LOG SALES LTD. |
|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| GREEN RIVER                | SCOTT CEDAR                |
| WESTERN RED CEDAR          |
					X
X					
	X				
		X			
			X		
				X	
		NO	NO	NO	NO
10	7 1/2	10	5 1/2	7 1/2	10
14	10 1/2	14	12 1/2	16 1/2	14
250 ±	270 ±	380 +	250 +	270 +	380
NAILS OR STAPLES					
YES	YES	YES	YES	YES	YES
4:12	4:12	4:12	4:12	4:12	4:12
TYPE-30 FELT	TYPE-30 FELT	TYPE-30 FELT	NONE	NONE	TYPE-30 FELT
NONE	NONE	NONE	NONE	NONE	NONE
			3:12	3:12	
			NONE	NONE	
			NONE	NONE	
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
1969	1969	1969	1969	1969	1961
1.3 MILLION +	250,000+	580,000+	1 MILLION +	230,000+	750,000 +
400 ±	400 ±	400 ±	400 ±	400 ±	400 ±
NO	NO	NO	NO	NO	NO
ICBO BOCA SBCCI	ICBO BOCA SBCCI	ICBO BOCA SBCCI	ICBO BOCA SBCCI	ICBO BOCA SBCCI	ICBO BOCA SBCCI
D. KNOTT 800/663-8707					
D. KNOTT 800/663-8707					

# Wood Shakes and Shingles

1.	COMPANY NAME	GREEN RIVER LOG SALES LTD.	GREEN RIVER LOG SALES LTD.	GREEN RIVER LOG SALES LTD.
2.	PRODUCT NAME	SCOTT CEDAR	CEDAR PLUS	CEDAR PLUS
3.	WOOD SPECIES	WESTERN RED CEDAR	WESTERN RED CEDAR	WESTERN RED CEDAR
4.	PRODUCT STYLE AND SIZE			
4A.	CEDAR			
	Shake, Split And Resawn, 24-Inch (24 IN. X 1/2 IN.)		X	
	Shake, Split And Resawn, 24-Inch (24 IN. X 3/4 IN.)	X		X
	Shake, Taper-Sawn, 18-Inch			
	Shake, Taper-Sawn, 24-Inch			
	Shingle, Perfection 18-Inch			
	Shingle, Royal 24-Inch			
4B.	PINE			
	Shake, Taper-Sawn, 18-Inch X 13/16-Inch			
	Shake, Taper-Sawn 24-Inch X 13/16-Inch			
	Shingle, Royal 24-Inch			
4C.	WOOD FIBER			
	Panel, 12 IN. X 48 IN. X 7/16 IN.			
	Panel, 12 IN. X 40 IN. X 1/2 IN.			
5.	AVAILABILITY RESTRICTED REGIONALLY (yes/no)	NO	NO	NO
6.	DIMENSIONS AND COVERAGE			
	Maximum Exposure (inches)	10	10	10
	Headlap (inches)	14	14	14
	Weight Per Roof Square (at ambient temperature, pounds)	250	380 +	260 +
	Fasteners Required (nails, staples, or specify)	NAILS OR STAPLES	NAILS OR STAPLES	NAILS OR STAPLES
7.	HIP/RIDGE PIECES AVAILABLE (yes/no)	YES	YES	YES
8.	SLOPE/INTERLAYMENT-UNDERLAYMENT RECOMMENDATIONS			
	Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12	4:12
	Interlayment Recommended In Normal Application	TYPE-30 FELT	TYPE-30 FELT	TYPE-30 FELT
	Underlayment Recommended In Normal Application	NONE	NONE	NONE
	Minimum Slope Recommended For Special Application (inches per foot)			
	Interlayment Recommended In Special Application			
	Underlayment Recommended In Special Application			
9.	RECOMMENDED DECKS			
9A.	TYPES			
	Solid Sheathing	X	X	X
	Spaced Sheathing	X	X	X
9B.	MATERIAL			
	Plywood/Wood	X	X	X
	Oriented-Strand Board	X	X	X
	Waferboard	X	X	X
	Other (specify)			
10.	YEAR PRODUCT FIRST SOLD	1981	1984	1984
11.	NUMBER OF SQUARES INSTALLED	1.3 MILLION +	450,000	590,000
12.	DISTRIBUTION			
	DISTRIBUTORS (number handling product or no)	400 ±	400 ±	400 ±
	DIRECT (number of regional service locations or no)	NO	NO	NO
13.	FIRE RATINGS			
	Fire Rating(s) Available (per UL Standard 790)		A, B, C	A, B, C
	Fire Ratings(s) Available (per ASTM E108)		A, B, C	A, B, C
14.	ACCEPTED BY THE FOLLOWING CODES	ICBO BOCA SBCCI	ICBO BOCA SBCCI	ICBO BOCA SBCCI
15.	FOR SALES INFORMATION, CONTACT:	D. KNOTT 800/663-8707	D. KNOTT 800/663-8707	D. KNOTT 800/663-8707
	FOR TECHNICAL INFORMATION, CONTACT:	D. KNOTT 800/663-8707	D. KNOTT 800/663-8707	D. KNOTT 800/663-8707
16.	SEE APPENDIX IF CHECKED			

NA=not applicable

# Wood Shakes and Shingles

GREEN RIVER LOG SALES LTD.	TAMARK MANUFACTURING LLC	TAMARK MANUFACTURING LLC			
CEDAR PLUS	CEDAR PLUS	CEDAR PLUS	CEDAR PLUS	LIFEPINE SHAKE	LIFEPINE SHAKE
WESTERN RED CEDAR	WESTERN RED CEDAR	WESTERN RED CEDAR	WESTERN RED CEDAR	TREATED PINE	TREATED PINE
X					
	X				
		X			
			X		
					X
				X	
NO	NO	NO	NO	NO	NO
7 1/2	10	5 1/2	7 1/2	10	7 1/2
10 1/2	14	12 1/2	16 1/2	14	11 1/2
280 +	280 ±	270 ±	295 ±	390	390
NAILS OR STAPLES	NAILS OR STAPLES	NAILS OR STAPLES	NAILS OR STAPLES	NAILS	NAILS
YES	YES	YES	YES	YES	YES
4:12	4:12	4:12	4:12	4:12	4:12
TYPE-30 FELT	TYPE-30 FELT	NONE	NONE	NO.-30 FELT	NO.-30 FELT
NONE	NONE	NONE	NONE	NONE	NONE
		3:12	3:12	2:12	2:12
		NONE	NONE	NO.-30 FELT	NO.-30 FELT
		NONE	NONE	HOT MOP	HOT MOP
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X		
				1-IN. X 6-IN. LUMBER	1-IN. X 6-IN. LUMBER
1984	1984	1984	1984	1984	1984
125,000	115,000	350,000	110,000	110,000	25,000
400 ±	400 ±	400 ±	400 ±	48	48
NO	NO	NO	NO	26	26
A, B, C	A, B, C	A, B, C	A, B, C		
A, B, C	A, B, C	A, B, C	A, B, C	CLASS B	CLASS B
ICBO BOCA SBCCI	ICBO BOCA SBCCI	ICBO BOCA SBCCI	ICBO BOCA SBCCI	ICBO BOCA SBCCI	ICBO BOCA SBCCI
D. KNOTT 800/663-8707	D. KNOTT 800/663-8707	D. KNOTT 800/663-8707	D. KNOTT 800/663-8707	K. RULE 912/232-0786	K. RULE 912/232-0786
D. KNOTT 800/663-8707	D. KNOTT 800/663-8707	D. KNOTT 800/663-8707	D. KNOTT 800/663-8707	K. RULE 912/232-0786	K. RULE 912/232-0786
				X	X

# Wood Shakes and Shingles

1.	COMPANY NAME	TAMARK MANUFACTURING LLC	TAMARK MANUFACTURING LLC
2.	PRODUCT NAME	LIFEPINE SHAKE	ROYAL SHINGLE
3.	WOOD SPECIES	TREATED PINE	TREATED PINE
4.	PRODUCT STYLE AND SIZE		
4A.	CEDAR		
	Shake, Split And Resawn, 24-Inch (24 IN. X 1/2 IN.)		
	Shake, Split And Resawn, 24-Inch (24 IN. X 3/4 IN.)		
	Shake, Taper-Sawn, 18-Inch		
	Shake, Taper-Sawn, 24-Inch		
	Shingle, Perfection 18-Inch		
	Shingle, Royal 24-Inch		
4B.	PINE		
	Shake, Taper-Sawn, 18-Inch X 13/16-Inch		
	Shake, Taper-Sawn 24-Inch X 13/16-Inch		
	Shingle, Royal 24-Inch	X	X
4C.	WOOD FIBER		
	Panel, 12 IN. X 48 IN. X 7/16 IN.		
	Panel, 12 IN. X 40 IN. X 1/2 IN.		
5.	AVAILABILITY RESTRICTED REGIONALLY (yes/no)	NO	NO
6.	DIMENSIONS AND COVERAGE		
	Maximum Exposure (inches)	10	10
	Headlap (inches)	14	14
	Weight Per Roof Square (at ambient temperature, pounds)	390	370
	Fasteners Required (nails, staples, or specify)	NAILS	NAILS
7.	HIP/RIDGE PIECES AVAILABLE (yes/no)	YES	YES
8.	SLOPE/INTERLAYMENT-UNDERLAYMENT RECOMMENDATIONS		
	Minimum Slope Recommended For Normal Application (inches per foot)	4:12	4:12
	Interlayment Recommended In Normal Application	NO.-30 FELT	NO.-30 FELT
	Underlayment Recommended In Normal Application	NONE	NONE
	Minimum Slope Recommended For Special Application (inches per foot)	2:12	
	Interlayment Recommended In Special Application	NO.-30 FELT	
	Underlayment Recommended In Special Application	HOT MOP	
9.	RECOMMENDED DECKS		
9A.	TYPES		
	Solid Sheathing	X	X
	Spaced Sheathing	X	X
9B.	MATERIAL		
	Plywood/Wood	X	X
	Oriented-Strand Board	X	X
	Waferboard		
	Other (specify)	1-IN. X 6-IN. LUMBER	
10.	YEAR PRODUCT FIRST SOLD	1984	1991
11.	NUMBER OF SQUARES INSTALLED	150,000	35000
12.	DISTRIBUTION		
	DISTRIBUTORS (number handling product or no)	48	75
	DIRECT (number of regional service locations or no)	73	NO
13.	FIRE RATINGS		
	Fire Rating(s) Available (per UL Standard 790)		
	Fire Ratings(s) Available (per ASTM E108)	CLASS B	CLASS B
14.	ACCEPTED BY THE FOLLOWING CODES	ICBO BOCA SBCCI	ICBO BOCA SBCCI
15.	FOR SALES INFORMATION, CONTACT:	K. RULE 912/232-0786	K. RULE 912/232-0786
	FOR TECHNICAL INFORMATION, CONTACT:	K. RULE 912/232-0786	K. RULE 912/232-0786
16.	SEE APPENDIX IF CHECKED	X	X

NA=not applicable

# Appendix

## WOOD SHAKES AND SHINGLES

### Tamark Manufacturing, LLC

LifePine shakes are treated with CCA to .40 retention, the same as recommended for ground contact. This allows for a 50-year limited warranty against rot, decay, and termite attack. Pneumatic tools may be used for efficient installation. LifePine shakes are a sawn shake with a grooved exposed surface and, therefore, are a hybrid between a split and resawn shake and a 24-inch royal shingle.

In addition to CCA, LifePine shakes are treated with a permanent water repellent to inhibit splits. Pre-stained colors are available. Material is listed as fire-resistant, with Class B treatment available.

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## Section 6

*Steep-Slope Roofing  
Materials Guide*

**2000**

**Slate**

## Information on Section 6: Slate

### General Information

Section 6: Slate in the 2000 edition of NRCA's *Steep-Slope Roofing Materials Guide* is a comprehensive listing of slate products commonly used in steep-slope roofing.

Roofing slate is a dense, durable rock material that is basically nonabsorbent. Two properties of slate are cleavage and fracture. It has natural cleavage, which permits it to be easily split in one direction. Fracture, usually occurring at right angles to the cleavage, is called the grain. Roofing slates are commonly split so that the length of the slate runs in the direction of the grain. The surface texture of slate after being split for commercial use derives from the characteristics of the rock from which it was quarried. Some slate splits to a smooth, practically even surface, while other yield a surface that is rough and uneven.

The color of slate is determined by its chemical and mineral composition. Because these factors differ in various regions, roofing slates can be obtained in a variety of colors. In addition, exposure to weather causes slate to change in color. The degree of change varies depending on the slate. Those slates exhibiting minimal color change are known as "permanent" or "unfading". Slate that shows a more marked color change is known as "weathering" slate. Between unfading and weathering is "semi-weathering."

There are several classifications for slate roofs. The first is standard slate, which refers to slate that is generally from 3/16-inch (5 mm) to 1/4-inch (6 mm) thick with uniform length. The category *Standard Smooth* used in item 3 refers to standard slate that has a relatively smooth surface, in comparison with standard rough or just "rough". These slates have a rougher texture and are generally available in thicker pieces. Finally, there are graduated/textural slates; these are designed with varying lengths and thicknesses and are generally rougher than standard slates.

### Specific Information Included in the Guide

Specific listing information for slate roofing products is as follows:

1. Company name
2. Product name
3. Textures
4. Sizes
5. Colors available
6. Slope/underlayment recommendations
7. Recommended decks
8. Flashing material
9. Year product first sold
10. Number of squares installed
11. Distribution

12. Technical information
13. Sale and technical information contacts

Reporting of technical information provided in Item 12 is based on American Society for Testing and Materials (ASTM) standard ASTM C406, titled "Standard Specification for Roofing Slate."

Additional information regarding slate roof systems is provided in *The NRCA Steep Roofing Manual* and *The NRCA Roofing and Waterproofing Manual*.

# Index to Slate

Slate	
<b>EVERGREEN SLATE CO., INC.</b> 68 E. Potter Avenue P.O. Box 248 Granville, NY 12832 518/642-2530 FAX: 518/642-9313 E-mail: slate@evergreenslate.com	206
<b>HILLTOP SLATE INC.</b> P.O. Box 201 Granville, NY 12849 518/642-2270 FAX: 518/642-1220 E-mail: Web: www.hilltopslate.com	206

Slate	
<b>NORTH COUNTRY SLATE</b> 8800 Sheppard Ave., East Scarborough, ON CANADA M1B 5R4 416/724-4666 or 800/975-2535 FAX: 416/281-8842 E-mail:	207

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# Slate

1. COMPANY NAME	EVERGREEN SLATE COMPANY, INC.	HILLTOP SLATE INC.
2. PRODUCT DESCRIPTION	VERMONT ROOFING SLATE	VERMONT & NEW YORK NATURAL SLATE
3. TEXTURES	THICKNESSES (inches) / WEIGHTS PER ROOF SQUARE (lbs) (Standard 3-in. headlap)	THICKNESSES (inches) / WEIGHTS PER ROOF SQUARE (lbs) (Standard 3-in. headlap)
Standard Smooth	3/16 - 1/4 / 700-800	3/16 - 1/4 / 700-800
Rough	1-4 / 3/8 / 1,000 3/8 - 1/2 / 1,500 1/2 - 3/4 / 2,200 3/4 - 1 / 3,400	3/16 - 1/4 - 3/8 / 825-1,000 FULL 1/4 / 900 FULL 3/8 / 1,100 FULL 1/2 / 1,700 FULL 3/4 / 2,300 FULL 1 / 3,400
Graduated -Textural	3/16, 1/4, 3/8, 1/2, 3/4 / AVG. 1,800	3/16, 1/4, 3/8, 1/2, 3/4, 1 / NA
4. SIZES	LENGTHS (in) / STANDARD WIDTH (in) / EXPOSURE (in) (Standard 3-in. headlap)	LENGTHS (in) / STANDARD WIDTH (in) / EXPOSURE (in) (Standard 3-in. headlap)
	24 / 14, 12 / 10-1/2 22 / 14, 12, 11 / 9-1/2 20 / 14, 12, 11, 10 / 10-1/2 18 / 14, 12, 11, 10, 9 / 7-1/2 16 / 14, 12, 11, 10, 9, 8 / 6-1/2 14 / 14, 12, 11, 10, 9, 8, 7 / 5-1/2 12 / 12, 10, 9, 8, 7, 6 / 4-1/2 10 / 10, 9, 8, 7, 6 / 3-1/2	24 / 16, 14, 12 / 10-1/2 22 / 16, 12, 11, / 9-1/2 20 / 14, 12, 11, 10, / 8-1/2 18 / 14, 12, 11, 10, 9 / 7-1/2 16 / 14, 12, 11, 10, 9, 8, 7 / 6-1/2 14 / 14, 12, 11, 10, 9, 8, 7 / 5-1/2 12 / 12, 10, 9, 8, 7, 6 / 4-1/2 10 / 10, 9, 8, 7, 6 / 3-1/2
5. COLORS AVAILABLE (specify: weathering, semi-weathering, unfading, semi-unfading, or X)		
Black	SEMI-UNFADING, UNFADING	UNFADING
Blue-Black	UNFADING	UNFADING
Gray	SEMI-WEATHERING, UNFADING	SEMI-WEATHERING
Blue-Gray		UNFADING
Gray-Black	SEMI-WEATHERING, UNFADING	SEMI-WEATHERING
Mottled Gray-Black	SEMI-UNFADING	SEMI-WEATHERING
Gray-Green	SEMI-WEATHERING, UNFADING	SEMI-WEATHERING
Green	SEMI-WEATHERING, UNFADING	UNFADING
Mottled Gray-Green	UNFADING	UNFADING
Purple	SEMI-UNFADING	UNFADING
Mottled Purple/Green	UNFADING	UNFADING
Green	SEMI-WEATHERING, UNFADING	SEMI-WEATHERING
Purple - Variegated	SEMI-WEATHERING	UNFADING
Red	UNFADING	UNFADING
6. SLOPE/UNDERLAYMENT RECOMMENDATIONS		
Minimum Slope Recommended in Normal Application (in/ft)	8:12	6:12
Underlayment Recommended In Normal Application	30 LB. FELT	30 LB. FELT
Minimum Slope Recommended For Special Application (in/ft)	4:12	4:12
Underlayment Recommended In Special Application		ICE / WATER SHIELD
7A. RECOMMENDED DECK TYPE		
Solid Sheathing	X	
Spaced Sheathing		
7B. RECOMMENDED DECK MATERIAL		
Plywood/Wood	X	X
Oriented Strand Board		
Waferboard		
Other (Specify)		
8. FLASHING MATERIAL	COPPER, STAINLESS STEEL	COPPER, LEAD
9. YEAR PRODUCT FIRST SOLD	1916	1948
10. NUMBER OF SQUARES INSTALLED	5 MILLION	350,000
11. DISTRIBUTION		
Distributors (number handling product or no)	--	14
Direct (number of regional service locations or no)	10	2
12. TECHNICAL INFORMATION		
COMPLIES WITH ASTM STANDARD C 406-89 (1996) STANDARD SPECIFICATION FOR ROOFING SLATE) (grade: check one)		
GRADE S <sub>1</sub> Over 75 years service life	X	X
GRADE S <sub>2</sub> 40 to 75 years service life		
GRADE S <sub>3</sub> 20 to 40 years service life		
13. FOR SALES INFORMATION, CONTACT:	D. SCARLOTTA, J. BAKER 518/642-2530	J. CONLON 518/642-2270
FOR TECHNICAL INFORMATION, CONTACT:	D. SCARLOTTA, J. BAKER 518/642-2530	J. CONLON 518/642-2270
14. SEE APPENDIX IF CHECKED		

NA=not applicable

# Slate

NORTH COUNTRY SLATE		
NATURAL ROOFING SLATE		
THICKNESSES (inches) / WEIGHTS PER ROOF SQUARE (lbs) (Standard 3-in. headlap)		
3/16 - 1/4	/	650 - 800
1/4 - 3/8	/	800 - 1,200
3/8 - 1/2	/	1,200 - 1,800
3/16, 1/4, 3/8, 1/2		
LENGTHS (in) / STANDARD WIDTH (in) / EXPOSURE (in) (Standard 3-in. headlap)		
24	/	14, 12 / 10-1/2
22	/	14, 12, 11 / 9-1/2
20	/	14, 12, 10 / 8-1/2
18	/	12, 10, 9 / 7-1/2
16	/	12, 10, 8 / 6-1/2
14	/	12, 10, 8 / 5-1/2
12	/	10, 8 / 4-1/2
UNFADING		
UNFADING		
SEMI-WEATHERING, UNFADING		
SEMI-WEATHERING		
UNFADING		
WEATHERING		
UNFADING		
UNFADING		
8:12		
30 LB. FELT		
4:12		
ICE / WATER SHIELD		
X		
X		
X		
2 X 3 WOOD BATTENS		
COPPER, LEAD		
1988		
100,000		
4		
1		
X		
DAVE LARGE 800/975-2835		
DAVE LARGE 800/975-2835		

# Appendix

## SLATE

### **Evergreen Slate Company, Inc.**

On slopes of 8:12 to 4:12, specify 4-in. head laps and use one layer of W.R. Grace Ice and Water shield for greater protection.

Evergreen Slate royal purple slate holds its color very well.

### **Penn Big Bed Slate Co., Inc.**

Plywood decks are not recommended.

### **Rising & Nelson Slate Co., Inc.**

Roofing slate is also available in lengths of 26 through 48 inches in thickness of  $\frac{1}{2}$ ,  $\frac{3}{4}$ , and 1 inch.

On slopes of less than 5:12, a 4 inch headlap should be considered.

## Section 7

*Steep-Slope Roofing  
Materials Guide*

**2000**

*Underlayment Sheets*

# Information on Section 7: Underlayment Sheets

## General Information

Section 7: Underlayment Sheets of the 2000 edition of NRCA's *Steep-Slope Roofing Materials Guide* is a comprehensive listing of underlayment products used as components of steep-slope roofing.

Underlayments used in steep-slope roofing are generally organic felts, fiberglass mats, composites, or modified bitumen sheets. Coated felts and self-adhering modified sheets are frequently used as eaves flashing, commonly referred to as "ice dam" or "ice shield" protection.

Asphalt-saturated non-perforated organic felts are among the most common underlayments used for shingles; they are commonly designated as Type 15 and Type 30, or referred to as "No. 15" and "No. 30," which is reflective of a once-used pound-per-square weight designation. The saturation process involves impregnating the fibers of the dry felt with asphalt and filling the voids. The coating process involves the application to the top and bottom surface of the sheets with mineral-stabilized coating asphalt. A further step may consist of application of mineral surfacing to one or both sides of the sheet.

Underlayment sheets are used for a variety of steep-slope membrane products. In the case of wood shakes, these sheets are produced in 18-inch widths as "interlayment" felts. Underlayments protect the deck until the roof covering is installed, maintain protection should part of a covering fail, and to separate the covering from the deck. They are usually required for a fire rating classification. They are generally mechanically fastened, but can also be fully adhered – for example, in the case of polymer modified bitumen ice dam protection membrane sheets.

## Specific Information Included in the *Guide*

Specific listing information for roofing underlayment products is as follows:

1. Company name
2. Product name or description
3. Product category
4. Product information
5. Availability
6. Recommended for application with
7. Year product first produced
8. Number of squares installed
9. Distribution
10. UL classified prepared roof accessory
11. Complies with (ASTM standards)
12. Accepted by the following codes
13. Sales and technical information contacts

Reporting of technical information in Item 11 is based upon the following American Society for Testing and Materials (ASTM) standards.

- ASTM D224, titled "Standard Specification for Smooth-Surfaced Asphalt Roll Roofing (Organic Felt)"
- ASTM D226, titled "Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing"
- ASTM D2626, titled "Standard Specification for Asphalt-Saturated and Coated Organic Felt Base Sheet Used in Roofing"
- ASTM D4869, titled "Standard Specification for Asphalt-Saturated Organic Felt Shingle Underlayment Used in Roofing"
- ASTM D1970, titled "Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection."

Additional information regarding underlayment is provided in *The NRCA Steep Roofing Manual* and *The NRCA Roofing and Waterproofing Manual*.

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	Underlayment Sheets
<b>ALCO-NVC, INC.</b> P.O. Box 14001 Detroit, MI 48214 800/323-0029 FAX: 313/331-4726 E-mail:alconvc@aol.com Web site: www.alconvc.com	214
<b>ANDEK CORPORATION</b> P.O. Box 392 Moorestown, NJ 08057 888/88ANDEK FAX: 888/44ANDEK E-mail: andekcorp@aol.com	215
<b>ATLAS ROOFING CORPORATION</b> 1775 The Exchange, #160 Atlanta, GA 30339 770/933-4478 FAX: 770/984-1517	215
<b>CERTAINTED CORPORATION</b> ROOFING PRODUCTS GROUP 1400 Union Meeting Rd, P O Box 1100 Blue Bell, PA 19422 800/322-3060 FAX: 610/341-6212	217
<b>FIELDS CORPORATION</b> 2240 Taylor Way Tacoma, WA 98421 253/627-4098 FAX: 253/383-2181	218
<b>GAF MATERIALS CORP.</b> 1361 Alps Road Wayne, NJ 07470 973/628-3000 FAX: 973/628-3356	221
<b>GLOBE BUILDING MATERIALS INC.</b> 2230 Indianapolis Blvd. Whiting, IN 45394 219/473-4500 FAX: 219/473-4504	221

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<b>MALARKEY ROOFING COMPANY</b> P.O. box 17217 Portland, OR 97217 503/283-1191 FAX: 503/283-5405  Web site: www.malarkey-rfg.com	223
<b>MONSEY BAKOR DIV. HENRY CO.</b> 336 Cold Stream Road Kimberton, PA 19442 610/933-8888 FAX: 610/933-4598  Web site: www.henry.com	224
<b>OWENS CORNING</b> One Owens Corning Parkway Toledo, OH 45369 419/248-8000 FAX: 419/248-7354 E-mail: owenscorning.com	225
<b>PABCO ROOFING MANUFACTURERS</b> 1718 Thorne Road Tacoma, WA 98421 253/272-0374 FAX: 253/572-4997 E-mail: pabcoroof@paccoast.com	225
<b>TAMKO ROOFING PRODUCTS INC.</b> P.o. Box 1404 220 W. 4th Street Joplin, MO 64801 417/624-6644 FAX: 417/624-8935 Web site: tamko.com	226
<b>TC MIRADRI</b> 2170 Satellite Blvd., Suite 266 Blasdell, NY 14219 905/627-4035 FAX: 905/627-9468 E-mail: nrts@wchat.on.ca	228
<b>WARRIOR ROOFING MFG., INC.</b> P.O. Box 40185 Tuscaloosa, AL 35404 205/553-1734 FAX: 205/553-1755	229

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<b>W. R. GRACE &amp; CO. - CONN.</b> 62 Whitmore Avenue Cambridge, MA 02140 617/876-1400 FAX: 617/498-2643  Web site: <a href="http://www.gcp-grace.com">www.gcp-grace.com</a>	231
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# Underlayment Sheets

1. COMPANY NAME	ALCO-NVC INC.	ALCO-NVC INC.	ALCO-NVC INC.
2. PRODUCT NAME OR DESCRIPTION	ALCO SHIELD ICE AND WATER PROTECTOR 100	ALCO SHIELD ICE AND WATER PROTECTOR 195	ALCO SHEILD ICE AND WATER PROTECTOR 200
3. PRODUCT CATEGORY			
A. Organic Asphalt-Saturated Felt, Unperforated			
B. Organic Asphalt-Saturated Felt, Coated			
C. Asphatl Fiberglass Felt			
D. Special "Ice Shield" Underlayment	X	X	X
4A. PRODUCT INFORMATION (FOR PRODUCTS IN CATEGORY 3A, 3B, OR 3C)			
Type (ASTM standard [specify] or generic)			
Available as Sepcialty Underlayment (type, e.g., shake felt)			
Sheet Width (inches)			
Size Per Roll (sq. ft.)			
Weight Per Roll (pounds)			
4B. PRODUCT INFORMATION (FOR PRODUCTS IN CATEGORY 3D)			
Kind of Sheet(s) (e.g., felts, modified bitumen)	MODIFIED BITUMEN	MODIFIED BITUMEN	MODIFIED BITUMEN
Number Of Ply(ies)/Sheets Comprising Underlayment	1	1	1
Waterproofing Medium (e.g., asphalt, modified asphalt)	MODIFIED ASPHALT	MODIFIED ASPHALT	MODIFIED ASPHALT
Application Method (e.g., mechanical, mopped, self-adhered)	SELF-ADHERED	SELF-ADHERED	SELF-ADHERED
Sheet Width (inches)	36	36	36
Size Per Roll (sq. ft.)	100	195	200
Weight Per Roll (pounds)	39	76	78
5. AVAILABILITY RESTRICTED REGIONALLY (yes/no)	NO	NO	NO
6. RECOMMENDED FOR APPLICATION WITH:			
Asphalt Shingles	X	X	X
Fiber-Cement Roof Components			
Clay Tile	X	X	X
Concrete Tile	X	X	X
Metal Roof Components	X		
Slate	X	X	X
Wood Shakes/Shingles	X	X	X
Other (specify)			
7. YEAR PRODUCT FIRST SOLD	1996	1996	1996
8. NUMBER OF SQUARES INSTALLED			
9. DISTRIBUTION			
Distributors (number handling product or no)	125	125	125
Direct (number of regional service locations or no)			
10. UL-CLASSIFIED PREPARED ROOFING ACCESSORY (yes/no)	YES	YES	YES
COMPLIES WITH:			
11A. ASTM D 224-89 STANDARD SPECIFICATION FOR SMOOTH-SURFACED ASPHALT ROLL ROOFOING (ORGANIC FELT) (type or NA)	NA	NA	NA
Type I--Minimum net mass per unit area of roofing, 39.8lb/100 ft <sup>2</sup>			
Type II--Minimum net mass per unit area of roofing, 54.6 lb/100 ft <sup>2</sup>			
Type III--Minimum net mass per unit area of roofing, 51.1lb/100 ft <sup>2</sup>			
Type IV--Minimum net mass per unit area of roofing, 39.8 lb/100 ft <sup>2</sup>			
11B. ASTM D 226-95 STANDARD SPECIFICATION FOR ASPHALT-SATURATED ORGANIC FELT USED IN ROOFING & WATERPROOFING (type or NA)	NA	NA	NA
Type I--Commonly called No. 15 asphalt felt			
Type II--Commonly called No. 30 asphalt felt			
11C. ASTM D 2626-95 STANDARD SPECIFICATION FOR ASPHALT-SATURATED AND COATED ORGANIC FELT BASE SHEET USED IN ROOFING (yes, no or NA)	NA	NA	NA
11D. ASTM D 4869-88 (1993) STANDARD SPECIFICATION FOR ASPHALT - SATURATED ORGANIC FELT SHINGLE UNDERLAYMENT USED IN ROOFING	NA	NA	NA
Type I--Shingle Underlayment			
Type II--Heavy Duty Shingle Underlayment			
11E. ASTM D 1970-95 STANDARD SPECIFICATION FOR SELF-ADHERING POLYMER MODIFIED BITUMINOUS SHEET MATERIAL USED AS STEEP ROOFING UNDERLAYMENT FOR ICE DAM PROTECTOIN (yes, no, or NA)	YES	YES	YES
11F. OTHER ASTM SPECIFICATION (specify)			
12. ACCEPTED BY THE FOLLOWING CODES			
13. FOR SALES INFORMATION, CONTACT:	E. KARPINSKI 800/323-0029	E. KARPINSKI 800/323-0029	E. KARPINSKI 800/323-0029
FOR TECHNICAL INFORMATION, CONTACT:	B. BAIR 800/323-0029	B. BAIR 800/323-0029	B. BAIR 800/323-0029
14. SEE APPENDIX IF CHECKED			

NA=not applicable

# Underlayment Sheets

ALCO-NVC INC.	ANDEK CORPORATION	ATLAS ROOFING CORPORATION	ATLAS ROOFING CORPORATION	ATLAS ROOFING CORORATION	ATLAS ROOFING CORORATION
ALCO SHIELD ICE AND WATER PROTECTOR 225	FLASHBAND	NO. 15 STANDARD SATURATED FELT	NO. 30 STANDARD SATURATED FELT	NO. 15 SPECIFICATION FELT	NO. 30 SPECIFICATION FELT
		X	X	X	X
X	X				
		NO. 15	NO. 30	NO. 15	NO. 30
		36 432	36 216	36 432	36 216
MODIFIED BITUMEN 1	MODIFIED BITUMEN 1				
MODIFIED ASPHALT SELF-ADHERED 36 225 88 NO	MODIFIED ASPHALT SELF-ADHERED 28 77 33 NO	NO	NO	NO	NO
X	X	X	X	X	X
	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X		X	X	X	X
1996	1973	1982	1982	1978	1978
	3.5 MILLION				
125	127 14				
YES		NO	NO	YES	YES
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	X	X
NA	NA	NA	NA	NA	NA
NA	NA	X	X	NA	NA
YES		NA	NA	NA	NA
	ICBO	BOCA ICBO SBCCI	BOCA ICBO SBCCI	BOCA ICBO SBCCI	BOCA ICBO SBCCI
E. KARPINSKI 800/323-0029 B. BAIR 800/323-0029	H. LISS  N. SHEARER	ATLAS REGIONAL SALES OFFICES (SEE APPENDIX) 770/933-4478			
		X	X	X	X

# Underlayment Sheets

1. COMPANY NAME	ATLAS ROOFING CORORATION	ATLAS ROOFING CORORATION	ATLAS ROOFING CORORATION
2. PRODUCT NAME OR DESCRIPTION	STORMMASTER DG ICE AND WATER PROTECTION	NO. 43 BASE SHEET	SLATE / TILE UNDERLAYMENT
3. PRODUCT CATEGORY			
A. Organic Asphalt-Saturated Felt, Unperforated			
B. Organic Asphalt-Saturated Felt, Coated		X	X
C. Aspahtl Fiberglass Felt			
D. Special "Ice Shield" Underlayment	X		
4A. PRODUCT INFORMATION (FOR PRODUCTS IN CATEGORY 3A, 3B, OR 3C)			
Type (ASTM standard [specify] or generic)		NO. 43	
Available as Sepcialty Underlayment (type, e.g., shake felt)			
Sheet Width (inches)		36	
Size Per Roll (sq. ft.)		234	
Weight Per Roll (pounds)			
4B. PRODUCT INFORMATION (FOR PRODUCTS IN CATEGORY 3D)			
Kind of Sheet(s) (e.g., felts, modified bitumen)	MODIFIED BITUMEN		
Number Of Ply(ies)/Sheets Comprising Underlayment	1		
Waterproofing Medium (e.g., asphalt, modified asphalt)	SBS		
Application Method (e.g., mechanical, mopped, self-adhered)	SELF ADHERED		
Sheet Width (inches)	36		
Size Per Roll (sq. ft.)	432		
Weight Per Roll (pounds)			
5. AVAILABILITY RESTRICTED REGIONALLY (yes/no)	NO	NO	NO
6. RECOMMENDED FOR APPLICATION WITH:			
Asphalt Shingles	X		
Fiber-Cement Roof Components	X	X	
Clay Tile	X	X	X
Concrete Tile	X	X	X
Metal Roof Components			
Slate	X		X
Wood Shakes/Shingles	X	X	
Other (specify)			
7. YEAR PRODUCT FIRST SOLD		1978	1992
8. NUMBER OF SQUARES INSTALLED			
9. DISTRIBUTION			
Distributors (number handling product or no)			
Direct (number of regional service locations or no)			
10. UL-CLASSIFIED PREPARED ROOFING ACCESSORY (yes/no)	YES	NO	
COMPLIES WITH:			
11A. ASTM D 224-89 STANDARD SPECIFICATION FOR SMOOTH-SURFACED ASPHALT ROLL ROOFOING (ORGANIC FELT ) (type or NA)	NA	NA	NA
Type I--Minimum net mass per unit area of roofing, 39.8lb/100 ft <sup>2</sup>			
Type II--Minimum net mass per unit area of roofing, 54.6 lb/100 ft <sup>2</sup>			
Type III--Minimum net mass per unit area of roofing, 51.1lb/100 ft <sup>2</sup>			
Type IV--Minimum net mass per unit area of roofing, 39.8 lb/100 ft <sup>2</sup>			
11B. ASTM D 226-95 STANDARD SPECIFICATION FOR ASPHALT-SATURATED ORGANIC FELT USED IN ROOFING & WATERPROOFING (type or NA)	NA	NA	NA
Type I--Commonly called No. 15 asphalt felt			
Type II--Commonly called No. 30 asphalt felt			
11C. ASTM D 2626-95 STANDARD SPECIFICATION FOR ASPHALT-SATURATED AND COATED ORGANIC FELT BASE SHEET USED IN ROOFING (yes, no or NA)	NA	YES	NA
11D. ASTM D 4869-88 (1993) STANDARD SPECIFICATION FOR ASPHALT - SATURATED ORGANIC FELT SHINGLE UNDERLAYMENT USED IN ROOFING	NA	NA	NA
Type I--Shingle Underlayment			
Type II--Heavy Duty Shingle Underlayment			
11E. ASTM D 1970-95 STANDARD SPECIFICATION FOR SELF-ADHERING POLYMER MODIFIED BITUMINOUS SHEET MATERIAL USED AS STEEP ROOFING UNDERLAYMENT FOR ICE DAM PROTECTOIN (yes, no, or NA)	YES	NA	NA
11F. OTHER ASTM SPECIFICATION (specify)			
12. ACCEPTED BY THE FOLLOWING CODES	BOCA ICBO SBCCI	BOCA ICBO SBCCI	BOCA ICBO SBCCI
13. FOR SALES INFORMATION, CONTACT:	ATLAS REGIONAL SALES OFFICES (SEE APPENDIX)	ATLAS REGIONAL SALES OFFICES (SEE APPENDIX)	ATLAS REGIONAL SALES OFFICES (SEE APPENDIX)
FOR TECHNICAL INFORMATION, CONTACT:	770/933-4478	770/933-4478	770/933-4478
14. SEE APPENDIX IF CHECKED	X	X	X

NA=not applicable

# Underlayment Sheets

ATLAS ROOFING CORPORATION	CERTAINEED CORPORATION	CERTAINEED CORPORATION	CERTAINEED CORPORATION	CERTAINEED CORPORATION	CERTAINEED CORPORATION
PREMIUM FLAT FELT (PFF)	ROOFERS' SELECT	WINTERGUARD WATERPROOFING SHINGLE UNDERLAYMENT	WINTERGUARD W.S.U. SHORT ROLL	STORMSHIELD / BLACK DIAMOND BASE SHEET	#15 PLAIN FELT - UL
	X				X
X	X				
		X	X	X	
COMPOSITE	COMPOSITE				TYPE I (D 266)
36 432	36 432 44				36 432 54
		MODIFIED ASPHALT	MODIFIED ASPHALT	MODIFIED BITUMEN	
		1	1	1	
		MODIFIED ASPHALT SELF-ADHERED	MODIFIED ASPHALT SELF-ADHERED	MODIFIED ASPHALT SELF-ADHERING	
		36	36	36	
		195	97.5	95/195/225	
		69	36	35/68/78	
NO	NO	NO	NO	NO	NO
X	X	X	X	X	X
		X	X	X	
		X	X	X	X
		X	X	X	X
		X	X	X	X
		X	X	X	X
				BUR SYSTEMS	
1997	1998	1987	1991	1987	
	YES				
	NO			NO	NO
YES	YES	YES	YES	YES	YES
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	X
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	YES
NA	NA	YES	YES	YES	NA
	WISCONSIN DILHR	WISCONSIN DILHR	WISCONSIN DILHR	ICBO, FM, MIAMI-DADE CNTY, FL	ICBO, MIAMI-DADE CNTY, FL
ATLAS REGIONAL SALES OFFICES (SEE APPENDIX) 770/933-4478	LOCAL OFFICE 800/322-3060	LOCAL OFFICE 800/322-3060	LOCAL OFFICE 800/322-3060	LOCAL OFFICE 800/322-3060	LOCAL OFFICE 800/322-3060
X	X	X	X	X	X

# Underlayment Sheets

1. COMPANY NAME	CERTAINTeed CORPORATION	FIELDS COMPANY, LLC	FIELDS COMPANY, LLC
2. PRODUCT NAME OR DESCRIPTION	#30 PLAIN FELT - UL	F10 SHAKELINER	F12 SHAKELINER
3. PRODUCT CATEGORY			
A. Organic Asphalt-Saturated Felt, Unperforated	X	X	X
B. Organic Asphalt-Saturated Felt, Coated			
C. Asphalt Fiberglass Felt			
D. Special "Ice Shield" Underlayment			
4A. PRODUCT INFORMATION (FOR PRODUCTS IN CATEGORY 3A, 3B, OR 3C)			
Type (ASTM standard [specify] or generic)	TYPE II (D 266)	NO. 30	NO. 30
Available as Specialty Underlayment (type, e.g., shake felt)		SHAKE FELT	SHAKE FELT
Sheet Width (inches)	36	18	18
Size Per Roll (sq. ft.)	216	180	180
Weight Per Roll (pounds)	54	27	32
4B. PRODUCT INFORMATION (FOR PRODUCTS IN CATEGORY 3D)			
Kind of Sheet(s) (e.g., felts, modified bitumen)			
Number Of Ply(ies)/Sheets Comprising Underlayment			
Waterproofing Medium (e.g., asphalt, modified asphalt)			
Application Method (e.g., mechanical, mopped, self-adhered)			
Sheet Width (inches)			
Size Per Roll (sq. ft.)			
Weight Per Roll (pounds)			
5. AVAILABILITY RESTRICTED REGIONALLY (yes/no)	NO	NO	NO
6. RECOMMENDED FOR APPLICATION WITH:			
Asphalt Shingles	X		
Fiber-Cement Roof Components			
Clay Tile	X		
Concrete Tile	X		
Metal Roof Components	X		
Slate	X		
Wood Shakes/Shingles	X	X	X
Other (specify)			
7. YEAR PRODUCT FIRST SOLD		1988	1988
8. NUMBER OF SQUARES INSTALLED		1 MILLION +	1 MILLION +
9. DISTRIBUTION			
Distributors (number handling product or no)		1,000 +	1,000 +
Direct (number of regional service locations or no)	NO		
10. UL-CLASSIFIED PREPARED ROOFING ACCESSORY (yes/no)	YES	NO	NO
COMPLIES WITH:			
11A. ASTM D 224-89 STANDARD SPECIFICATION FOR SMOOTH-SURFACED ASPHALT ROLL ROOFING (ORGANIC FELT) (type or NA)	NA	NA	NA
Type I—Minimum net mass per unit area of roofing, 39.8lb/100 ft <sup>2</sup>			
Type II—Minimum net mass per unit area of roofing, 54.6 lb/100 ft <sup>2</sup>			
Type III—Minimum net mass per unit area of roofing, 51.1lb/100 ft <sup>2</sup>			
Type IV—Minimum net mass per unit area of roofing, 39.8 lb/100 ft <sup>2</sup>			
11B. ASTM D 226-95 STANDARD SPECIFICATION FOR ASPHALT-SATURATED ORGANIC FELT USED IN ROOFING & WATERPROOFING (type or NA)			
Type I—Commonly called No. 15 asphalt felt			
Type II—Commonly called No. 30 asphalt felt	X		
11C. ASTM D 2626-95 STANDARD SPECIFICATION FOR ASPHALT-SATURATED AND COATED ORGANIC FELT BASE SHEET USED IN ROOFING (yes, no or NA)	YES	NA	NA
11D. ASTM D 4869-88 (1993) STANDARD SPECIFICATION FOR ASPHALT-SATURATED ORGANIC FELT SHINGLE UNDERLAYMENT USED IN ROOFING			
Type I—Shingle Underlayment		NA	NA
Type II—Heavy Duty Shingle Underlayment			
11E. ASTM D 1970-95 STANDARD SPECIFICATION FOR SELF-ADHERING POLYMER MODIFIED BITUMINOUS SHEET MATERIAL USED AS STEEP ROOFING UNDERLAYMENT FOR ICE DAM PROTECTOIN (yes, no, or NA)	NA	NA	NA
11F. OTHER ASTM SPECIFICATION (specify)			
12. ACCEPTED BY THE FOLLOWING CODES	ICBO, MIAMI-DADE CNTY, FL		
13. FOR SALES INFORMATION, CONTACT:	LOCAL OFFICE	M. FIELDS 800/627-4098	M. FIELDS 800/627-4098
FOR TECHNICAL INFORMATION, CONTACT:	800/322-3060	T. VANDERLINDA 800/627-4098	T. VANDERLINDA 800/627-4098
14. SEE APPENDIX IF CHECKED	X		

NA=not applicable

# Underlayment Sheets

FIELDS COMPANY, LLC	FIELDS COMPANY, LLC	FIELDS COMPANY, LLC	FIELDS COMPANY, LLC	FIELDS COMPANY, LLC	FIELDS COMPANY, LLC
F15 TYPE 30 ASTM SHAKELINER	F 20 2-SQUARE SHAKELINER	F 22 2-SQUARE NO. 30 FELT	F 25 2-SQUARE TYPE 30 ASTM FELT	F 30 3-SQUARE NO. 15 FELT	F 32 3-SQUARE NO. 15 FELT
X	X	X	X	X	X
TYPE II (D226) SHAKE FELT	NO. 30	NO. 30	TYPE II (D 226)	NO. 15	NO. 15
18	36	36	36	36	36
180	216	216	216	324	324
48	32	38	60	28	31
NO	NO	NO	NO	NO	NO
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X
X					
1988	1988	1988	1988	1988	1988
1 MILLION +	1 MILLION +	1 MILLION +	1 MILLION +	1 MILLION +	1 MILLION +
1,000 +	1,000 +	1,000 +	1,000 +	1,000 +	1,000 +
YES	NO	NO	YES	NO	NO
NA	NA	NA	NA	NA	NA
TYPE II			TYPE II		
NA	NA	NA	NA	NA	NA
NA					
NA	NA	NA	NA	NA	NA
BOCA, ICBO, SBCCI			BOCA ICBO SBCCI		
M. FIELDS 800/627-4098	M. FIELDS 800/627-4098	M. FIELDS 800/627-4098	M. FIELDS 800/627-4098	M. FIELDS 800/627-4098	M. FIELDS 800/627-4098
T. VANDERLINDA 800/627-4098	T. VANDERLINDA 800/627-4098	T. VANDERLINDA 800/627-4098	T. VANDERLINDA 800/627-4098	T. VANDERLINDA 800/627-4098	T. VANDERLINDA 800/627-4098

# Underlayment Sheets

1. COMPANY NAME	FIELDS COMPANY, LLC	FIELDS COMPANY, LLC	FIELDS COMPANY, LLC
2. PRODUCT NAME OR DESCRIPTION	F 35 3-SQUARE TYPE 15 ASTM FELT	F 40 4-SQUARE NO. 15 FELT	F 42 4-SQUARE NO. 15 FELT
3. PRODUCT CATEGORY			
A. Organic Asphalt-Saturated Felt, Unperforated	X	X	X
B. Organic Asphalt-Saturated Felt, Coated			
C. Asphalt Fiberglass Felt			
D. Special "Ice Shield" Underlayment			
4A. PRODUCT INFORMATION (FOR PRODUCTS IN CATEGORY 3A, 3B, OR 3C)			
Type (ASTM standard [specify] or generic)	TYPE 1 (D 226)	NO. 15	NO. 15
Available as Specialty Underlayment (type, e.g., shake felt)			
Sheet Width (inches)	36	36	36
Size Per Roll (sq. ft.)	324	432	432
Weight Per Roll (pounds)	41	37	41
4B. PRODUCT INFORMATION (FOR PRODUCTS IN CATEGORY 3D)			
Kind of Sheet(s) (e.g., felts, modified bitumen)			
Number Of Ply(ies)/Sheets Comprising Underlayment			
Waterproofing Medium (e.g., asphalt, modified asphalt)			
Application Method (e.g., mechanical, mopped, self-adhered)			
Sheet Width (inches)			
Size Per Roll (sq. ft.)			
Weight Per Roll (pounds)			
5. AVAILABILITY RESTRICTED REGIONALLY (yes/no)	NO	NO	NO
6. RECOMMENDED FOR APPLICATION WITH:			
Asphalt Shingles	X	X	X
Fiber-Cement Roof Components	X	X	X
Clay Tile	X	X	X
Concrete Tile	X	X	X
Metal Roof Components	X	X	X
Slate	X	X	X
Wood Shakes/Shingles			
Other (specify)			
7. YEAR PRODUCT FIRST SOLD	1988	1988	1988
8. NUMBER OF SQUARES INSTALLED	1 MILLION +	1 MILLION +	1 MILLION +
9. DISTRIBUTION			
Distributors (number handling product or no)	1,000 +	1,000 +	1,000 +
Direct (number of regional service locations or no)			
10. UL-CLASSIFIED PREPARED ROOFING ACCESSORY (yes/no)	YES	NO	NO
COMPLIES WITH:			
11A. ASTM D 224-89 STANDARD SPECIFICATION FOR SMOOTH-SURFACED ASPHALT ROLL ROOFING (ORGANIC FELT) (type or NA)	NA	NA	NA
Type I—Minimum net mass per unit area of roofing, 39.8lb/100 ft <sup>2</sup>			
Type II—Minimum net mass per unit area of roofing, 54.6 lb/100 ft <sup>2</sup>			
Type III—Minimum net mass per unit area of roofing, 51.1lb/100 ft <sup>2</sup>			
Type IV—Minimum net mass per unit area of roofing, 39.8 lb/100 ft <sup>2</sup>			
11B. ASTM D 226-95 STANDARD SPECIFICATION FOR ASPHALT-SATURATED ORGANIC FELT USED IN ROOFING & WATERPROOFING (type or NA)			
Type I—Commonly called No. 15 asphalt felt	TYPE I		
Type II—Commonly called No. 30 asphalt felt			
11C. ASTM D 2626-95 STANDARD SPECIFICATION FOR ASPHALT-SATURATED AND COATED ORGANIC FELT BASE SHEET USED IN ROOFING (yes, no or NA)	NA	NA	NA
11D. ASTM D 4869-88 (1993) STANDARD SPECIFICATION FOR ASPHALT-SATURATED ORGANIC FELT SHINGLE UNDERLAYMENT USED IN ROOFING			
Type I—Shingle Underlayment			
Type II—Heavy Duty Shingle Underlayment			
11E. ASTM D 1970-95 STANDARD SPECIFICATION FOR SELF-ADHERING POLYMER MODIFIED BITUMINOUS SHEET MATERIAL USED AS STEEP ROOFING UNDERLAYMENT FOR ICE DAM PROTECTOIN (yes, no, or NA)	NA	NA	NA
11F. OTHER ASTM SPECIFICATION (specify)			
12. ACCEPTED BY THE FOLLOWING CODES	BOCA ICBO SBCCI		
13. FOR SALES INFORMATION, CONTACT:	M. FIELDS 800/627-4098	M. FIELDS 800/627-4098	M. FIELDS 800/627-4098
FOR TECHNICAL INFORMATION, CONTACT:	T. VANDERLINDA 800/627-4098	T. VANDERLINDA 800/627-4098	T. VANDERLINDA 800/627-4098
14. SEE APPENDIX IF CHECKED			

NA=not applicable

# Underlayment Sheets

FIELDS COMPANY, LLC	GAF MATERIALS CORP.	GAF MATERIALS CORP.	GAF MATERIALS CORP.	GLOBE BUILDING MATERIALS, INC.	GLOBE BUILDING MATERIALS, INC.
F 45 4-SQUARE TYPE 15 ASTM FELT	SHINGLE-MATE	WEATHER WATCH	STORMGUARD WATERPROOF UNDERLAYMENT	SHINGLE UNDERLAYMENT	#15 PLAIN FELT
X				X	X
	X				
		X	X		
TYPE I (D 226)	COMPOSITE			NO. 15	NO. 15
36	36			36	36
432	400			400	432
53	30				
		MODIFIED BITUMEN	MODIFIED BITUMEN		
		1	1		
		MODIFIED ASPHALT SELF-ADHERING	MODIFIED ASPHALT SELF-ADHERING		
		36	36		
		150	200		
		70	67		
NO	NO	NO	NO	NO	NO
X	X	X	X	X	X
X		X	X		
X					
X					
X					
X				X	
1988	1984	1987	1997	1987	1955
1 MILLION +					
1,000 +					
YES	NO	YES	YES	YES	YES
NA	NA	NA	NA	NA	NA
	NA	NA	NA		
TYPE I					
NA	NA	NA	NA	NA	NA
	NA	NA	NA		
NA	NA	NO	NO	NA	NA
BOCA ICBO SBCCI					
M. FIELDS 800/627-4098	GAF REGIONAL SALES OFFICE	GAF REGIONAL SALES OFFICE	GAF REGIONAL SALES OFFICE	219/473-4500	219/473-4500
T. VANDERLINDA 800/627-4098	800/ROOF-411	800/ROOF-411	800/ROOF-411	219/473-4500	219/473-4500
	X	X	X		

# Underlayment Sheets

1. COMPANY NAME	GLOBE BUILDING MATERIALS, INC.	GLOBE BUILDING MATERIALS, INC.	GLOBE BUILDING MATERIALS, INC.
2. PRODUCT NAME OR DESCRIPTION	#15 PREMIUM	#30 PLAIN	18" SHAKE FELT
3. PRODUCT CATEGORY			
A. Organic Asphalt-Saturated Felt, Unperforated	X	X	X
B. Organic Asphalt-Saturated Felt, Coated			
C. Asphalt Fiberglass Felt			
D. Special "Ice Shield" Underlayment			
4A. PRODUCT INFORMATION (FOR PRODUCTS IN CATEGORY 3A, 3B, OR 3C)			
Type (ASTM standard [specify] or generic)	TYPE I (D 226)	NO. 30	NO. 30
Available as Specialty Underlayment (type, e.g., shake felt)			
Sheet Width (inches)	36	36	18
Size Per Roll (sq. ft.)	432	216	108
Weight Per Roll (pounds)			
4B. PRODUCT INFORMATION (FOR PRODUCTS IN CATEGORY 3D)			
Kind of Sheet(s) (e.g., felts, modified bitumen)			
Number Of Ply(ies)/Sheets Comprising Underlayment			
Waterproofing Medium (e.g., asphalt, modified asphalt)			
Application Method (e.g., mechanical, mopped, self-adhered)			
Sheet Width (inches)			
Size Per Roll (sq. ft.)			
Weight Per Roll (pounds)			
5. AVAILABILITY RESTRICTED REGIONALLY (yes/no)	NO	NO	NO
6. RECOMMENDED FOR APPLICATION WITH:			
Asphalt Shingles	X	X	
Fiber-Cement Roof Components			
Clay Tile			
Concrete Tile			
Metal Roof Components			
Slate			
Wood Shakes/Shingles			X
Other (specify)			
7. YEAR PRODUCT FIRST SOLD		1955	1987
8. NUMBER OF SQUARES INSTALLED			
9. DISTRIBUTION			
Distributors (number handling product or no)			
Direct (number of regional service locations or no)			
10. UL-CLASSIFIED PREPARED ROOFING ACCESSORY (yes/no)			
COMPLIES WITH:			
11A. ASTM D 224-89 STANDARD SPECIFICATION FOR SMOOTH-SURFACED ASPHALT ROLL ROOFING (ORGANIC FELT) (type or NA)	NA	NA	NA
Type I—Minimum net mass per unit area of roofing, 39.8lb/100 ft <sup>2</sup>			
Type II—Minimum net mass per unit area of roofing, 54.6 lb/100 ft <sup>2</sup>			
Type III—Minimum net mass per unit area of roofing, 51.1lb/100 ft <sup>2</sup>			
Type IV—Minimum net mass per unit area of roofing, 39.8 lb/100 ft <sup>2</sup>			
11B. ASTM D 226-95 STANDARD SPECIFICATION FOR ASPHALT-SATURATED ORGANIC FELT USED IN ROOFING & WATERPROOFING (type or NA)			
Type I—Commonly called No. 15 asphalt felt	X		
Type II—Commonly called No. 30 asphalt felt			
11C. ASTM D 2626-95 STANDARD SPECIFICATION FOR ASPHALT-SATURATED AND COATED ORGANIC FELT BASE SHEET USED IN ROOFING (yes, no or NA)	NA	NA	NA
11D. ASTM D 4869-88 (1993) STANDARD SPECIFICATION FOR ASPHALT-SATURATED ORGANIC FELT SHINGLE UNDERLAYMENT USED IN ROOFING			
Type I—Shingle Underlayment			
Type II—Heavy Duty Shingle Underlayment			
11E. ASTM D 1970-95 STANDARD SPECIFICATION FOR SELF-ADHERING POLYMER MODIFIED BITUMINOUS SHEET MATERIAL USED AS STEEP ROOFING UNDERLAYMENT FOR ICE DAM PROTECTOIN (yes, no, or NA)	NA	NA	NA
11F. OTHER ASTM SPECIFICATION (specify)			
12. ACCEPTED BY THE FOLLOWING CODES			
13. FOR SALES INFORMATION, CONTACT:	219/473-4500	219/473-4500	219/473-4500
FOR TECHNICAL INFORMATION, CONTACT:	219/473-4500	219/473-4500	219/473-4500
14. SEE APPENDIX IF CHECKED			

NA=not applicable

# Underlayment Sheets

GLOBE BUILDING MATERIALS, INC.	GLOBE BUILDING MATERIALS, INC.	MALARKEY ROOFING COMPANY	MALARKEY ROOFING COMPANY	MALARKEY ROOFING COMPANY	MALARKEY ROOFING COMPANY
EAVE & VALLEY SHIELD	EAVE & VALLEY SHIELD	#402 SATELLITE TYPE 15	#404 SATELLITE TYPE 30	#405 SATELLITE TYPE 30 SHAKELINER	ARCTIC SEAL #1' 70
		X	X	X	
X	X				X
		TYPE I (D 226)	TYPE II (D 226)	TYPE II (D 226) SHAKE FELT	
		36	36	18	
		432	216	180	
		57	58	49	
MODIFIED BITUMEN	MODIFIED BITUMEN				MODIFIED BITUMEN
1	1				1
MODIFIED ASPHALT SELF-ADHERING	MODIFIED ASPHALT SELF-ADHERING				MODIFIED ASPHALT SELF-ADHERING
36	36				36
108	195				225
43	75				70
NO	NO	YES	YES	YES	NO
X	X	X	X		X
X	X	X	X		X
X	X		X		X
X	X	X	X		X
X	X	X	X		X
X	X		X	X	X
					WATERPROOFING
1990	1990	1957	1957	1957	1993
		100+	100+	100+	100+
NA	NA	NA	NA	NA	NA
NA	NA	X	X	X	NA
NA	NA	YES	NA	NA	NA
NA	NA	X	X	X	NA
		NA	NA	NA	YES
		ICBO	ICBO	ICBO	ICBO
219/473-4500	219/473-4500	G. MALARKEY 800/545-1191	G. MALARKEY 800/545-1191	G. MALARKEY 800/545-1191	G. MALARKEY 800/545-1191
219/473-4500	219/473-4500	J. DECHANDT, M. MALARKEY	J. DECHANDT, M. MALARKEY	J. DECHANDT, M. MALARKEY	J. DECHANDT, M. MALARKEY

# Underlayment Sheets

1. COMPANY NAME	MALARKEY ROOFING COMPANY	MONSEY BAKOR DIV. OF HENRY CO.	MONSEY BAKOR DIV. OF HENRY CO.
2. PRODUCT NAME OR DESCRIPTION	#501 UDL SBS UNDERLAYMENT	EAVEGUARD SHINGLE UNDERLAYMENT	PERMA-SEAL FG METAL ROOF & TILE UNDERLAYMENT
3. PRODUCT CATEGORY			
A. Organic Asphalt-Saturated Felt, Unperforated			
B. Organic Asphalt-Saturated Felt, Coated			
C. Asphalt Fiberglass Felt	X		
D. Special "Ice Shield" Underlayment		X	X
4A. PRODUCT INFORMATION (FOR PRODUCTS IN CATEGORY 3A, 3B, OR 3C)			
Type (ASTM standard [specify] or generic)	4601		
Available as Specialty Underlayment (type, e.g., shake felt)			
Sheet Width (inches)	39		
Size Per Roll (sq. ft.)	200		
Weight Per Roll (pounds)	75		
4B. PRODUCT INFORMATION (FOR PRODUCTS IN CATEGORY 3D)			
Kind of Sheet(s) (e.g., felts, modified bitumen)	M ODIFIED BITUMEN	MODIFIED BITUMEN	MODIFIED BITUMEN
Number Of Ply(ies)/Sheets Comprising Underlayment	1	1	1
Waterproofing Medium (e.g., asphalt, modified asphalt)	MODIFIED ASPHALT	MODIFIED ASPHALT	MODIFIED ASPHALT
Application Method (e.g., mechanical, mopped, self-adhered)		SELF-ADHERING	SELF-ADHERING
Sheet Width (inches)	39	36	36
Size Per Roll (sq. ft.)	200	100/195/225	225
Weight Per Roll (pounds)	75	37/78/90	75
5. AVAILABILITY RESTRICTED REGIONALLY (yes/no)		NO	
6. RECOMMENDED FOR APPLICATION WITH:			
Asphalt Shingles	X	X	X
Fiber-Cement Roof Components			X
Clay Tile	X		X
Concrete Tile	X		X
Metal Roof Components	X		
Slate	X	X	X
Wood Shakes/Shingles	X	X	X
Other (specify)			
7. YEAR PRODUCT FIRST SOLD	1997	1983	1990
8. NUMBER OF SQUARES INSTALLED		800,000 +	
9. DISTRIBUTION			
Distributors (number handling product or no)	100+	200 +	200+
Direct (number of regional service locations or no)		NO	NO
10. UL-CLASSIFIED PREPARED ROOFING ACCESSORY (yes/no)		YES	
COMPLIES WITH:			
11A. ASTM D 224-89 STANDARD SPECIFICATION FOR SMOOTH-SURFACED ASPHALT ROLL ROOFING (ORGANIC FELT) (type or NA)	NA		
Type I—Minimum net mass per unit area of roofing, 39.8lb/100 ft <sup>2</sup>			
Type II—Minimum net mass per unit area of roofing, 54.6 lb/100 ft <sup>2</sup>			
Type III—Minimum net mass per unit area of roofing, 51.1lb/100 ft <sup>2</sup>			
Type IV—Minimum net mass per unit area of roofing, 39.8 lb/100 ft <sup>2</sup>			
11B. ASTM D 226-95 STANDARD SPECIFICATION FOR ASPHALT-SATURATED ORGANIC FELT USED IN ROOFING & WATERPROOFING (type or NA)		NA	
Type I—Commonly called No. 15 asphalt felt			
Type II—Commonly called No. 30 asphalt felt	X		
11C. ASTM D 2626-95 STANDARD SPECIFICATION FOR ASPHALT-SATURATED AND COATED ORGANIC FELT BASE SHEET USED IN ROOFING (yes, no or NA)	NA	NA	
11D. ASTM D 4869-88 (1993) STANDARD SPECIFICATION FOR ASPHALT - SATURATED ORGANIC FELT SHINGLE UNDERLAYMENT USED IN ROOFING	NA	NA	
Type I—Shingle Underlayment			
Type II—Heavy Duty Shingle Underlayment			
11E. ASTM D 1970-95 STANDARD SPECIFICATION FOR SELF-ADHERING POLYMER MODIFIED BITUMINOUS SHEET MATERIAL USED AS STEEP ROOFING UNDERLAYMENT FOR ICE DAM PROTECTOIN (yes, no, or NA)	NA	YES	NO
11F. OTHER ASTM SPECIFICATION (specify)		D 5147-91	
12. ACCEPTED BY THE FOLLOWING CODES			
13. FOR SALES INFORMATION, CONTACT:	G. MALARKEY 800/545-1191	W. MULLEN 800/523-0268	W. MULLEN 800/523-0268
FOR TECHNICAL INFORMATION, CONTACT:	J. DECHANDT, M. MALARKEY	S, LEONARD 972/494-5182	S. LEONARD 972/494-5182
14. SEE APPENDIX IF CHECKED			

NA=not applicable

# Underlayment Sheets

MONSEY BAKOR DIV. OF HENRY CO.	OWENS CORNING	OWENS CORNING	PABCO ROOFING PRODUCTS	TAMKO ROOFING PRODUCTS, INC.	TAMKO ROOFING PRODUCTS, INC.
PERMA-SEAL PE METAL ROOF & TILE UNDERLAYMENT	WEATHERLOCK M MAT FACED	WEATHERLOCK G GRANULATED SURFACE	ICE AND WATER GUARD	SHAKE UNDERLAYMENT	MASTER SMOOTH
				X	X
X	X	X	X		
				SHAKE FELT	TYPE II (D 224)
				18	36
				180	108
				28	55
MODIFIED BITUMEN	MODIFIED BITUMEN	MODIFIED BITUMEN	MODIFIED BITUMEN		
1	1	1	1		
MODIFIED ASPHALT SELF-ADHERING	MODIFIED ASPHALT SELF-ADHERING	MODIFIED ASPHALT SELF-ADHERING	MODIFIED ASPHALT SELF-ADHERED		
36	36	36	36		
225	100/200	100/200	225		
70			54		
	YES	YES	YES	NO	NO
X	X	X	X		X
X	X	X	X		
X	X	X	X		
X	X	X	X		
X	X	X	X		
X	X	X	X	X	
1998	1999	1997	1986		
			100000		
200+			100		
NO			NO	NO	NO
	NA	NA		NA	TYPE I
NA	NA			NA	NA
	NA	NA		NA	NA
	NA	NA		NA	NA
NO			YES	NA	NA
			ICBO		
W. MULLEN 800/523-0268 S. LEONARD 972/494-5182	800/GET-PINK	800/GET-PINK	R. VANDENBERG 253/272-0374 S. DINWIDDIE 606/858-3266	DISTRICT OFFICE	DISTRICT OFFICE
	800/GET-PINK	800/GET-PINK		TECHNICAL SERVICES 417/624-6644	TECHNICAL SERVICES 417/624-6644

# Underlayment Sheets

1. COMPANY NAME	TAMKO ROOFING PRODUCTS, INC.	TAMKO ROOFING PRODUCTS, INC.	TAMKO ROOFING PRODUCTS, INC.
2. PRODUCT NAME OR DESCRIPTION	NAIL-FAST	NO. 30 UL	NO. 30
3. PRODUCT CATEGORY			
A. Organic Asphalt-Saturated Felt, Unperforated		X	
B. Organic Asphalt-Saturated Felt, Coated	X		
C. Asphalt Fiberglass Felt			
D. Special "Ice Shield" Underlayment			
4A. PRODUCT INFORMATION (FOR PRODUCTS IN CATEGORY 3A, 3B, OR 3C)			
Type (ASTM standard [specify] or generic)	D 224, D 2626	TYPE II (D 226)	NO. 30
Available as Specialty Underlayment (type, e.g., shake felt)	TILE UNDERLAYMENT		
Sheet Width (inches)	36	36	36
Size Per Roll (sq. ft.)	216	216	216
Weight Per Roll (pounds)	86	58	34
4B. PRODUCT INFORMATION (FOR PRODUCTS IN CATEGORY 3D)			
Kind of Sheet(s) (e.g., felts, modified bitumen)			
Number Of Ply(ies)/Sheets Comprising Underlayment			
Waterproofing Medium (e.g., asphalt, modified asphalt)			
Application Method (e.g., mechanical, mopped, self-adhered)			
Sheet Width (inches)			
Size Per Roll (sq. ft.)			
Weight Per Roll (pounds)			
5. AVAILABILITY RESTRICTED REGIONALLY (yes/no)	NO	NO	NO
6. RECOMMENDED FOR APPLICATION WITH:			
Asphalt Shingles	X	X	X
Fiber-Cement Roof Components			
Clay Tile			
Concrete Tile	X		
Metal Roof Components	X		
Slate			
Wood Shakes/Shingles	X		
Other (specify)			
7. YEAR PRODUCT FIRST SOLD			
8. NUMBER OF SQUARES INSTALLED			
9. DISTRIBUTION			
Distributors (number handling product or no)			
Direct (number of regional service locations or no)			
10. UL-CLASSIFIED PREPARED ROOFING ACCESSORY (yes/no)		YES	YES
COMPLIES WITH:			
11A. ASTM D 224-89 STANDARD SPECIFICATION FOR SMOOTH-SURFACED ASPHALT ROLL ROOFING (ORGANIC FELT) (type or NA)		NA	NA
Type I—Minimum net mass per unit area of roofing, 39.8lb/100 ft <sup>2</sup>	TYPE I		
Type II—Minimum net mass per unit area of roofing, 54.6 lb/100 ft <sup>2</sup>			
Type III—Minimum net mass per unit area of roofing, 51.1lb/100 ft <sup>2</sup>			
Type IV—Minimum net mass per unit area of roofing, 39.8 lb/100 ft <sup>2</sup>			
11B. ASTM D 226-95 STANDARD SPECIFICATION FOR ASPHALT-SATURATED ORGANIC FELT USED IN ROOFING & WATERPROOFING (type or NA)	NA		NA
Type I—Commonly called No. 15 asphalt felt			
Type II—Commonly called No. 30 asphalt felt		X	
11C. ASTM D 2626-95 STANDARD SPECIFICATION FOR ASPHALT-SATURATED AND COATED ORGANIC FELT BASE SHEET USED IN ROOFING (yes, no or NA)	YES	NA	NA
11D. ASTM D 4869-88 (1993) STANDARD SPECIFICATION FOR ASPHALT-SATURATED ORGANIC FELT SHINGLE UNDERLAYMENT USED IN ROOFING	NA		
Type I—Shingle Underlayment			
Type II—Heavy Duty Shingle Underlayment			
11E. ASTM D 1970-95 STANDARD SPECIFICATION FOR SELF-ADHERING POLYMER MODIFIED BITUMINOUS SHEET MATERIAL USED AS STEEP ROOFING UNDERLAYMENT FOR ICE DAM PROTECTOIN (yes, no, or NA)	NA	NA	NA
11F. OTHER ASTM SPECIFICATION (specify)			
12. ACCEPTED BY THE FOLLOWING CODES		METRO-DADE COUNTY, FL	
13. FOR SALES INFORMATION, CONTACT:	DISTRICT OFFICE	DISTRICT OFFICE	DISTRICT OFFICE
FOR TECHNICAL INFORMATION, CONTACT:	TECHNICAL SERVICES 417/624-6644	TECHNICAL SERVICES 417/624-6644	TECHNICAL SERVICES 417/624-6644
14. SEE APPENDIX IF CHECKED			

NA=not applicable

# Underlayment Sheets

| TAMKO ROOFING PRODUCTS, INC.    |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| NO. 30-18" FELT                 | NO. 15                          | MOISTURE GUARD PLUS             | NO. 15 UL                       | NO. 150                         | 22" SHAKE UNDERLAYMENT          |
|                                 |                                 |                                 | X                               | X                               | X                               |
|                                 |                                 | X                               |                                 |                                 |                                 |
| NO. 30 SHAKE                    | NO. 15                          |                                 | TYPE I (D 226)                  | NO. 15                          | TYPE II (D226) SHAKE FELT       |
| 18                              | 36                              |                                 | 36                              | 36                              | 22                              |
| 108                             | 432                             |                                 | 432                             | 432                             | 220                             |
| 17                              | 33                              |                                 | 54                              | 41                              | 57                              |
|                                 |                                 | MODIFIED BITUMEN                |                                 |                                 |                                 |
|                                 |                                 | 1                               |                                 |                                 |                                 |
|                                 |                                 | MODIFIED ASPHALT SELF-ADHERING  |                                 |                                 |                                 |
|                                 |                                 | 39 3/8                          |                                 |                                 |                                 |
|                                 |                                 | 108/225                         |                                 |                                 |                                 |
|                                 |                                 | 43/86                           |                                 |                                 |                                 |
| NO                              | NO                              | NO                              | NO                              | NO                              |                                 |
|                                 | X                               | X                               | X                               | X                               |                                 |
|                                 |                                 |                                 |                                 |                                 |                                 |
|                                 |                                 |                                 |                                 |                                 |                                 |
| X                               | X                               |                                 |                                 |                                 | X                               |
|                                 |                                 |                                 |                                 |                                 |                                 |
|                                 |                                 |                                 |                                 |                                 |                                 |
|                                 |                                 |                                 |                                 |                                 |                                 |
| NO                              | YES                             | YES                             | YES                             | YES                             | NO                              |
|                                 |                                 |                                 |                                 |                                 |                                 |
| NA                              | NA                              | NA                              | NA                              | NA                              | NA                              |
|                                 |                                 |                                 |                                 |                                 |                                 |
|                                 |                                 |                                 |                                 |                                 |                                 |
| NA                              | NA                              | NA                              |                                 | NA                              |                                 |
|                                 |                                 |                                 | X                               |                                 | X                               |
| NA                              | NA                              | NA                              | NA                              | NA                              | NA                              |
|                                 |                                 |                                 |                                 |                                 |                                 |
| NA                              | NA                              | NA                              | NA                              | NA                              |                                 |
|                                 |                                 |                                 |                                 |                                 |                                 |
| NA                              | NA                              | YES                             | NA                              | NA                              | NA                              |
|                                 |                                 |                                 |                                 |                                 |                                 |
|                                 |                                 |                                 | METRO-DADE COUNTY, FL.          |                                 |                                 |
| DISTRICT OFFICE                 |
| TECHNICAL SERVICES 417/624-6644 |

# Underlayment Sheets

1. COMPANY NAME	TAMKO ROOFING PRODUCTS, INC.	TAMKO ROOFING PRODUCTS, INC.	TC MIRADRI
2. PRODUCT NAME OR DESCRIPTION	NO. 30 ASTM SHAKE UNDERLAYMENT	TILE UNDERLAYMENT	MIRADRI WIP 100
3. PRODUCT CATEGORY			
A. Organic Asphalt-Saturated Felt, Unperforated	X		
B. Organic Asphalt-Saturated Felt, Coated		X	
C. Asphalt Fiberglass Felt			
D. Special "Ice Shield" Underlayment			X
4A. PRODUCT INFORMATION (FOR PRODUCTS IN CATEGORY 3A, 3B, OR 3C)			
Type (ASTM standard [specify] or generic)	TYPE II (D226)		
Available as Specialty Underlayment (type, e.g., shake felt)	SHAKE FELT	TILE UNDERLAYMENT	
Sheet Width (inches)	18	36	
Size Per Roll (sq. ft.)	180	108	
Weight Per Roll (pounds)	47	74	
4B. PRODUCT INFORMATION (FOR PRODUCTS IN CATEGORY 3D)			
Kind of Sheet(s) (e.g., felts, modified bitumen)			MODIFIED BITUMEN
Number Of Ply(ies)/Sheets Comprising Underlayment			1
Waterproofing Medium (e.g., asphalt, modified asphalt)			MODIFIED ASPHALT
Application Method (e.g., mechanical, mopped, self-adhered)			SELF-ADHERING
Sheet Width (inches)			36
Size Per Roll (sq. ft.)			100/200
Weight Per Roll (pounds)			35/65
5. AVAILABILITY RESTRICTED REGIONALLY (yes/no)	NO	NO	YES
6. RECOMMENDED FOR APPLICATION WITH:			
Asphalt Shingles			X
Fiber-Cement Roof Components			X
Clay Tile			X
Concrete Tile		X	X
Metal Roof Components			
Slate			X
Wood Shakes/Shingles	X		
Other (specify)			
7. YEAR PRODUCT FIRST SOLD			1996
8. NUMBER OF SQUARES INSTALLED			
9. DISTRIBUTION			
Distributors (number handling product or no)			200+
Direct (number of regional service locations or no)			NO
10. UL-CLASSIFIED PREPARED ROOFING ACCESSORY (yes/no)	NO	NO	YES
11A. COMPLIES WITH:			
ASTM D 224-89 STANDARD SPECIFICATION FOR SMOOTH-SURFACED ASPHALT ROLL ROOFING (ORGANIC FELT) (type or NA)	NA	NA	NA
Type I—Minimum net mass per unit area of roofing, 39.8lb/100 ft <sup>2</sup>			
Type II—Minimum net mass per unit area of roofing, 54.6 lb/100 ft <sup>2</sup>			
Type III—Minimum net mass per unit area of roofing, 51.1lb/100 ft <sup>2</sup>			
Type IV—Minimum net mass per unit area of roofing, 39.8 lb/100 ft <sup>2</sup>			
11B. ASTM D 226-95 STANDARD SPECIFICATION FOR ASPHALT-SATURATED ORGANIC FELT USED IN ROOFING & WATERPROOFING (type or NA)			NA
Type I—Commonly called No. 15 asphalt felt	X	X	
Type II—Commonly called No. 30 asphalt felt			
11C. ASTM D 2626-95 STANDARD SPECIFICATION FOR ASPHALT-SATURATED AND COATED ORGANIC FELT BASE SHEET USED IN ROOFING (yes, no or NA)	NA	NA	NA
11D. ASTM D 4869-88 (1993) STANDARD SPECIFICATION FOR ASPHALT-SATURATED ORGANIC FELT SHINGLE UNDERLAYMENT USED IN ROOFING			NA
Type I—Shingle Underlayment			
Type II—Heavy Duty Shingle Underlayment			
11E. ASTM D 1970-95 STANDARD SPECIFICATION FOR SELF-ADHERING POLYMER MODIFIED BITUMINOUS SHEET MATERIAL USED AS STEEP ROOFING UNDERLAYMENT FOR ICE DAM PROTECTOIN (yes, no, or NA)	NA	NA	YES
11F. OTHER ASTM SPECIFICATION (specify)			
12. ACCEPTED BY THE FOLLOWING CODES			
13. FOR SALES INFORMATION, CONTACT:	DISTRICT OFFICE	DISTRICT OFFICE	TC MIRADRI
FOR TECHNICAL INFORMATION, CONTACT:	TECHNICAL SERVICES	TECHNICAL SERVICES	888/464-7234
	417/624-6644	417/624-6644	W. HARVIE
			888/464-7234
14. SEE APPENDIX IF CHECKED			

NA=not applicable

# Underlayment Sheets

TC MIRADRI	TC MIRADRI	WARRIOR ROOFING MANUFACTURING, INC.	WARRIOR ROOFING MANUFACTURING, INC.	WARRIOR ROOFING MANUFACTURING, INC.	WARRIOR ROOFING MANUFACTURING, INC.
MIRADRI WIP 200	MIRADRI WIP 300 HT	SHINGLE FELT	#15 W	#30 W	#15 ASTM
		X	X	X	X
X	X				
		TYPE I (D 4869)	TYPE I (D 4869)	NO. 30	TYPE I (D 226)
		36	36	36	36
		432	432	216	432
		36	40	40	50
MODIFIED BITUMEN	MODIFIED BITUMEN				
1	1				
MODIFIED ASPHALT SELF-ADHERING	MODIFIED ASPHALT SELF-ADHERING				
36	36				
200	200				
65	65				
		NO	NO	NO	NO
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
	X	X	X	X	X
	X	X	X	X	X
	HIGH TEMP APPLICATION				
1996	1996	1984	1988	1988	1978
		3 MILLION	18 MILLION	3.5 MILLION	72 MILLION
200+	200+	200 ±	200 ±	200 ±	200 ±
NO	NO	NO	NO	NO	NO
YES	YES	YES	YES	YES	YES
NA	NA	NA	NA	NA	NA
NA	NA				X
NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA
		X	X		
YES	YES	NA	NA	NA	NA
TC MIRADRI 888/464-7234 W. HARVIE 888/464-7234	TC MIRADRI 888/464-7234 W. HARVIE 888/464-7234	B. LA RUE 800/749-3358 D. CARDEN 800/749-3358			