Updated steep-slope standards

by **Mark S. Graham**

ASTM International recently changed its material standards that apply to steep-slope roll-roofing and underlayment products. If you specify, procure or install steep-slope roof systems, I encourage you to become familiar with these changes.

Roll roofing

In 2001, ASTM published a material standard applicable to asphalt-saturated organic felt products commonly used in roll-roofing applications. The standard is designated as ASTM D6380-01, "Standard Specification for Asphalt Roll Roofing (Organic Felt)." ("-01" designates the year of publication; in this case, it is 2001.)

ASTM D6380-01 provides three class designations, Class S, Class M and Class WS, defining smooth-surfaced, mineral granule-surfaced and wide-selvage-edge roll products, respectively. These classes further are divided into types. Classes S and WS include Types III and IV designations, and Class M includes a Type II designation only. These designations differentiate among products within the same class based on products' minimum net mass per unit area.

ASTM D6380-01 is intended to eventually replace ASTM's previous product standards applicable to roll-roofing products: ASTM D224, "Specification for Smooth-Surfaced Asphalt Roll Roofing (Organic Felt)"; ASTM D249, "Standard Specification for Asphalt Roll Roofing (Organic Felt) Surfaced with Mineral Granules"; and ASTM D371, "Standard Specification for Asphalt Roll Roofing (Organic Felt) Surfaced with Mineral Granules; Wide Selvage."

Underlayment

ASTM D4869, "Standard Specification for Asphalt-Saturated Organic Felt Underlayment Used in Steep Slope Roofing," which defines commodity-grade underlayment used in asphalt shingle roof systems, significantly has been expanded and updated. The new edition, ASTM D4869-02, incorporates requirements for conventional No. 15 and No. 30 steep-slope underlayment products that previously were defined by ASTM D226, "Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing."

ASTM D4869-02 provides four type classifications. Types I and III represent products that previously were classified by ASTM D4869, Types I and II, respectively. Types II and IV represent products previously described as complying with ASTM D226 Type I (No. 15) and ASTM D226 Type II (No. 30), respectively.

Because it is required by building codes, a specific advantage to having No. 15 and No. 30 underlayment products defined by ASTM D4869-02 is that the standard includes a liquid-water transmission test (shower test) for underlayment that ASTM D226 does not include. Also, ASTM D4869-02 includes maximum dimensional stability values of 2.00 percent for Types I and II products and 1.75 percent for Types III and IV products. These dimensional stability limits are intended to address wrinkling commonly associated with asphalt-saturated underlayment products.

ASTM also recently published a new underlayment standard, ASTM D6757-02, "Standard Specification for Inorganic Underlayment for Use with Steep Slope Roofing Products." This standard is intended to address specific requirements for fiberglass- or fiberglass composite-reinforced underlayment products.

ASTM D6757-02 incorporates test methods and requirements that are similar to ASTM D4869-02 but with specific performance requirements that are more appropriate to the product type. For example, though ASTM D4869-02 allows for maximum dimensional stability values of 2.00 percent and 1.75 percent as noted, ASTM D6757-02 allows for a maximum dimensional stability value of only 1.25 percent.

According to the standard's scope, ASTM D6757-02 is intended " ... to provide criteria for producing and evaluating underlayments with a significantly reduced tendency to wrinkle before or after the installation of steep roofing products."

Closing thoughts

If you are involved in specifying, purchasing or installing roll-roofing or underlayment products for steep-slope roof systems, I encourage you to implement these new standards.

Information regarding compliance of specific roll-roofing and underlayment products is available by contacting product manufacturers. Copies of the standards are available from ASTM by calling (610) 832-9585 or accessing its Web site, www.astm.org.



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