NRCA and ARMA have proposed a revision to ASTM D312
on-hand supplies. EVT and FP data for these samples are provided in Figure 3. Ten of the 14 tested samples did not meet the physical property requirements of the asphalt type of which the product was labeled.

Comparing EVT results from NRCA’s 1989, 2000 and 2014 tests show EVT values have increased notably over the years. Also, comparing FP results from the 2000 and 2014 studies show FP temperatures also have increased notably and currently are well in excess of the minimum 500 F value prescribed in ASTM D312.

These increases in EVT and FP temperatures undoubtedly have resulted in increases in asphalt kettle and tanker temperatures in the field to provide the asphalt EVT at the point of application.

**REVISING ASTM D312**

Based upon NIOSH’s document and IARC’s research, it is apparent asphalt fumes and the possible detrimental effects of overheating asphalt are best mitigated when asphalt kettle and tanker temperatures are kept to a minimum. To facilitate lowering of asphalt heating temperatures, NRCA and ARMA have proposed a revision to ASTM D312 that currently is being balloted.

The current ASTM D312 ballot includes establishing a 550 F maximum heating temperature for asphalt. This requirement is intended to supersede the current roofing industry guideline that calls for a maximum asphalt heating temperature 25 F less than the asphalt’s FP temperature. Some asphalt suppliers recommend in their SDs a maximum asphalt heating temperature 50 F less than the asphalt’s FP temperature.

In conjunction with prescribing a maximum heating temperature, the ballot also establishes maximum EVT values based upon the maximum tested values from NRCA’s 1989 study. These EVT values follow:

- **Type III mop application:** 430 F maximum
- **Type III mechanical spreader application:** 455 F maximum
- **Type IV mop application:** 470 F maximum
- **Type IV mechanical spreader application:** 485 F maximum

The ballot also includes adding a requirement that asphalt suppliers provide lot-specific EVT mop and mechanical spreader application values on their asphalt packaging or bills of lading.

The closing date for the ballot is in early June, and any comments received will be discussed during ASTM Committee D08’s June meeting.

NRCA will keep its members apprised of the ballot outcome and the timing of asphalt suppliers’ implementations of any new application guidelines.

**INTERIM RECOMMENDATIONS**

Until ASTM D312 is appropriately revised, NRCA recommends you do the following:

- Consult asphalt suppliers and product manufacturers for specific installation instructions and SDs—be aware some suppliers’ and manufacturers’ installation instructions are not consistent with their SDs.
- Carefully select asphalt—be aware of the asphalt’s actual EVT and FP temperature; do not rely on preprinted package labeling and consult asphalt suppliers for lot-specific EVT and FP temperature values.
- Make your field personnel aware of changing EVTs, FP temperatures and maximum asphalt heating temperatures.

NRCA members with questions regarding the health and safety of using hot asphalt are encouraged to contact NRCA’s Risk Management Section. Questions about asphalt application, testing or ASTM D312 can be directed to NRCA’s Technical Services Section. NRCA staff can be reached at (800) 323-9545.

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