

902-M-062 ASPHALT MATERIALS

(Adopted 07-15-21)

The Standard Specifications are revised as follows:

SECTION 415, BEGIN LINE 1, DELETE AND INSERT AS FOLLOWS:

**SECTION 415 – ~~BASE SEAL~~BLANK**

**415.01 Description**

~~This work shall consist of applying asphalt emulsion to the pavement surface in accordance with 105.03.~~

**MATERIALS**

**415.02 Materials**

~~Base seal materials shall be in accordance with the following:~~

~~Asphalt Emulsion, SS-1h, AE-NT — 902.01(b)~~

**CONSTRUCTION REQUIREMENTS**

**415.03 Equipment**

~~A distributor in accordance with 409.03(a) shall be used.~~

**415.04 Weather Limitations**

~~Base sealing operations shall not be conducted on a wet pavement or when the ambient air or pavement temperature is below 32°F.~~

**415.05 Preparation of Surface**

~~Surfaces shall be clean and free of any foreign or loose material.~~

**415.06 Application of Asphalt Material**

~~The base seal materials shall be applied to the pavement surface uniformly with a distributor at an application rate of 0.22 ±0.02 gal./sq yd.~~

**415.07 Protection of Surface**

~~The base seal materials shall cure a minimum of two hours after application before resuming paving operations.~~

**415.08 Method of Measurement**

~~The base seal will be measured by the ton complete in place.~~

**415.09 Basis of Payment**

~~The base seal will be paid for at the contract unit price per ton.~~

~~Payment will be made under:~~

<b>Pay Item</b>	<b>Pay Unit Symbol</b>
Base Seal .....	TON

The costs of all asphalt materials, surface preparation and all other necessary incidentals shall be included in the cost of the pay item.

SECTION 902, BEGIN LINE 17, INSERT AS FOLLOWS:

GRADE	58-28	64-22	64-28	70-22	70-28	76-22
ORIGINAL BINDER						
Flash Point, minimum, °C	230					
Viscosity, maximum, 3 Pa·s, Test Temp, °C	135					
DSR, G*/sin δ (delta), minimum, 1.00 kPa, Test Temp. @ 10 rad/s, °C	58	64	64	70	70	76
ROLLING THIN-FILM OVEN RESIDUE						
Mass Loss, maximum, %	1.00					
DSR, G*/sin δ (delta), minimum, 2.20 kPa, Test Temp. @ 10 rad/s, °C	58	64	64	70	70	76
PRESSURE AGING VESSEL (PAV) RESIDUE						
PAV Aging Temperature, °C	100 (Note 1)					
DSR, G* sin δ (delta), maximum, 5,000 kPa, Test Temp. @ 10 rad/s, °C (Note 3)	19	25	22	28	25	31
Physical Hardening	Report (Note 2)					
Creep Stiffness, S, maximum, 300 MPa, m-value, minimum, 0.300, Test Temp. @ 60 s, °C	-18	-12	-18	-12	-18	-12
Notes:	<ol style="list-style-type: none"> <li>1. Oven temperature tolerance shall be ±0.5°C.</li> <li>2. Physical Hardening is performed on a set of asphalt beams according to AASHTO T 313, Section 12.1, except the conditioning time is extended to 24 h ±10 minutes at 10°C above the minimum performance temperature. The 24 h stiffness and m-value are reported for information purposes only.</li> <li>3. Binders that have a G* sin δ (delta) of 5,001 to 6,000 Kpa will be considered acceptable if the phase angle is 42 degrees or greater.</li> </ol>					

SECTION 902, BEGIN LINE 96, INSERT AS FOLLOWS:

#### **4. Rapid Penetrating Emulsion, RPE**

The asphalt material comprising the rapid penetrating emulsion shall be in accordance with the following:

<i>Characteristics</i>	<i>Test Requirement</i>	<i>Test Method</i>
<i>Test on Emulsion</i>		
<i>Viscosity, Saybolt Furol at 25C, max.</i>	<i>50</i>	<i>AASHTO T 59</i>
<i>Sieve Test, %, max.</i>	<i>0.10</i>	<i>AASHTO T 59</i>
<i>Oil Distillate by Volume of Emulsified Asphalt, %, max.</i>	<i>1.0</i>	<i>AASHTO T 59</i>
<i>Identification Test, %, min.</i>	<i>60</i>	<i>ITM 599</i>
<i>Water Resistance Test, %, min.</i>	<i>60</i>	<i>ITM 598</i>
<i>Residue by Distillation*, %, min.</i>	<i>30</i>	<i>AASHTO T 59</i>
<i>Test on Residue</i>		
<i>Penetration (0.1 mm) at 25C, 100g, 5s, max.</i>	<i>150</i>	<i>AASHTO T 49</i>
<i>Ash Content, %, max.</i>	<i>1.0</i>	<i>AASHTO T 111</i>
<i>* The minimum sample size shall be 300g.</i>		