

STATE

OF

TENNESSEE

(Rev 10-1-99)

March 1, 2006

(Rev 01-24-08)

SPECIAL PROVISION

REGARDING

FILLING CRACKS IN FLEXIBLE PAVEMENT

Description. This work shall consist of cleaning and filling existing longitudinal and transverse cracks having a width of 3/16 inch or greater in flexible pavements and shoulders.

Method of Application. All cracks shall be thoroughly cleaned with high pressure, dry compressed air removing all vegetation, debris, moisture and foreign materials, as directed by the Engineer. The sealant shall be applied to the crack with a pressure feed wand system immediately after cleaning at a temperature within the range recommended by the Manufacturer of the sealant. The sealant shall be applied using the flush fill method. The crack shall be filled level with the asphalt surface. Immediately after placement of the sealant, a v-shaped rubber squeegee shall be use to level all excess material above the asphalt surface. Any sealant above the asphalt surface must be feathered out as directed by the Engineer. The crack filling will only be allowed when both the air and pavement temperatures are within the tolerances recommended by the Manufacturer of the material.

Materials. The sealant shall be a **Hot-Poured Elastic Type Joint Sealer, Type II** conforming to the requirements of ASTM D6690 with the following exceptions. The sealant shall be listed on the Department’s Qualified Products List 5. Section C. Hot Pour Joint Sealers.

The specification limits for sealant shall be as follows:

TEST

Cone Penetration (ASTM D5329)
Resilience (ASTM D5329)
Softening Point (ASTM D36)
Ductility, 77F (25C) (ASTM D113)
Flexibility (ASTM D3111 Modified)
Flow 140°F (60°C) (ASTM D5329)
Brookfield Viscosity, 400°F(204°C) (ASTM D2669)
Asphalt Compatibility (ASTM D5329)
Bitumen Content (ASTM D4)
Tensile Adhesion (ASTM D5329)
Safe Heating Temperature
Recommended Pour Temperature

Specification

20-40
30% min.
210°F (99°C) min.
16in (40cm) min.
Pass at 30°F (-1°C)
0.2in (0.5cm) max
100 Poise max.
Pass
60% min
400% min.
As recommended by the Manufacturer
As recommended by the Manufacturer

Storage, heating, application instructions and cautions shall be supplied with each shipment. The sealant shall be able to be reheated to application temperature at least once after the initial heat up without degradation of sealant specifications.

The joint sealer shall be a mixture of virgin synthetic rubber or reclaimed rubber or a combination of the 2 with asphalt and plasticizers and tacifiers. Ground cured rubber scrap shall not be used. The sealer shall be free of foreign materials, and when melted shall be free of lumps. The material will be kept within the temperature range recommended by the Manufacturer. The Contractor shall furnish the Engineer with a certified statement from the Manufacturer of the sealant showing compliance with this specification together with a certified copy of the test report.

Equipment. The melter-applicator shall be an oil jacketed double boiler type, equipped with an agitator and separate thermometers for both the oil bath and the melting vat. All equipment necessary for the satisfactory performance of this operation shall be on the job and approved by the Engineer before work will be permitted to begin.

Traffic Control. All traffic control shall be in accordance with the **Manual on Uniform Traffic Control Devices** (Section 6).

Performance. The Contractor shall repair/replace any crack sealant that fails to bond to the existing pavement within one year of initial placement. All costs to repair/replace the sealant shall be borne by the contractor.

Method of Measurement. Sealant for random cracks will be measured by the pound. At the beginning of each work day, the Engineer, or his appointed representative, shall document the amount of material in the heater-melter unit and log all additional material added during the day and measure the amount of material remaining in the heater melter at the end of each day to determine the total poundage used.

Basis of Payment. Payment for Crack Sealant, by the pound, shall be full compensation for the sealant in place, including cleaning of cracks and all incidentals of the work.