MATERIAL SPECIFICATION FOR HOT POURED RUBBERIZED ASPHALT JOINT SEALING COMPOUND

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1212.01 SCOPE

This specification covers hot poured rubberized asphalt compounds for sealing joints and cracks with a small amount of movement either in Portland cement concrete pavements or hot mix asphalt pavements.

1212.02 REFERENCES

This specification refers to the following standards, specifications, or publications:

ASTM International

D36-06 Standard Test Method for Softening Point of Bitumen (Ring and Ball Apparatus)
D70-08 Standard Test Method for Density of Semi-Solid Bituminous Materials (Pycnometer Method)
D5329-07 Test Methods for Sealants and Fillers, Hot-Applied, For Joints and Cracks in Asphaltic and Portland Cement Concrete Pavements

Ministry of Transportation Publications

LS-262 Method of Test for Bulk Relative Density of Compacted Bituminous Mixtures

National Standard Specifications

CAN/CGSB 37.50-M89 Hot Applied Rubberized Asphalt for Roofing and Waterproofing

1212.05 MATERIALS

1212.05.01 Hot-Poured Rubberized Asphalt Joint/Crack Sealant Compounds

Shipments of hot-poured rubberized asphalt joint/crack sealant compounds shall meet the requirements given in Table 1.

1212.07 PRODUCTION

1212.07.01 Pouring Point

The pouring point for hot-poured rubberized asphalt joint/crack sealant compounds shall be at least 10 °C lower than the safe heating temperature recommended by the manufacturer.

For hot-poured rubberized asphalt joint/crack sealant compounds used for sealing joints and cracks in Portland cement concrete pavements, the pouring point shall also be the lowest temperature to which the material is heated and at which it is suitable for filling a 12.5 mm wide and 40 mm deep groove formed between two blocks of concrete without inclusions of large air voids or discontinuities and without damage to the material.

For hot-poured rubberized asphalt joint/crack sealant compounds used for sealing joints and cracks in asphalt pavements, the pouring point shall also be the lowest temperature to which the material is heated and at which it is suitable for filling a 40 mm wide and 10 mm deep groove cut in asphaltic concrete pavement without inclusions of large air voids or discontinuities and without damage to the material.

1212.07.02 Packaging and Marking

The sealing compound shall be packaged in 22 kg or smaller units. It shall be contained in a polyethylene bag, and the bags, shall, in turn be placed in a metal container. Each container shall be legibly marked with the following information:

a) Designated trade name of the compound.

b) Manufacturer's name.

c) Batch number.

d) Date of manufacture.

e) Quantity contained.

1212.08 QUALITY ASSURANCE

1212.08.01 Testing Joint/Crack Sealant Compound

All samples of sealant compound that are used for sealing joints and cracks in hot mix asphalt pavements and Portland cement concrete pavements shall/will be tested for all of the attributes listed in Table 2, with the exceptions as noted.

TABLE 1
Testing Requirements

Test	Sealant Designation	
	"Southern Ontario Only"	**"All Districts"** (Note 1)
Cone Penetration @ 25 °C	≤ 90 units	-
Flow (mm)	≤ 5	≤ 3
Bond- 3 cycles @ 50% extension at-18 °C	Pass	-

Notes:
1. A successful field trial is required before a product is accepted for placement on the DSM.

TABLE 2
Testing Requirements

Test	Procedures Required for Hot-Poured Rubberized Joint / Crack Sealing Compounds Used in Hot Mix Asphalt Pavements	Procedures Required for Hot-Poured Rubberized Joint / Crack Sealing Compounds Used in Portland Cement Concrete Pavements
Sample Preparation	CAN/CGSB 37.50-M	CAN/CGSB 37.50-M
Cone Penetration	ASTM D5329	ASTM D5329
Resilience	ASTM D5329	ASTM D5329
Asphalt Compatibility (tested to 80 °C)	ASTM D5329- (Note 1)	Not Required
Bond (Non-Immersed) (Note 2)	ASTM D5329	ASTM D5329
Flow	ASTM D5329	ASTM D5329
Softening Point	ASTM D36- (Note 1)	Not Required
Relative Density	ASTM D70- (Note 1)	LS-262
Toughness	Not Required	CAN/CGSB 37.50-M

Notes:
1. For each batch of sealant compound used in hot mix asphalt pavements, the Contractor shall provide results for all of these tests. However, for re-heated sealant compounds that are sampled during construction, these tests will be completed at the discretion of the Bituminous Section in Downsview.
2. For each batch of "All Districts" products used as joint/crack sealant compound in hot mix asphalt pavements, the Contractor shall provide test results based on bond testing that is conducted in 3 cycles at -29 °C with both 50% and 200% extension. For each batch of "Southern Ontario Only" sealant used as joint/crack sealant compound in hot mix asphalt pavement, the Contractor shall provide test results based on bond testing that is conducted in 5 cycles at-18 °C with 50% extension.

   All re-heated sealant compounds sampled during construction will be tested in 5 cycles at -18 °C with 50% extension, or when used as joint/crack sealant compound in hot mix asphalt pavements, the samples will be tested, as specified by the Bituminous Section in Downsview.