MATERIAL SPECIFICATION FOR HOT-APPLIED RUBBERIZED ASPHALT WATERPROOFING MEMBRANE

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1213.01 SCOPE

This specification covers the material requirements for hot-applied rubberized asphalt (HRA) waterproofing membrane for structures.

1213.02 REFERENCES

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

Ontario Provincial Standard Specifications, Construction:

OPSS 914 Waterproofing Bridge Decks and Culverts with Hot-Applied Rubberized Asphalt Waterproofing Membrane

Ontario Ministry of Transportation Publications:

Laboratory Testing Manual:
LS-350 Low Temperature Flexibility of Hot-Applied Rubberized Asphalt Waterproofing Membrane
LS-351 Cone Penetration and Relative Density of Hot-Applied Rubberized Asphalt Waterproofing Membrane
LS-352 Flow of Hot-Applied Rubberized Asphalt Waterproofing Membrane

LS-353 Toughness and Ratio of Toughness to Peak Force and Adhesion of Hot-Applied Rubberized Asphalt Waterproofing Membrane
LS-354 Heat Stability of Hot-Applied Rubberized Asphalt Waterproofing Membrane
LS-360 Oven Aged Low Temperature Flexibility of Hot-Applied Rubberized (HRA) Asphalt Waterproofing Membrane

1213.03 DEFINITIONS

For the purpose of this specification, the following definitions apply:

Hot-Applied Rubberized Asphalt (HRA) Waterproofing Membrane means as defined in OPSS 914.

1213.05 MATERIALS

1213.05.01 HRA Waterproofing Membrane

The HRA waterproofing membrane, including oven aged samples, shall be according to Table 1.

1213.07 PRODUCTION

1213.07.01 Markings and Packaging

The following information shall be clearly shown on each package of HRA waterproofing membrane:

a) Product name.

b) Name of manufacturer.

c) Manufacturer's batch or lot number.

1213.08 QUALITY ASSURANCE

1213.08.01 Sampling and Lot Size

Sampling and lot size for the HRA waterproofing membrane shall be according to OPSS 914.

1213.08.02 Acceptance of HRA Waterproofing Membrane

The HRA waterproofing membrane shall be considered acceptable when all the properties listed above meet the acceptance values specified in Table 1.

Unacceptable HRA waterproofing membrane shall be subject to removal and replacement.

TABLE 1
HRA Waterproofing Membrane Properties - Acceptance Values

Test	Test Number	Acceptance Value
Low Temperature Flexibility at -25 °C	LS-350	Pass according to the requirements in LS-350 (no breaks or cracks).
Cone Penetration at 25 °C	LS-351	Max. 110 (0.1 mm)
Cone Penetration at 50 °C	LS-351	Max. 160 (0.1 mm)
Flow at 60 °C	LS-352	Max. 3 mm
Toughness	LS-353	Min. 5.5 joules
Toughness/Peak Force	LS-353	Min. 0.040 joules/newton
Adhesion	LS-353	A minimum of 2 of the 3 samples shall pass according to the requirements in LS-353.
Relative Density	LS-351	For Information
Heat Stability	LS-354	Pass all tests
Oven Aged Low Temperature Flexibility	LS-360	Pass according to the requirements in LS-360 (no breaks or cracks).