



**MATERIAL SPECIFICATION FOR
PROTECTION BOARD**

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1215.01 SCOPE

This specification covers the material requirements for protection board for use with hot-applied rubberized asphalt (HRA) waterproofing membranes.

1215.02 REFERENCES

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

Ontario Provincial Standards Specifications, Construction:

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

MTO Publications

MTO Laboratory Testing Manual:

LS-282 Method of Test for Quantitative Extraction of Asphalt Cement and Analysis of Extracted Aggregate
LS-355 Water Absorption of Protection Board
LS-356 Indentation/Puncture Test
LS-357 Compatibility
LS-358 Weather Simulation and Bond of Protection Board
LS-359 Thickness of Protection Board

1215.03 DEFINITIONS

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

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

1215.05 MATERIAL

1215.05.01 Protection Board

1215.05.01.01 General

Protection board shall be formed of asphalt and fillers between two fibreglass sheet materials. The thickness of the protection board shall be 3.60 ± 0.40 mm when tested according to this specification.

1215.05.01.02 Compatibility

When tested according to LS-357, the protection board shall show no evidence of puncture, delamination, pumping, stripping of the aggregates, or any signs of incompatibility between the boards and the asphaltic concrete or the HRA waterproofing membrane.

1215.05.01.03 Indentation/Puncture

When tested according to LS-356, the protection board shall have no punctures, tears or separations, and indentations shall be a minimum of 0.25 mm deep and not greater than 0.9 mm deep.

1215.05.01.04 Separation Material Between Boards

The protection board separation material, used to separate the boards and prevent bonding, shall be sand.

1215.05.01.05 Visual Appearance

The protection board shall have a uniform appearance and the fibre glass mesh shall be properly coated. Excess sand shall not be present on the protection board prior to placement.

1215.05.01.06 Water Absorption

When tested according to the Quality Assurance section, the specimens shall have a water absorption of less than or equal to 5.0% and shall show no deterioration such as stripping emulsification or loss of mass.

1215.05.01.07 Weather Simulation and Bond

When tested according to LS-358, the edge of the upper board shall not curl up more than 5 mm from the original horizontal position, and shall not delaminate within itself or debond from the HRA waterproofing membrane.

1215.07 PRODUCTION

1215.07.01 General

The protection board or the board separation material shall not be changed without the prior approval of the Owner.

Protection boards shall be coated on each side with a separation material.

1215.07.02 Dimensions

The thickness of the protection board shall be 3.6 mm ± 0.4 mm. The width of the protection board shall be 1100 mm ± 200 mm and the length of the board shall be 1500 mm ± 200 mm. The board shall have straight edges, square corners, and edges free of burrs and breakaways.

Notwithstanding the size tolerance above, all sheets in a shipment shall be of the same length and width within a tolerance of ± 5 mm and of uniform thickness within a tolerance of ± 0.25 mm.

1215.07.03 Storage

After manufacturing, protection boards shall be stored within the manufacturer's recommended temperature range, and in conditions that prevent water penetration and exposure to the elements.

1215.07.04 Markings and Packaging

The following information shall be clearly shown on each bundle of protection board:

- a) Product name.
- b) Name of manufacturer.
- c) Date of manufacture.

The material shall be packaged to permit shipping, handling, and storage without damage to the protection board.

1215.08 QUALITY ASSURANCE

1215.08.01 Sampling and Lot Size

Sampling and lot size for the protection board shall be as specified in OPSS 914.

1215.08.02 Acceptance of Thickness

Measurement of protection board thickness shall according to LS-359. Protection board shall be acceptable if the test result for thickness is 3.6 mm ± 0.4 mm.

1215.08.03 Acceptance of Water Absorption

The protection board shall be tested for water absorption according to LS-355. The protection board shall be acceptable if the water absorption is less than or equal to 5.0% and the protection boards shows no deterioration such as stripping emulsification or loss of mass.

1215.08.04 Acceptance of Indentation/Puncture

The protection board shall be tested for indentation/puncture according to LS-356. The protection board shall be acceptable if:

- a) The protection board shows no punctures; and
- b) Indentations are a minimum of 0.25 mm deep and not greater than 0.9 mm deep.

1215.08.05 Acceptance of Compatibility

The protection board shall be tested for compatibility according to LS-357. The protection board shall be acceptable if the board shows no evidence of puncture, delamination, pumping, stripping of the aggregates, or any signs of incompatibility between the boards and the asphaltic concrete or the HRA waterproofing membrane.

1215.08.06 Acceptance of Weather Simulation and Bond

Protection board shall be tested for weather simulation and bond according to LS-358. The protection board shall be acceptable if the edge of the upper board does not curl up more than 5 mm from the original horizontal position, and does not delaminate within itself or debond from the HRA waterproofing membrane.

1215.08.07 Asphalt Content

Protection board shall be tested for asphalt content according to LS-282. The asphalt content of the protection board shall be tested for information purposes only.