



**Note: The MUNI published in November 2021 replaces OPSS 1213 COMMON, March 1998 with no technical content changes.**

## **MATERIAL SPECIFICATION FOR HOT APPLIED RUBBERIZED ASPHALT WATERPROOFING MEMBRANE**

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<b>1213.01</b>	<b>SCOPE</b>

This specification covers the requirements for hot applied rubberized asphalt waterproofing membrane for bridge decks.

#### **1315.01.01 Specification Significance and Use**

This specification is written as a municipal-oriented specification. Municipal-oriented specifications are developed to reflect the administration, testing, and payment policies, procedures, and practices of many municipalities in Ontario.

Use of this specification or any other specification shall be according to the Contract Documents.

## **1315.01.02 Appendices Significance and Use**

Appendices are not for use in provincial contracts as they are developed for municipal use, and then, only when invoked by the Owner.

Appendices are developed for the Owner's use only.

Inclusion of an appendix as part of the Contract Documents is solely at the discretion of the Owner. Appendices are not a mandatory part of this specification and only become part of the Contract Documents as the Owner invokes them.

Invoking a particular appendix does not obligate an Owner to use all available appendices. Only invoked appendices form part of the Contract Documents.

The decision to use any appendix is determined by an Owner after considering their contract requirements and their administrative, payment, and testing procedures, policies, and practices. Depending on these considerations, an Owner may not wish to invoke some or any of the available appendices.

## **1213.02 REFERENCES**

When the Contract Documents indicate that municipal-oriented specifications are to be used and there is a municipal-oriented specification of the same number as those listed below, references within this specification to an OPSS shall be deemed to mean OPSS.MUNI, unless use of a provincial-oriented specification is specified in the Contract Documents. When there is not a corresponding municipal-oriented specification, the references below shall be considered to be the OPSS listed, unless use of a provincial-oriented specification is specified in the Contract Documents.

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

### **Ontario Provincial Standard Specifications, Construction:**

OPSS 914 Waterproofing Bridge Decks with Hot Applied Asphalt Membrane

### **National Standards of Canada:**

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

### **American Society for Testing and Materials:**

ASTM D 5329-92 - Test Methods for Sealants and Fillers, Hot Applied, for Joints and Cracks in Asphalt and Portland Cement Concrete Pavements

### **Ministry of Transportation Publications:**

MTO Field Guide, For the Acceptance of Hot Mix and Bridge Deck Waterproofing

## **1213.05 MATERIALS**

### **1213.05.01 General**

Under no circumstances shall this product be changed without the prior approval of the Contract Administrator.

**1213.05.02                      Composition**

The composition and general properties of the waterproofing membrane shall meet the requirements of CAN/CGSB-37.50 except that:

- a. the cone penetration at 50°C shall not be greater than 160, when tested according to ASTM D 5329.
- b. the specimens for Oven Aged Low Temperature Flexibility shall not show any cracking.
- c. the exception to the test result listed in "a." above for cone penetration shall apply to testing for heat stability.

**1213.08                              QUALITY ASSURANCE**

**1213.08.01                      Sampling and Testing**

Sampling and testing of the waterproofing membrane will be according to the CAN/CGSB-37.50 except as modified herein.

**1213.08.02                      Required Testing**

The following properties will be tested:

- Cone Penetration @ 25°C
- Cone Penetration @ 50°C
- Flow @ 60°C
- Low Temperature Flexibility @ -25°C
- Oven Aged Low Temperature Flexibility
- Toughness
- Toughness/Peak Force
- Mass Density
- Heat Stability

**1213.08.03                      Sample Preparation Variation from CAN/CGSB-37.50**

**1213.08.03.01                      Low Temperature Flexibility Test and Oven Aged Low Temperature Flexibility**

One large sample will be made on a 3 to 5 mm thick aluminum panel that has been treated with a releasing agent. The area of the film will be large enough to permit cutting out ten specimens, 25 mm by 150 mm, for testing.

**1213.08.04                      Testing Variation from CAN/CGSB-37.50**

**1213.08.04.01                      Low Temperature Flexibility Test**

The bend test on the five specimens will be applied solely to the film.

**1213.08.04.02                      Oven Aged Low Temperature Flexibility Test Procedure**

The procedure for testing for oven aged low temperature flexibility will be the same as that used for the low temperature flexibility testing except that the five specimens will be oven aged at 70°C ± 2°C for seven days after the initial 16 to 72 h conditioning and shall again be conditioned for 16 to 72 h after the oven aging prior to placing in the cold chamber.

**1213.08.04.03            Cone Penetration Test Procedure**

The testing will be according to ASTM D 5329.

**1213.08.04.04            Heat Stability**

The testing variations listed above for low temperature flexibility and cone penetration apply to testing for heat stability.

There will be no testing for viscosity.

**1213.08.05                Field Sampling**

Field sampling will be done according to OPSS 914 and the MTO Field Guide, for Acceptance of Hot Mix and Bridge Deck Waterproofing. Testing for heat stability will not be done.

The oven aged low temperature flexibility test and the heat stability test will not be conducted on the field samples.

**Appendix 1213-A, November 2021  
FOR USE WHILE DESIGNING MUNICIPAL CONTRACTS**

**Note:** This is a non-mandatory Commentary Appendix intended to provide information to a designer, during the design stage of a contract, on the use of the OPS specification in a municipal contract. This appendix does not form part of the standard specification. Actions and considerations discussed in this appendix are for information purposes only and do not supersede an Owner's design decisions and methodology.

**Designer Action/Considerations**

The designer should ensure that the General Conditions of Contract and the 100 Series General Specifications are included in the Contract Documents.

**Related Ontario Provincial Standard Drawings**

No information provided here.