



## **CONSTRUCTION SPECIFICATION FOR PATCHING OF ASPHALT PAVEMENT**

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This specification covers the requirements for patch repairs to asphalt pavement using emulsified asphalt patching material, or proprietary cold patching material (PCPM).

#### **307.02 REFERENCES**

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

##### **Ontario Provincial Standard Specifications, Material**

OPSS 1153 Emulsified Asphalt Patching Material and Proprietary Cold Patching Material

#### **307.03 DEFINITIONS**

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

**Binder** means the approved bituminous binding material conforming to the manufacturer's product specification.

**Proprietary Cold Patching Material (PCPM)** means a cold patching mix consisting of binder and aggregates, and manufactured by a specific company at their terminal, without further blending or modification prior to distribution to the work site.

**307.04 DESIGN AND SUBMISSION REQUIREMENTS**

**307.04.01 Submission Requirements**

Submission requirements for emulsified asphalt patching material or PCPM shall be according to OPSS 1153.

**307.05 MATERIALS**

**307.05.01 Emulsified Asphalt Patching Material**

Emulsified asphalt patching material shall be according to OPSS 1153.

**307.05.02 Proprietary Cold Patching Material**

The PCPM shall be according to OPSS 1153.

**307.06 EQUIPMENT**

**307.06.01 Placement and Compaction**

Method, equipment, and hand tools used for placing and compaction of patching material shall ensure durable work.

**307.07 CONSTRUCTION**

**307.07.01 General**

Asphalt repairs using patching material shall be carried out at the locations specified in the Contract Documents.

**307.07.02 Stockpiling**

If stockpiling of patching material is required, stockpiles shall be built to a maximum height of 3 m, and at locations specified in the Contract Documents or agreed between Contractor and Contractor Administrator. Stockpiles shall be constructed in such a manner that compaction, other than by the weight of the material itself, shall not result.

Equipment shall not be run over the surface of the stockpile.

**307.07.03 Delivery**

The mixture shall be transported in vehicles with smooth metal boxes in good and leak-proof condition, previously cleaned of all foreign materials.

Truck boxes shall be lightly coated with a uniform application of a release agent just prior to loading. If liquid agent is used, the truck boxes shall be drained after each application and prior to loading.

#### **307.07.04 Surface Preparation**

The surface on which the patching material is placed shall be free of dirt, sand, foreign matter and loose material. Standing water in the repair area shall be removed prior to placement of patching material, or follow the manufacturer's installation instructions if PCPM is used.

#### **307.07.05 Placement and Compaction**

##### **307.07.05.01 General**

At the time of use, stockpiled patching material shall exhibit uniform coating, good cohesion and workability.

During the patching operation the mixture placed shall adhere to the adjacent surfaces.

For repairs, patching material shall be placed in the repair area and compacted as specified in the Contract Documents. Placement and compaction of the patching material shall be sufficient to meet the requirements according to the Surface Appearance subsection.

For repairs greater than 50 mm in depth, the patching material shall be placed in lift thicknesses of maximum 50 mm in depth and each lift shall be compacted prior to the addition of the next lift.

#### **307.07.06 Surface Appearance**

After placement and final compaction of the patching material, patches shall be free of defective areas, including, but not limited to wheel track marking, ravelling, uneven surface, and fat spots.

#### **307.07.07 Material Sampling and Testing**

Patching material samples shall be provided when requested by the Owner. Samples may be requested before or during the construction. The samples shall be taken from the stockpile, truck, or during placement of the material.

Samples required for stripping resistance, workability, and cohesion testing shall be a minimum 25 kg. Samples required for extraction and gradation testing shall be a minimum 15 kg.

All samples shall be obtained, labeled and packaged in the presence of the Contract Administrator. Sample containers shall be supplied and shall be metal containers equipped with a wire handle and a tight fitted lid. Samples shall be labelled with the following information:

- a) Contract Number.
- b) Sampling date.
- c) Mixture type and name.
- d) Sampling location.
- e) Manufacturer's name.
- f) Contractor's name.
- g) Weather conditions at the time of sampling.
- h) Sampler's name.

Completed samples shall be submitted to the Contract Administrator for delivery to the Owner's designated laboratory.

**307.07.08 Management of Excess Material**

Management of excess material shall be as specified in the Contract Documents.

**307.08 QUALITY ASSURANCE**

**307.08.01 Acceptance**

The Contract Administrator shall determine the acceptance of all patching work based on all of the following:

- a) Visual observation of the patching material - During the time of patching, the mix used shall exhibit uniform coating, good cohesion, and workability.
- b) Surface appearance of the patch at the time of patching - All patches after final compaction shall be free of defective areas, including, but not limited to wheel track marking, raveling, uneven surface, and fat spots. Areas showing such defects shall be deemed rejectable.
- c) Continuity with adjacent surfaces.
- d) Conformance of the patching materials to the mixture property testing requirements - Test results for stripping resistance, workability and cohesion not meeting the mixture property testing requirements according to OPSS 1153 shall be deemed rejectable.

**307.08.02 Testing**

Patching material samples may be taken and tested by the Owner to ensure the material is according to OPSS 1153 and this specification.

The Owner may request the Contractor to provide test results showing that the patching material possesses the mixture property testing requirements according to OPSS 1153.

**307.08.03 Rejection**

All material and patches rejected by the Contract Administrator shall be removed and replaced. The replaced portion of the work shall meet the requirements of this specification.

**307.09 MEASUREMENT FOR PAYMENT**

**307.09.01 Actual Measurement**

**307.09.01.01 Emulsified Asphalt Patching Material  
Proprietary Cold Patching Material**

Measurement of patching material shall be by mass in tonnes.

**307.10 BASIS OF PAYMENT**

**307.10.01 Emulsified Asphalt Patching Material - Item  
Proprietary Cold Patching Material - Item**

Payment at the Contract price for the above tender items shall be full compensation for all labour, Equipment, and Material to do the work.