

53.4 ASPHALT PAVEMENT CRACK SEALING

53.4.1 GENERAL

The Work consists of supplying crack sealant and sealing cracks in asphalt concrete pavement.

53.4.2 MATERIALS

The Contractor shall supply the type and grade of asphalt/emulsified asphalt material generally accepted for this work from the Alberta Transportation Recognized Products list.

The use of other materials will be subject to the approval of the Engineer. In situations where the Contractor obtains approval to use a material not included in the "Recognized Products List", he shall provide the Engineer with the following information 5 days prior to commencing the Work:

- Name and mailing address of crack sealant supplier and manufacturer
- Name of crack sealant product to be supplied
- Written confirmation from the manufacturer that the crack sealant to be supplied meets all specified requirements along with test results that demonstrate that the product meets all specified requirements.

The Contractor shall verify that all crack sealant delivered and used in the Work is the type and grade ordered.

The Contractor shall supply the Engineer with the manufacturer's quality control test results, as identified in Table 53.4.2(A), for each batch of crack sealant. These test results shall be supplied at the time of delivery of each batch of crack sealant to the Work.

Table 53.4.2(A)

PRODUCT	QUALITY CONTROL TESTING REQUIREMENTS
COLD POUR	a) Uniformity EC-101 b) Viscosity ASTM D562 c) Solids Content ASTM D244 d) Rate of Curing (24 hour) EC-101
HOT POUR	a) Softening Point ASTM D36 b) Penetration @ 25EC ASTM D5 c) Viscosity ASTM D2170

53.4.3 PROCEDURE

The work area shall be a maximum of 3 kilometres in length.

No Work shall be performed during rain or snow or when the pavement surface or cracks are wet.

Crack sealant shall not be applied when the atmospheric temperature at the work site is below 0E Celsius.

All cracks within the entire width of the pavement surface, which are between 5 mm and 25 mm in width, shall be sealed.

Prior to the application of crack sealant, the Contractor shall ensure that the road surface adjacent to the cracks is clean.

Hot Pour crack sealant shall be heated to the temperature specified by the manufacturer. Overheating will not be permitted.

Crack sealant shall be applied within the manufacturer's specified temperature range. Crack sealant shall be applied so that the crack is flush filled immediately following application and a thin overband of sealant extends approximately 25 mm beyond the edges of the crack. Excess crack sealant shall be removed from the pavement surface immediately following application. Removal shall involve the use of a squeegee, starting from the centerline and proceeding to the shoulder.

Traffic shall be kept off sealed cracks until the crack sealant will not track under the action of traffic. At locations such as intersections where this is not practical, the Contractor shall prevent tracking by applying a blotting agent to the crack sealant.

When necessary, the Contractor shall supply one of the following blotting agents:

- screened sand with a maximum topsize of 2 mm
- cement
- flyash

The use of other products shall be subject to the approval of the Engineer.

Fuel, asphalt and any other spills shall be cleaned up to the satisfaction of the Engineer at the Contractor's expense.

53.4.4 SAMPLING AND TESTING

The Contractor shall retain copies of his supplier's QC testing results, and undertake the quality control and quality assurance testing as required by the QC/QA Program as shown in the Special Provisions. The Contractor shall supply material samples to the Engineer for QA (Audit) testing purposes when requested.

The Contractor shall provide the Engineer with one representative sample of crack sealant material for every 100 000 litres used.

53.4.5 ACCEPTANCE CRITERIA

Evaluation of the Work will be based on a visual inspection by the Engineer. To be acceptable, all applicable cracks must be treated as specified herein and at least 95% of the treated cracks must contain an adequate quantity of crack sealant material.

Failure to comply with the acceptance criteria will result in the Contractor re-treating all failed cracks at his own expense.

53.4.6 TIME TO COMPLETE

The Contractor shall complete the Work within 60 days of the issuance of the Work Order.

53.4.7 MEASUREMENT AND PAYMENT

Measurement will be in metres of the length of crack sealed.

Payment will be made at the unit price bid per metre for "Crack Sealing". This payment will be full compensation for cleaning the road surface adjacent to the cracks, supplying and applying the crack sealant, and all labour, materials, equipment, tools and incidentals necessary to complete the Work.

When the Engineer directs the Contractor to apply one of the aforementioned blotting agents, a supplementary payment will be made at the unit price bid per length of crack treated for "Crack Sealing - Blotting." This payment will be full compensation for supplying and applying the blotting agent and all labour, materials, equipment, tools and incidentals necessary to complete the Work.

53.4.8 WARRANTY

The warranty period for this Work shall be 20 days.