

Roads

Master Specification

RD-BP-S3 Supply of Pavement Crack Sealant

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RD-BP-S3 Supply of Pavement Crack Sealant

1 General

- 1.1 This Part specifies the requirements for the supply of elastomeric / crumb rubber sealants used for sealing cracks in existing asphalt and spray seal pavements.

2 Materials

General

- 2.1 Sealant used for pavement crack sealing must be a product approved by the Department. A list of approved crack sealants is included in the Department's Approved Products List, available from <https://www.dpti.sa.gov.au/standards>.
- 2.2 Approved crack sealants must comply with the requirements of this Part.
- 2.3 A manufacturer / Contractor may submit a request to the Department (email: DPTI.Tenders@sa.gov.au) for the approval of a crack sealant which is not included in the Approved Products List by providing:
- documented work method for application of the product (Clause 2.4);
 - evidence of successful trials (Clause 2.5); and
 - documented evidence of compliance with Clauses 2.6 through 2.8.
- 2.4 The Sealant Work Method must be provided detailing all procedures and relevant documentation for the application of the sealant for each crack sealing operation type and treated crack width range, types of sites and bituminous surfacings suitable for this work method.
- 2.5 The manufacturer / Contractor must demonstrate that the sealant is applicable to the types of sites and bituminous surfacings to be crack sealed by conducting trials. No separate payment will be made for the trials.

Sealant

- 2.6 The crack sealant material must:
- be a standard class bitumen to AS 2008 "Residual Bitumen for Pavements", modified with an appropriate polymer and crumb rubber, designed to penetrate the crack, adhere to the crack surface and side walls, and resist further crack activity;
 - meet the requirements of Table RD-BP-S3 2-1; and
 - not contain coal tar.
- 2.7 The manufacturer / Contractor must identify any fillers used in the sealant.
- 2.8 Test certificates must be provided yearly to email: DPTI.Tenders@sa.gov.au and not be greater than 12 months past issue date.

Table RD-BP-S3 2-1 Sealant Test Properties

Test Procedure	Test Name	Binder Property
Performance Related Properties		
AGPT/T121	Consistency at 60°C using mould A (Pa.s)	5000 minimum
AGPT/T121	Stiffness at 15°C using mould C (kPa)	150 maximum
Index Properties		

Test Procedure	Test Name	Binder Property
AGPT/T121	Elastic Recovery at 60°C, 100s (%)	70 minimum
AGPT/T121	Elastic Recovery at 15°C, 100s (%)	50 minimum
RMS T1181	Extensibility (%)	500 minimum
Handling Properties		
AGPT/T111	Viscosity at 165°C (Pa.s)	0.8 maximum
Production Control Properties		
AGPT/T122	Torsional Recovery at 25°C, 30s (%)	40 – 80
AGPT/T131	Softening Point Using Glycerine Bath (°C)	95 minimum
AS2341.12	Penetration 25°C, 100g, 5s (dm)	130 maximum

3 Test Procedures

3.1 The manufacturer / Contractor must use the following test procedures to verify conformance with this Part:

a) Austroads test methods

- i) AGPT/T121: Shear properties of polymer modified binders (ARRB elastometer).
- ii) AGPT/T111: Handling viscosity of polymer modified binders (Brookfield thermosel).
- iii) AGPT/T122: Torsional recovery of polymer modified binders
- iv) AGPT/T131: Softening point of polymer modified binders

b) Australian Standards

- i) AS2341.12: Methods of testing bitumen and related road making products - Penetration 25C, 100g, 5 s.

c) NSW Roads and Maritime Services:

- i) T1181: Extension Test for Hot Poured Elastomeric Joint Sealants