Transport Roads & Maritime Services

NSW GOVERNMENT

Test method T1181

Extension test for hot poured joint sealant

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Revision Summary

Ed/Rev Number	Clause Number	Description of Revision	Authorisation	Date
		Reformatted and Revision Summary Added	D.Dash	June 2001
Ed 2/ Rev 0	All	Reformatted RMS template	J Friedrich	November 2012

Note that Roads and Maritime Services is hereafter referred to as 'RMS'.

The most recent revision to Test method T1181 (other than minor editorial changes) are indicated by a vertical line in the margin as shown here.

Test method T1181

Extension test for hot poured joint sealant

1. Scope

This test method describes the procedure to determine the extensibility of a joint sealant when subjected to a rapid extension. This test method is adapted from that set out in the American Society for Testing and Material Designation, D3408 - 75T.

2. Apparatus

(a) A tensile testing machine of 5 kN capacity which permits the test specimen to be extended by 200 mm at a uniform of 5 mm min. Test specimen shall be held in self-aligning grips.

(b) Cement mortar blocks and assembly jig with base plate and annular ring as specified in Test Method T1172.

3. Preparation

Three test specimens shall be prepared as specified in Test Method T1172. The specimens shall be clearly marked for identification, and shall be cured for seven days at a temperature of 16 - 26ºC and at a relative humidity of 45 - 75%.

4. Procedure

(a) Measure and record the distance between the faces of the mortar blocks at three positions for each specimen.

(b) Grip the test specimen in the jaws of the tensile testing machine, at a temperature of 16-26ºC.

(c) Pull the mortar blocks apart at a rate of 5 mm/minute under standard laboratory conditions. Continue the extension until the sealant fails or the testing machine reaches the limit of its capability.

(d) Repeat the procedure outlined in (b) and (c) above on the remaining two specimens.

(e) Record the maximum extension in mm for each of the three test specimens.

(f) Record the type of failure, if any.

5. Calculation and Reporting

Calculate the extensibility for each sample according to the formula:

$$Extensibility = \frac{D}{M} \times 100\%$$

Where
D is the maximum extension in mm for each sample.
M is the corresponding mean of the distance between the faces of the concrete blocks of each sample prior to extension.

Report the extensibility as the mean of the three readings.
If the specimen failed report the type of failure, i.e. cohesion or adhesion.