



Transport
Roads & Maritime
Services

Test method T1192

Adhesion of sealant

NOVEMBER 2012



Revision Summary

Ed/Rev Number	Clause Number	Description of Revision	Authorisation	Date
		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 T1192 (other than minor editorial changes) are indicated by a vertical line in the margin as shown here.

Test method T1192

Adhesion of sealant

1. Scope

This extension and/or compression procedure tests for any adhesion or cohesion failure, as defined in the relevant specification of a sealant which is bonded to Portland cement concrete.

2. Apparatus

- (a) A machine capable of cycles of extension and compression at a uniform rate of 10mm/min. (e.g. Instron 1185).
- (b) Portland cement concrete blocks having one flat face of 50 x 140 mm and approximately 25 mm thick, cut from a slab of well compacted, high strength material
- (c) Assembly jig as detailed in Fig.1, set up so that the sealant may be poured into the space (100 x 50 x 13 mm) between the blocks.
- (d) A tension/compression jig as detailed in Fig. 2.

3. Preparation of Specimen

- (a) Prepare the blocks by one of the following methods:
 - (i) Dry blocks: Allow blocks to dry for 7 days after cutting.
 - (ii) Dry abraded blocks: Allow blocks to dry for 7 days after cutting. Abrasive blast the bonding faces with grit.
 - (iii) Saturated-surface-dry blocks: Soak the blocks in tap water for a minimum of 2 hours at room temperature. Remove the blocks from the water and blot them dry with folded paper towel to remove surface water. The sealant must then be applied within 10 minutes.
- (b) With a suitable release agent treat the base plate and those surfaces of the assembly jig that are to come into contact with the sealant.
- (c) Place the blocks in the assembly jig being careful not to touch the contact faces.
- (d) Prepare the sealant according to the supplier's instructions (e.g. thorough mixing of the components or heating to the specified pouring temperature).
- (e) Insert a 15 mm foam backing material into the space between the blocks and push it down to a position 30 mm below the top. Apply the sealant to a depth of approximately 12 mm above the backing material. (See Fig 3)
- (f) Allow the specimen to cure for the time specified by the supplier.

4. Conditioning of Specimens

Following the specified curing time and prior to adhesion testing condition three specimens as required by the specification.

5. Procedure

- (a) Measure and record the distance between the faces of the blocks to the nearest 0.5mm at three positions for each specimen.
- (b) Grip the specimen in the jaws of the testing machine and ensure that the distance between the blocks is equal to that measured in Testing Procedure (a).
- (c) Apply extension and/or compression as required by the specification at a rate 10mm per min. at $\pm 3^\circ\text{C}$ unless otherwise specified.
- (d) Record the maximum extension and/or compression and any cohesion or adhesive failure greater than 10% of the cross-sectional area.

6. Reporting

The report shall consist of an evaluation of the material according to the pass/fail criteria of the specification.

TEST ASSEMBLY

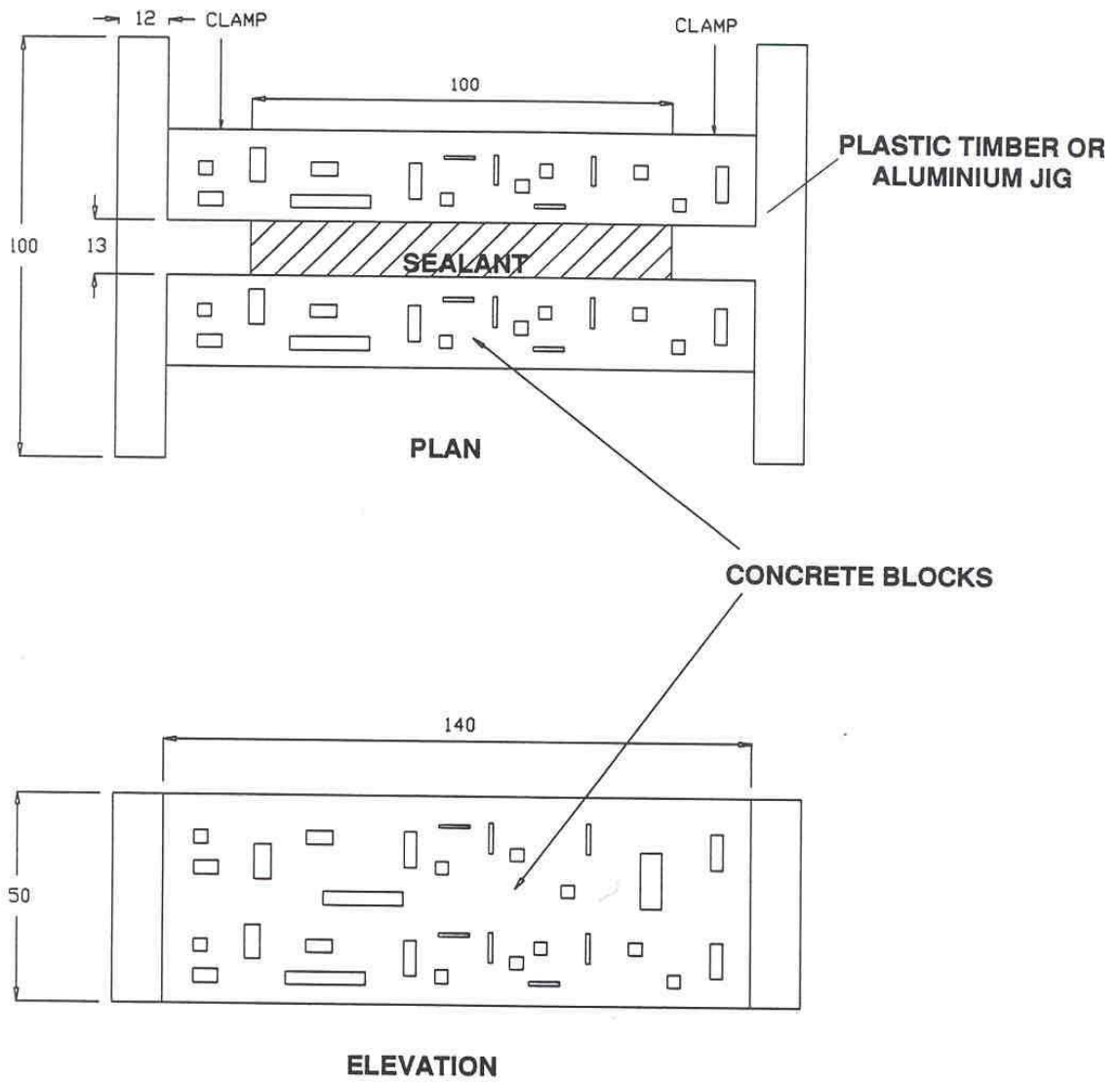


FIGURE 1

TENSION / COMPRESSION

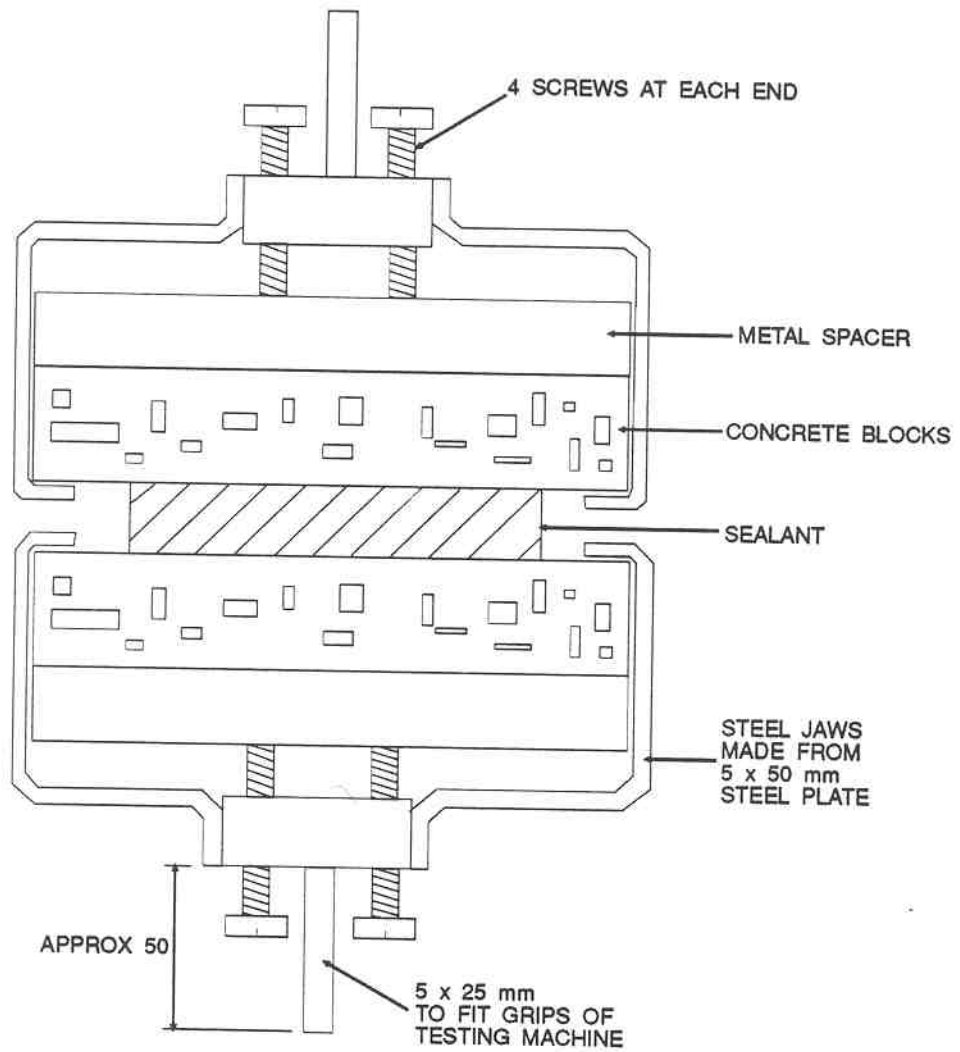


FIGURE 2

POSITION OF BACKING MATERIAL

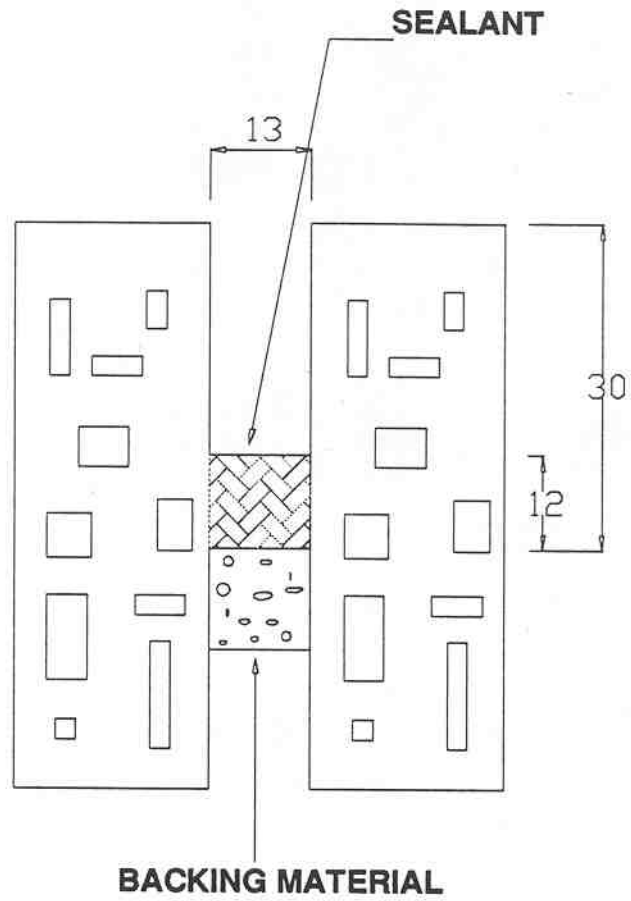


FIGURE 3