



Test method T1160

Low temperature recovery of preformed polychloroprene elastomeric joint seals for bridge structures

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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 T1160 (other than minor editorial changes) are indicated by a vertical line in the margin as shown here.

Test method T1160

Low temperature recovery of preformed polychloroprene elastomeric joint seals for bridge structures

1. Scope

This test method sets out the procedure for testing the low-temperature recovery of polychloroprene elastomeric seals for bridge structures. The test method has been adapted from the procedure set out in the American Society for Testing and Materials Standard Specification D2628.69.

2. Apparatus

- (a) Parallel metal compression plates, preferably chrome plated, 200 mm by 125 mm by 10 mm drilled at each corner and fitted with bolts and nuts suitably protected from corrosion.
- (b) A refrigerated box capable of being maintained at $-10 \pm 1^\circ\text{C}$ and at $-29 \pm 1^\circ\text{C}$.
- (c) A dial gauge suitably mounted on a vertical support or outside calipers and vernier gauge or micrometer, graduated in units of $250\mu\text{m}$.

3. Procedure

- (a) From the material submitted for test cut two samples each 125 mm long.
- (b) Measure the width at the centre of the longitudinal vertical faces of each sample of joint seal. Mark the position at which the measurement is taken.
- (c) Place one sample between the compression plates so that the plane through both edges of the top surface of the joint seal is at right angles to the plates. Internal surfaces of the sample as well as the outside surfaces may be dusted lightly with talc.
- (d) Compress the joint seal between the compression plates by hand pressure and by screwing down the nuts on the bolts ensuring that the top surface of the joint seal folds inwards towards the centre of the specimen. Keep the compression plates parallel at all times. Deflect the specimen to 50 per cent of the original measured top width.
- (e) Place the clamp assembly containing the compressed specimen in the refrigerated box maintained at $-10 \pm 1^\circ\text{C}$ for 72 hours.
- (f) Unclamp the test specimen at the end of this period and allow it to recover at $-10 \pm 1^\circ\text{C}$ for 1 hour.
- (g) Measure the recovered width at the same location as the original width.
- (h) Place the second specimen similarly clamped and deflected to 50% of its original width in the refrigerated box at $-29 \pm 1^\circ\text{C}$ for a period of 22 hours.
- (i) Unclamp the test specimen at the end of this period and allow it to recover at $-29 \pm 1^\circ\text{C}$ for a period of 1 hour.
- (j) Measure the recovered width at the same location as the original width.

4. Calculation and Reporting

Calculate the per cent recovery as follows:

$$\text{Recovery per cent} = \frac{\text{Recovered Width}}{\text{Original Width}} \times 100$$

Report as the per cent recovery after compression at $-10 \pm 1^\circ\text{C}$ and $-29 \pm 1^\circ\text{C}$.

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