



Transport
Roads & Maritime
Services

Test method T1108

Shear stiffness of small elastomeric
bearings and strip

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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 T1108 (other than minor editorial changes) are indicated by a vertical line in the margin as shown here.

Test method T1108

Shear stiffness of small elastomeric bearings and strip

1. Scope

This test method sets out the procedures for the determination of the shear stiffness of small elastomeric bearings and strip. The procedures are in line with the requirements of Technical Specification (Bridgeworks) Part B280.

2. Apparatus

- (a) As per Test Method T1107 plus:
- (b) A jack fixed to the bed of the testing machine acting in a horizontal direction with a travel of at least 75 mm.

3. Procedure

- (a) Position the bearings, two at a time, centrally in the compression testing machine with a shear plate (500 × 150 × 25 mm) positioned between them.
- (b) Apply the required compressive force to the assembly. Hold this force and fix the dial gauge to the centre of the shear plate edge opposite to the shearing ram. Zero this dial gauge.
- (c) Apply a shear force (horizontal) to produce 1.25 times the design deflection; hold this load and examine the small bearings or strip for any signs of distress.
- (d) Remove the shear force.
- (e) Remove the compressive force and reposition the bearings or strip if necessary. Re-apply the compressive force.
- (f) Zero the dial gauge. Apply the shear force until the shear design deflection is reached and note the shear force at this point.

4. Calculation

$$\text{Shear stiffness (kN/mm)} = \frac{F}{2 \times \text{DesignDeflection}}$$

Where F = Force required, in kN, to produce the shear deflection.

Note: This value of shear stiffness is an average of the 2 bearings individual shear stiffness.