



**Transport**  
Roads & Maritime  
Services

# Test method T1107

Compression stiffness of small  
elastomeric bearing and strip

NOVEMBER 2012



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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 T1107 (other than minor editorial changes) are indicated by a vertical line in the margin as shown here.

# Test method T1107

## Compression stiffness of small elastomeric bearing and strip

### 1. Scope

This method sets out the procedure for determining the compression stiffness of small elastomeric bearings and elastomeric strip. This procedure is in accordance with RTA Technical Specification (Bridgeworks) Part B280.

### 2. Apparatus

- (a) A universal testing machine calibrated in technical units of force in accordance with AS2193 and maintained to Grade A standard.  
This machine to have a compression testing area with a table bed with a surface area larger than the area of the bearing being tested.
- (b) A special upper platen to be fitted to the machine so designed as to provide a large flat surface area suitably braced so that no local deformation of the surface takes place under the compression force.
- (c) A second steel plate is required to sit on the table bed of the test machine. Both this lower plate and the upper platen must overlap the bearing or the strip by at least 25 mm all around.
- (d) At least 2 dial gauges reading to at least 0.01 mm and preferably having an electrical output which can be indicated on an X - Y recorder which shows an average readout.

### 3. Procedure

- (a) The bearing or strip is to be placed in the centre of the steel base plate whose centre is in line with the control vertical axis of test machine.
- (b) Fix the dial gauges to the attachments on the upper platen i.e. front and rear positions.
- (c) Carry out the following test sequence:
  - (i) Load bearing or strip to 1.5 times the design load.
  - (ii) Reduce load to 0.1 times the design load.
  - (iii) Load again to 1.5 times the design load.
  - (iv) Reduce load to 0.1 times the design load.
  - (v) Hold this force for 1 minute.
  - (vi) Zero the gauges or note the reading on the X - Y recorder.
  - (vii) Increase the load until it reads 1.1 times the design load (note minimum time for this part is to be not less than 1 minute).
  - (viii) Hold this load for 1 minute and then read both gauges or the position of the pen on the X - Y recorder.
  - (ix) Record the average of the 2 dial gauges or the position of the pen on the X - Y recorder.

### 4. Report

- (a) Report the compression stiffness of the bearing or strip determined from the following equation:

$$\text{Compression stiffness (kN/mm)} = \frac{\text{Design Force (kN)}}{\text{Average deflection (mm)}}$$