



Transport
Roads & Maritime
Services

Test method T1174

Fuel immersion test for fuel-resistant hot poured joint sealing compounds

NOVEMBER 2012



Revision Summary

Ed/Rev Number	Clause Number	Description of Revision	Authorisation	Date
		Reformatted and Generally Revised	D.Dash	August 2000
		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 T1174 (other than minor editorial changes) are indicated by a vertical line in the margin as shown here.

Test method T1174

Fuel immersion test for fuel-resistant hot poured joint sealing compounds

1. Scope

This test method sets out the procedure for verifying that the properties of fuel-resistant types of joint sealing compound do not deteriorate to an unacceptable degree as the result of contact with split fuel or oil.

The standard test fuel will give results which indicate the probable behaviour of a compound coming into contact with the usual fuels and lubricating oils, however provision is made for the test to be carried out with a different fuel if the purchaser is doubtful if the standard fuel will be representative of a particular type of spillage.

2. Apparatus

- (a) A container made from 2 mm metal sheet with internal dimensions 460 mm by 310 mm by 150 mm deep with a close fitting lid capable of being sealed with adhesive tape.
- (b) A transfer jig. A suitable design derived from BS 2499 is illustrated in Fig. 1.

3. Standard fuel

- (a) The standard fuel consists of a mixture of 70 per cent by volume of iso-octane having the properties specified below with 30 per cent of industrial grade toluene complying with BS 805-1063, Section 1.
- (b) Properties of iso-octane:

Octane number	100 ± 0.1
Density at 20°C, g per ml	0.691 90±0.000 15
Refractive Index, ND	1.391 50±0.000 15
Freezing Point, °C	-107.52 min.
Distillation:	
50% Recovery, °C	99.25± 0.05
Increase from 20% to 80% .. .	0.06 maximum
- (c) If required by the purchaser, a special oil or fuel may be substituted to his specification but the other conditions of the test are not to be varied

4. Procedure

- (a) Prepare test specimens in accordance with Test Method T1170.
- (b) Position the test specimens, still held in the pouring jig, in a transfer jig and clamp securely the joint being positioned over the cut-away section in the base.
- (c) Remove the pouring jig, care being taken to prevent the joint being subjected to any movement or stress during the operations.
- (d) Place the transfer jig and specimen upside down in the container and pour the standard fuel slowly and carefully without splashing until 13 mm of each specimen is immersed.
- (e) Place the lid on the container and seal with adhesive tape.
- (f) Maintain the container at a temperature of 20-25°C for 24±1 hours.
- (g) Remove the extension test specimens in the jigs from the fuel and place in the atmosphere at a temperature of 23±2°C for a minimum period of 6 hours, after which test the specimen adhesion and extensibility as in Test Method T1172, except that an extension of 12 mm is to be applied.

5. Reporting

Report as "Pass" or "Fail"

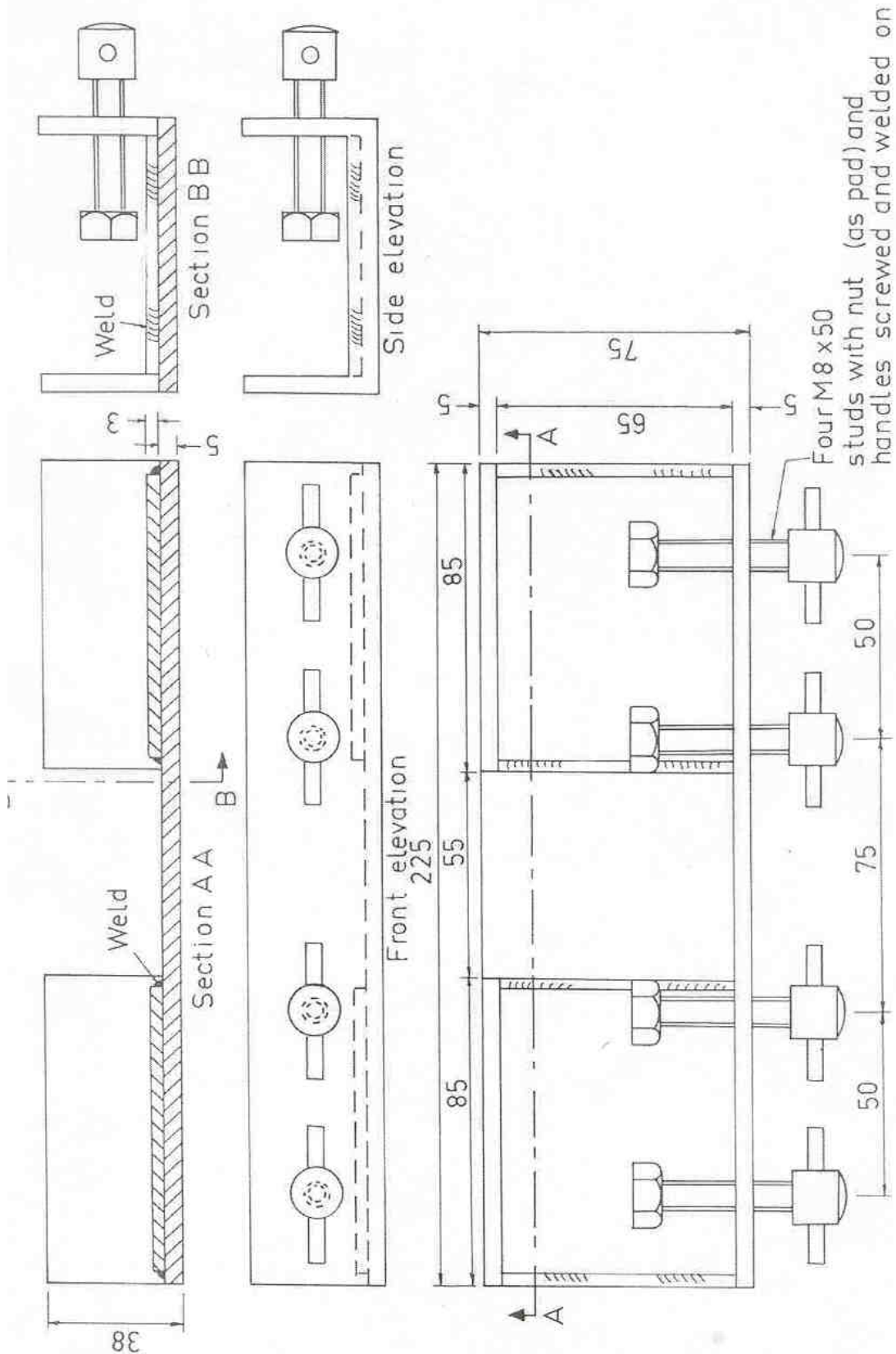


Figure 1: Transfer jig for Fuel Immersion Test for Fuel Resistant Hot Poured Joint Sealing Compounds (Test Method N° T1174)
 (All dimensions are in millimetres)