



Test method T738

Particle shape of scrap rubber

NOVEMBER 2012



Revision Summary

Ed/Rev Number	Clause Number	Description of Revision	Authorisation	Date
		Reformatted and Revision Summary Added. mm added to 6.(1)	D.Dash	Jan 2000
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 T738 (other than minor editorial changes) are indicated by a vertical line in the margin as shown here.

Test method T738

Particle shape of scrap rubber

1. Scope

This method applies to scrap rubber intended for use in sprayed sealing work. It seeks to establish measurements on particle shape which are not revealed by sieve analysis. Over length particles, which swell further when mixed with bitumen can matt together and block sprayer jets.

2. Materials

The material for this test is that from test T730 which is retained on the 0.600 mm sieve. (Including matter retained by all higher sieve sizes).

3. Apparatus

- (a) Hand lens (10 x to 50x magnification) or low powered microscope.
- (b) Rule or scale graduated in 0.5 mm or better or;
- (c) A linen tester (in lieu of (a) and (b))
- (d) Small spatula and small brush (optional).

4. Procedure

- (a) Mix the sample well. With a small spatula distribute small piles (at least 5) of the material on to a piece of paper.
- (b) With the brush or spatula count out three groups of 100 particles; once one of the original small piles has been started continue counting from it until it is exhausted.
- (c) From each of the 3 groups of 100 pick out the 11 longest particles. Then identify the three smallest in each of the groups of 11.
- (d) Record the general shape of the 9 particles (3 groups of 3). If the particles are compact eg roughly spherical or cubical they will have only one popular dimension which will correspond to the sieve sizing. However, the particles may have other shapes eg brick shape, book, pencil, strap; these shapes have one longest dimension and a short dimension. Average the greatest length observed for the 9 particles. Do not attempt to straighten out curly particles or to measure along the length of the curve.
- (e) With the highest powered lens note the surface shape of the particles. (Does it have fairly well defined corners and edges, is the surface fluffy or spongy?)

5. Calculations

Calculate the "10th percentile maximum dimension" as the mean of the results of 4 (d).

6. Reporting

- (a) The "10th percentile maximum dimension" (mm)
- (b) Whether the particles are -
 - (i) Fluffy or spongy
 - (ii) Smooth faced

NOTE: Smooth faced particles may be expected to return poor results in tests T733, T739 and T741.