



Test method T1207

Roundness (Shape) of glass beads

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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 T1207 (other than minor editorial changes) are indicated by a vertical line in the margin as shown here.

Test method T1207

Roundness (Shape) of glass beads

1. Scope

This test method sets out the procedure to be followed for separating glass beads into spherical and non-spherical categories. The procedure is extracted from the Australian Standard E42-1967. (Appendix B).

2. Apparatus

- (a) An electrical feeder-vibrator upon which is mounted a smooth glass panel 150mm wide and 380mm long. The slope of the panel to be 1 in 20.

Note: A suitable apparatus is the "Syntron" feed type FT01 Code 59-D-193.

- (b) A means of varying the amplitude of the vibrations transmitted to the glass panel, at a fixed frequency of 50 cycles per second.
- (c) A means of ensuring that the glass plate remains dry throughout the test, e.g. an infra-red lamp mounted above and focused on the panel.
- (d) A feeding device for the delivery of beads onto the vibrating panel. Alternatively hand feeding may be used.
- (e) 425 μm , 300 μm and 150 μm (AS 1152-1973) sieves.
- (f) Metal pans for the collection of spheres and irregular beads at opposite ends of the panel (plastic pans have been found to be unsatisfactory due to electrostatic effects).

3. Procedure

- (a) Select a 20g sample from the test using a riffle sampler.
- (b) Pass the sample through 425 μm and 300 μm sieves dividing the sample into four fractions:-
- (i) Retained on the 425 μm sieve.
 - (ii) Passing 425 μm and retained on 300 μm sieve.
 - (iii) Passing the 300 μm sieve and retained on the 150 μm sieve.
 - (iv) Passing the 150 μm sieve.
- (c) Set the vibrator amplitude control so that irregular beads will move slowly up the slope while spherical beads roll down. Feed each fraction in turn on the panel 125 mm from the top at such a rate that no 'bunching' of the beads or 'flooding' of the panel occurs. When the panel is well covered with beads, stop feeding and allow the separation to proceed. When this appears complete, i.e. after all spherical beads have rolled down the slope into the pan, carefully brush the remaining beads into the pan at the top of the slope.
- (d) Weigh the spherical and non-spherical beads in each fraction and calculate the proportion of spherical beads in the total sample, and in the fraction retained on the 425 μm sieve.

4. Reporting

Report the percentage of spherical beads in the whole sample and the percentage of spherical beads in the portion retained on the 425 μm sieve.

5. Technique

If this test is performed with care a single 'run' with each bead fraction will usually divide the beads into spheres and non-spheres with sufficient accuracy. In doubtful cases or where the result is close to specified limits it may be necessary to make additional runs with each fraction of spheres and non-spheres to determine whether or not further separation can be made.