



# Test method T278

Aggregate shape by the ratio of greatest to least dimension

OCTOBER 2012



---

## Revision Summary

Ed/Rev Number	Clause Number	Description of Revision	Authorisation	Date
		New Issue-Greg Hall	G Donald	Dec 2005
Ed 2/ Rev 0	All	Reformatted RMS template	J Friedrich	October 2012

Note that Roads and Maritime Services is hereafter referred to as 'RMS'.

The most recent revision to Test method T278 (other than minor editorial changes) are indicated by a vertical line in the margin as shown here.

# Test method T278

## Aggregate shape by the ratio of greatest to least dimension

### 1. Scope

This method sets out the procedure for assessing aggregate shape as a ratio of Greatest Dimension to Least Dimension.

This method is based on New Zealand Test Method TNZ T/5 “Method of determining size, shape and grading of Grades 1-4 sealing chips”.

In this document, AGD means Average Greatest Dimension and ALD means Average Least Dimension.

### 2. Referenced Documents

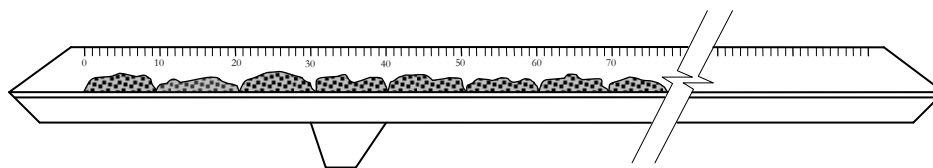
The following documents are referred to in this method:

T235 & AS 1141.20.1 “Average Least Dimension of Aggregate”.  
Nominal size 10mm and greater.

T275 & AS 1141.20.2 “Average Least Dimension of 5mm and 7mm Aggregates”.

### 3. Apparatus

AGD measuring trough graduated in divisions of 1mm (see Figure 1)



**Figure 1**  
**AGD measuring trough**

### 4. Procedure

- (a) Carry out the procedure for determining ALD as described in Test Methods T235 and T275.
- (b) On completion of the measurement of the least dimension and sorting of all the particles in the test sample into groups of nominal least dimension, place the aggregate particles of each group in a line, just touching, with their greatest dimension along the trough described in Figure 1.

‘Nominal Least Dimension’ means the mid point between the upper and lower limits of each size range used to sort the particles into groups in the ALD test.

‘Touching’ means no visible gap when viewed from vertically above but also no overlap. Physical contact between particles is not a requirement.

- (c) Record the total length of each line of particles to the nearest millimetre.

### 5. Calculations

- (a) Divide the total length of each line by the number of aggregate particles in the line to determine the AGD of each group.
- (b) Divide the sum of the lengths of each line by the sum of the numbers of aggregate particles in each line to determine the AGD of the sample.
- (c) Divide the AGD of each group by the nominal least dimension of each group to determine aggregate shape of each group.

---

Note that this ratio is recorded as indicative of the shape for each group but is not reliable where the number of aggregate particles in the group is less than 15% of the total number used to determine the ALD (i.e. minimum 100).

- (d) Divide the AGD of the sample by the ALD of the sample to determine the aggregate shape of the sample.

## 6. Reporting

- (a) The ratio of AGD to Nominal Least Dimension of each group to the nearest 0.01.
- (b) The ratio of AGD to ALD of the sample to the nearest 0.01.