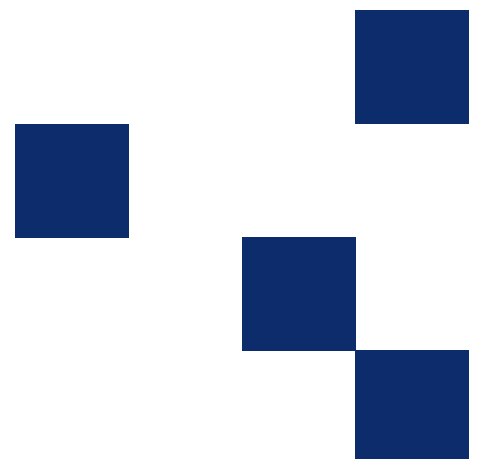




Test method T227

Clay content of crushed rock used for pavement construction (X-ray and Petrographic methods)

OCTOBER 2012



Revision Summary

Ed/Rev Number	Clause Number	Description of Revision	Authorisation	Date
		Reformatted and Revision Summary Added	D.Dash	May 1999
		Date on Test Method Revised to Agree with Date on Revision Summary	D.Dash	Feb 2001
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 T227 (other than minor editorial changes) are indicated by a vertical line in the margin as shown here.

Test method T227

Clay content of crushed rock used for pavement construction (X-ray and Petrographic methods)

1. Scope

This test method describes the procedure for the determination of the clay content of crushed rock pavement material including lime modified or lime stabilised crushed rock.

2. Apparatus

- (a) Balance accurate and readable to 0.2 g within the operating range
- (b) 37.5 mm, 19.0 mm, 13.2 mm, 9.50 mm, 4.75 mm, 2.36 mm, 425 μm and 75 μm AS sieves
- (c) Braun Disc Mill
- (d) Apparatus for the Petrographic Examination of Rock in Thin Section as described in Test Method T226
- (e) Glass beakers
- (f) A thermostatically controlled oven with good air circulation, capable of maintaining a temperature within the range 105°C to 110°C

NOTE: The X-ray analysis is carried out by the staff of the Mining Museum.

3. Procedure

- (a) Reduce the sample, as necessary, by quartering and riffing, to provide an amount sufficient to yield at least 500 g retained on the 4.75 mm sieve.
- (b) Screen the sample on a 4.75 mm sieve. To facilitate this operation and to avoid overloading of sieves, screen the sample on 37.5 mm, 19.0 mm, 13.2mm, and 9.50 mm AS sieves prior to separation on a 4.75 mm sieve. Discard the material passing the 4.75 mm sieve.
- (c) Wash the material retained on the 4.75 mm sieve to remove loose dirt and lime coatings, if any.
- (d) Dry the material in an oven at 105°C to 110°C.
- (e) Select approximately 20 pieces of the largest grain size and select at least two pieces considered to be representative of the sample. Prepare thin sections of the representative pieces in accordance with the procedure described in Test Method T226.
- (f) Determine the approximate proportions of clay minerals present by examination of the thin section using a petrological microscope in accordance with the procedure described in Test Method T226.
- (g) Grind the remaining material to obtain 100 g of material passing a 75 μm sieve. To facilitate this operation and to avoid overloading of sieves, screen the material on a 2.36 mm and 425 μm sieve prior to separation on a 75 μm sieve. Retain any surplus material for possible future analysis.
- (h) Forward the 100 g sub-sample to the Curator, Geological and Mining Museum, 36 George Street North, Sydney, NSW 2000 under cover of a Local Order requesting testing and identification of the presence of the following clay minerals by x-ray analysis, including the approximate proportions:
 - (i) Chlorite
 - (ii) Swelling Chlorite
 - (iii) Chlorite Montmorillonite
 - (iv) Montmorillonite

4. Reporting

Report the type and approximate quantity of clay present. Both the petrographic and x-ray data should be incorporated in a composite report.