Transport Roads & Maritime Services

NSW GOVERNMENT

Test method T1216

Water absorption of ceramic pavement markers

NOVEMBER 2012

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 T1216 (other than minor editorial changes) are indicated by a vertical line in the margin as shown here.

Test method T1216

Water absorption of ceramic pavement markers

1. Scope

This test method sets out the procedure for determining the water absorption of glazed ceramic pavement markers. The test method is derived from the American Society for Testing and Materials Designation C373.

2. Apparatus

(a) Balance of an adequate capacity suitable for weighing to an accuracy of 0.01g.

(b) Constant temperature oven, thermostatically controlled to give a temperature of 150 ± 5°C.

3. Preparation

Five whole pavement markers with the glaze unblemished selected for test.

4. Procedure

(a) Dry the test specimens to constant mass by heating in an oven at 150°C followed by cooling in a desiccator.

(b) Determine the mass (M_1) of each marker to the nearest 0.01g.

(c) Place the markers in a pan or beaker of distilled water and boil for five hours taking care that the markers are covered at all times with water. Ensure that the specimens are separate from each other and the sides of the container.

(d) After five hours boiling allow the specimens to cool in the water and to soak for a further 24 hours.

(e) Remove the markers from the water, carefully dry the glazed portion with absorbent cloth. Blot the unglazed portion with a moistened lint-free linen, or cotton, cloth to remove all excess moisture.

(f) Determine the saturated mass (M_2) of each marker to the nearest 0.01g.

5. Calculation and Reporting

Determine the water absorption as follows:-

$$Water\ absorption\,\% = \frac{M_2 - M_1}{M_1} \times 100$$

Report the mean of the values obtained with at least five specimens and also the individual values to the nearest 0.1%.

Where pronounced differences in percentage absorption occur among the individual specimens, test another five specimens. Report all individual values and the mean of all 10 specimens.