Transport Roads & Maritime Services

NSW GOVERNMENT

Test method T264

Soluble salts in sands

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 T264 (other than minor editorial changes) are indicated by a vertical line in the margin as shown here.

Test method T264

Soluble salts in sands

1. Scope

This test method sets out the procedure for the determination of the presence and amount of soluble salts present in sands proposed for use in cement concrete.

2. Apparatus

(a) A metal-mixing and quartering tray

(b) Mixing apparatus such as a trowel and quartering apparatus such as metal plates 400 mm by 125 mm and 200 mm by 125 mm

(c) Metal dishes 100 mm and 225 mm diameter

(d) A thermostatically controlled oven with good air circulation, capable of maintaining a temperature within the range of 105oC to 110oC

(e) A balance of 250 g capacity, readable and accurate to 0.01 g

(f) An evaporating basis, 150 mm diameter

(g) Measuring cylinder, 100 mL

(h) Erlenmeyer flask, 100 mL

(i) Hot plate

(j) Distilled water

(k) Desiccator

3. Test Portion

(a) The test sample shall be dried to constant mass in an oven at a temperature within the range of 105 $^{\circ}$ C to 110 $^{\circ}$ C

(b) Obtain duplicate test portions each 100 g mass by coning and channelling the dried test sample

4. Procedure

Carry out the following procedure on each of the duplicate test portions:

(a) Place the 100 g test portion in a 500 mL flask and add 200 mL distilled water. Insert the stopper and shake vigorously for approximately 30 seconds. Allow the stoppered flask and contents to stand for about 30 minutes

(b) Carefully pour off 100 mL of the liquid into a measuring cylinder using a pipette to make up to the mark. Transfer the 100 mL of liquid to a tared evaporating basin.

(c) Evaporate the contents of the evaporating basin by gently heating and then boiling on a hot-plate taking care to avoid any loss due to vigorous boiling. Dry the evaporating basin and contents to constant mass in an oven at a temperature within the range of 105 $^{\circ}$ C to 110 $^{\circ}$ C.

5. Calculations

(a) Calculate the percentage of soluble salts present in each test portion as follows:

Percentage Soluble Salts = $(A - B) \times 2$

Where

A = mass of basin + residue
B = mass of basin

(b) Compute the percentage of soluble salts as the mean of the two determinations.

6. Reporting

(a) Where the percentage of soluble salts exceeds 0.3%, report the amount determined as a percentage

(b) Where the percentage of soluble salts is 0.3% or less, report the sample as free from soluble salts