



**Transport**  
Roads & Maritime  
Services

# Test method T274

## Aggregate spread rate (field method)

APRIL 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	New issue. Various tray materials allowed.	J Friedrich	Apr 2012

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

The most recent revision to Test method T274 (other than minor editorial changes) are indicated by a vertical line in the margin as shown here.

# Test method T274

## Aggregate spread rate (field method)

### 1. Scope

This test method sets out the procedure for determining in the field the actual spread rate aggregate.

### 2. General

- (a) This test is applicable to aggregate spread loose onto a road surface.
- (b) The following document is referred to in this test method:
  - (i) T211 Loose Bulk Density of Aggregate.

### 3. Apparatus

- (a) A tray with internal dimensions of approximately 500 x 500 mm and 75 mm deep. The shape must remain stable during testing.
- (b) A balance of suitable capacity and accurate to 10 g within the operating range.
- (c) Sample bags.
- (d) Suitable dishes.

### 4. Sampling and Preparation

- (a) Determine the Loose Bulk Density of the Aggregate ( $C$ ) in  $t/m^3$  according to T211.
- (b) Measure the 2 sides of the tray to the nearest 1 mm and calculate the area ( $A$ ) in  $m^2$ . Record the area of the tray.

### 5. Procedure

- (a) Place the tray flat on the road surface to be tested just off the end of the spray run.
- (b) Position the tray square to the direction of travel of the spreader and so that the spreader passes over the tray without contact.
- (c) Ensure that the spreader continues to travel at the design spread rate as it passes over the tray.
- (d) After the spreader has passed, remove the filled tray without spillage.
- (e) Empty the contents of the tray into a sample bag and label with sample identification and the tray area.
- (f) Determine the mass of aggregate retained on the tray ( $M$ ) to the nearest 0.01 kg.

### 6. Calculations

- (a) Calculate the rate of spread of aggregate ( $R$ ) for the tray as follows:

$$R = \frac{M}{A}$$

Where:

$R$  = Rate of spread of aggregate ( $kg/m^2$ )

$M$  = Mass of aggregate retained on tray ( $kg$ )

$A$  = Area of tray ( $m^2$ )

- (b) Calculate the Actual Aggregate Spread Rate ( $H_A$ ) to the nearest 1 m<sup>2</sup>/m<sup>3</sup> as follows:

$$H_A = \frac{C \times 1000}{R}$$

Where:

$$\begin{aligned} H_A &= \text{Actual Aggregate Spread Rate (m}^2\text{/m}^3\text{)} \\ C &= \text{Loose Bulk Density of aggregate (t/m}^3\text{)} \\ R &= \text{Rate of spread of aggregate (kg/m}^2\text{)} \end{aligned}$$

## 7. Reporting

Include the following results in the report:

- (a) Location of test.
- (b) Type and nominal size of aggregate.
- (c) The Actual Aggregate Spread Rate ( $H_A$ ) to the nearest 1 m<sup>2</sup>/m<sup>3</sup>.
- (d) Reference to this test method.

RMS/Pub 12.122