



Test method T237

Rate of application of precoat to aggregate

APRIL 2012



Revision Summary

Ed/Rev Number	Clause Number	Description of Revision	Authorisation	Date
Ed 1/Rev 0	All	Reformatted and Revision Summary	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. Spoons replaced with measured precoat.	J Friedrich	Apr 2012

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

The most recent revision to Test method T237 (other than minor editorial changes) are indicated by a vertical line in the margin as shown here.

Test method T237

Rate of application of precoat to aggregate

1. Scope

This test method sets out the procedure to determine the rate of application of precoat to aggregate for bituminous surfacing work.

2. General

- (a) This test is applicable to bituminous surfacing work.
- (b) The surface condition of the aggregate sample must represent the stockpile (i.e. dry, moist, dusty, etc) as the rate of application of precoating agent depends on it.
- (c) The following document is referred to in this test method:
 - (i) T100 Sampling of road construction materials (soil, gravel, sand, aggregate, rock and recycled products).

3. Apparatus

- (a) A clean and dry metal container with lid of about 5 L capacity and with a volume of 2.5 L marked on the inside.
- (b) Graduated measuring apparatus of at least 50 mL capacity.

NOTE: A disposable syringe or measuring cylinder are suitable.

4. Sampling and Preparation

- (a) Prepare a sample of the precoating agent.
- (b) Obtain a sample of aggregate according to T100.
- (c) Reduce the aggregate sample by quartering or riffing to produce a sub-sample of about 5 kg. Minimise the loss of dust or moisture from the aggregate particles.
- (d) Rate the condition of the aggregate sample to be tested as one of the following:
 - (i) Clean and dry.
 - (ii) Clean and damp.
 - (iii) Dusty coating.
 - (iv) Muddy coating.

5. Procedure

- (a) Prepare the precoating agent according to the manufacturer's recommendations. Fill a calibrated cylinder with precoating agent to the 50 mL level.
- (b) Loosely fill the container with an aggregate sub-sample approximately level with the 2.5 L marking.
- (c) Pour 20 mL of precoating agent evenly over the aggregate in the container. Seal the container and mix the precoat with the aggregate particles for about 10 seconds using a steady shaking and/or rolling action.

NOTE: The 20 mL may need to be reduced if the aggregate previously has been precoated.

- (d) Open the lid, inspect the particles and visually assess the approximate percentage of the aggregate surfaces coated.

NOTE: If all the aggregate particles have a dull damp appearance without any excess precoat assume it is 90 to 100% coated.

- (e) While there is less than 90% coated, continue as follows:
- (i) Add 5 mL of precoating agent, seal the container, and mix with the aggregate particles for about 5 seconds using a steady shaking and/or rolling action.

NOTE: About 75% of the aggregate surface should be initially coated.

- (ii) Open the lid, inspect the particles and assess the approximate percentage of the aggregate surfaces coated. If more than 90% coated, proceed to Step 5(f).
- (f) If excess precoating agent is evident in the container make a note in the report.

NOTE: If there is much excess, discard the results and repeat the test with a new sub-sample. Reduce the quantity of precoating agent added at each step.

- (g) Record the total volume of precoat used (V_P) to the nearest 1 mL.

6. Calculations

- (a) Calculate the Rate of Application of Precoating Agent (R_P) as follows:

$$R_P = \frac{V_P}{2.5}$$

Where R_P = Rate of application of precoating agent (L/m³).

V_P = Volume of precoating agent (mL)

NOTE: The 2.5 is the loose volume of aggregate in L used in the test.

7. Reporting

Include the following results in the report:

- (a) Type, nominal size and source of aggregate.
- (b) Surface condition of aggregate tested (refer to Step 4(d)).
- (c) The type and source of precoating agent.
- (d) The Rate of Application of Precoating Agent (R_P) to the nearest 2 L/m³. Note whether excess precoating was evident.
- (e) Reference to this test method.