



Test method T869

Spreading rate of paint from aerosol can

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 T869 (other than minor editorial changes) are indicated by a vertical line in the margin as shown here.

Test method T869

Spreading rate of paint from aerosol can

1. Scope

This method sets out the procedure for determining the spreading rate of aerosol paint using a Sheen Hiding Power Chart (No.301).

2. Apparatus

- (a) Sheen Hiding Power Chart (No.301)
- (b) Glass plate 150 x 75 mm, maximum thickness 3 mm. All edges to be ground to prevent chipping
- (c) Rule capable of measuring distance of 200 ± 25 mm
- (d) Thermostatically controlled oven capable of maintaining a temperature within the range 105°C to 108°C
- (e) Balance of capacity 200 g weighing to the nearest mg

3. Procedure

Perform in Triplicate

- (a) Determine the surface area (A, m^2) of the glass to 4 significant figures
- (b) Position the pre-dried, tared (M_1 , grams) glass plate on the black and white pattern of a Sheen Hiding Power Chart, so that the black/white dividing line bisects the longer dimension of the plate
- (c) Passing the aerosol can 200 ± 25 mm from the slide at a 200 ± 25 mm per second, coat the surface with paint to substantially obliterate the chart pattern. If, when the paint has dried, the pattern has become visible, a repeat application of the paint should be made
- (d) Oven dry the glass plate for three hours at $105^\circ C \pm 3^\circ C$ and after allowing to cool to room temperature in a desiccator determine its mass (M_2 , grams)

4. Calculations

$$\text{Dry Coverage, } D \text{ (m}^2 \text{/kg)} = \frac{1000A}{M_2 - M_1}$$

$$\text{Wet Coverage, } W \text{ (m}^2 \text{/kg)} = \frac{D \times N.V.}{100}$$

Where N.V. = Non volatile content by Test Method T805.

The spreading rate expressed in terms of m^2 per can of aerosol may be calculated by multiplying the can contents mass by W.

$$\text{Spreading Rate, } S \text{ (m}^2 \text{ per can)} = W \text{ (m}^2 \text{/kg)} \times \text{Can Contents (kg/can)}.$$

Calculate the mean of the three individual results.

Note: If an individual result differs by more than 10% from the mean, repeat the whole test.

5. Reporting

Report the mean Dry Coverage, Wet Coverage or Spreading Rate.