
Paints and related materials—Methods of test

Method 214.3: Viscosity—Cone-and-plate

1 SCOPE

This Standard sets out a method of determining the viscosity of paint samples using the cone-and-plate viscometer at a nominal temperature of 25°C.

NOTE: The suitability and applicability of this method is discussed in AS 1580.214.0.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

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| 1580 | Paints and related materials—Methods of test |
| 1580.101.5 | Method 101.4: Conditions of test, temperature control |
| 1580.214.0 | Method 214.0: Rheological properties—Guide to test methods |
| 2850 | Chemical analysis—Interlaboratory test programs—For determining precision of analytical method(s)—Guide to the planning and conduct |

BS

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|---------|---|
| 2000 | Methods of test for petroleum and its products |
| 2000-71 | Part 71: Kinematic viscosity of transparent and opaque liquids and calculation of dynamic viscosity |

3 PRINCIPLE

A small sample of paint, under controlled temperature conditions, is subjected to high shear between a conical rotating plate and a flat plate, and the resulting torque is measured. The viscosity is determined by calculation.

4 APPARATUS

A thermostatically controlled cone-and-plate viscometer, of nominal shear rate, 10 000 s⁻¹, and capable of meeting the viscosity specification of the reference oil (see Paragraph B3.1) to within 5% of its certified value at 25°C, is required. Figure 1 illustrates a suitable apparatus and a description is given in Appendix A.