Australian Standard™

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	
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	
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.