Australian Standard™

Methods of testing bitumen and related roadmaking products

Method 25: Determination of consistency

1 SCOPE

This Standard sets out a method for determining the consistency of bitumen emulsion at 25°C (see Note, Clause 3) using the Engler viscometer.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS	
1152	Specification for test sieves
AS/NZS	
2341	Methods of testing bitumen and related roadmaking products
2341.1	Part 1: Precision data—Definitions
ASTM	
E 1	Specification for ASTM thermometers
IP	Methods for analysis and testing, Part 1, Vol. 2, Appendix A

3 PRINCIPLE

The efflux time of an emulsion at 25°C from an Engler viscometer is compared with that for water at the same temperature and from the same instrument. The ratio of the times obtained is expressed as degrees Engler.

NOTE: For high viscosity emulsions, a temperature higher than 25°C may be used.

4 APPARATUS

The following apparatus is required:

(a) *Engler viscometer* Engler viscometer consisting of a cup with a short jet in the centre of the base, which is stoppered by means of a tapered, hardwood plug. The cup is surrounded by a waterbath fitted with a stirring device (see Figure 1).

(b) *Sieve* A sieve having an aperture size of 600 μm complying with AS 1152.

(c) *Timing device* A timing device of any suitable type, which can be read to 0.2 s or less, and is accurate to 0.07% when tested over 5 min.

(d) *Two thermometers* Two thermometers complying with Specification IP 76C or two standard thermometers complying with No. 23C of ASTM E 1. For higher temperatures an appropriate thermometer shall be used (see Note, Clause 3).

(e) *Volumetric receiving flask* A volumetric receiving flask of 200 mL capacity at 20°C.