Australian Standard®

Methods of testing bitumen and related roadmaking products

Method 16: Determination of flashpoint of cutback bitumen

PREFACE

This Standard was prepared by the Standards Australia Committee CH/25 on Bitumen and Related Products for Roadmaking to supersede AS 2341.16—1980.

METHOD

1 SCOPE This Standard sets out a procedure for the determination of the closed flashpoint of cutback bitumens when the flashpoint does not exceed 110°C.

NOTE: The results obtained do not differ significantly from the minimum flashpoint of the material determined under equilibrium conditions of temperature and vapour pressure.

2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS	
2106	Methods for the determination of the flashpoint of flammable liquids (closed cup)
2341	Methods of testing bitumen and related roadmaking products
2341.1	Part 1: Precisions data—Definitions
IP	Methods for analysis and testing, Part 1, Vol. 2, Appendix A

3 PRINCIPLE The sample is placed in the cup of an Abel flashpoint apparatus and heated at a very slow uniform rate while stirring. A small test flame is directed into the cup at regular intervals, and the flashpoint is taken as the lowest temperature at which application of the flame causes the vapour above the sample to ignite.

4 APPARATUS The following items of apparatus are required:

(a) *Abel flashpoint apparatus*—with a stirrer (as specified in AS 2106), but provided with means for mechanical stirring. Provision shall also be made for maintaining a good circulation in the waterbath, e.g. by means of a gentle stream of air, the air being introduced through a fine tube entering the bath through a hole bored for this purpose.

(b) *Thermometers*—IP 43C (10°C to 110°C) or IP 44C (15°C to 121°C), as specified in IP Standard thermometers.

(c) *Metronome*—set at 75 to 80 beats/min, or a pendulum of 600 mm effective length.

(d) *Barometer*—reading to 1 mmHg (1 mmHg = 0.133 kPa).