

Australian Standard®

Methods of testing bitumen and related roadmaking products

Method 14: Determination of flashpoint of residual bitumen

PREFACE

This Standard was prepared by the Standards Australia Committee on Bitumen and Related Products (for Roadmaking) to supersede AS 2341.14—1980. It is derived from IP 35, *Flash point (open) and fire point by means of the Pensky-Martens apparatus*, and is equivalent to IP 36, *Method of test for flash and fire points by Cleveland open cup*.

METHOD

1 SCOPE This Standard sets out a procedure for the determination of the open cup flashpoint of residual bitumens over a range of 200°C to 350°C.

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: Precision data — Definitions

3 APPARATUS The following items of apparatus are required:

- (a) The standard Pensky-Martens closed tester, as specified in AS 2106, with the following modifications:

The cover of the cup shall be replaced by a clip which encircles the upper rim of the cup and carries the thermometer and test flame. The tube carrying the thermometer shall have its centre on a radius at approximately 90 degrees to the radius passing through the point of attachment of the test flame, and shall be of such height that when the thermometer is in position its bulb shall be in the vertical axis of the cup and 13 mm below the filling line. The test flame shall be fixed at the vertical axis of the cup and at a level with the upper edge of the cup.

- (b) Thermometer ASTM 10C (IP 16C), as specified in AS 2106.

4 TEST ROOM The test shall be made in a room or compartment free from draughts, and darkened sufficiently for the flash to be readily discernible.

5 PROCEDURE The procedure shall be as follows:

- Thoroughly clean and dry all parts of the cup and its accessories. Remove all traces of solvent used to clean the apparatus.
- Fill the cup with the sample up to the level indicated by the filling mark.
- Place the clip carrying the thermometer and test flame on the cup and set the latter in the stove. Ensure that the locating devices are properly engaged. Insert the thermometer.
- Light the test flame and adjust it so that it is the size of a bead 4 mm in diameter.
- Apply heat at such a rate that the temperature recorded by the thermometer increases by not less than 5°C nor more than 6°C per minute, and observe the surface of the material carefully. No mechanical agitation should be applied.