

## Australian Standard®

## Methods of sampling and testing asphalt

## Method 3.1: Bitumen content and aggregate grading—Reflux method

**1 SCOPE** This Standard sets out the method for determining, by hot solvent extraction, the binder content of mixes containing residual bitumen and subsequently the particle size distribution of aggregate by sieve analysis.

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

## AS

- 1141 Methods for sampling and testing aggregates  
1141.2 Method 2: Basic testing equipment  
1141.11 Method 11: Particle size distribution by dry sieving

1152 Test sieves

- 2243 Safety in laboratories  
2243.8 Part 8: Fume cupboards

- 2891 Methods of sampling and testing asphalt  
2891.1 Method 1: Sampling of asphalt  
2891.10 Method 10: Water and volatile oils content

3568 Oils for reducing the viscosity of residual bitumen for pavements

## Worksafe Australia Standard

Exposure standards for atmospheric contaminants in the occupational environment

**3 DEFINITIONS** For the purpose of this Standard, the definitions given in AS 2891.1 apply.

**4 MATERIALS** The following material is required:

*Solvent*—Toluene or 1,1,1-trichloroethane, commercial grade.

**5 APPARATUS** The following apparatus is required:

**5.1 Balances**—complying with the following requirements:

- (a) Approximately 5 kg capacity, readable to 0.1 g with a limit of performance of not exceeding  $\pm 0.5$  g.  
(b) Approximately 200 g capacity, readable to 0.2 mg with a limit of performance of not more than  $\pm 1$  mg.

**5.2 Centrifuge**—to accommodate tubes of suitable capacity (see Clause 7.1(g)).

**5.3 Metal containers**—flat-bottomed, having a capacity of at least 60 mL and fitted with press-over lids. Alternatively, suitable glass containers such as Petri dishes may be used.

NOTE: Aluminium containers should not be used with 1,1,1-trichloroethane as it causes accelerated oxidation of the aluminium.

**5.4 Cutter oil**—in accordance with AS 3568.

**5.5 Shallow metal dish.**

**5.6 Flask**—2 L Erlenmeyer or round-bottom type, provided with a reflux condenser and additional stopper for sealing the flask during weighing.

**5.7 Fume cupboard**—in accordance with the appropriate requirements specified in AS 2243.8.

