

Australian Standard[®]

Methods of sampling and testing asphalt

Method 2.1: Sample preparation—Mixing, quartering and conditioning of asphalt in the laboratory

1 SCOPE This Standard sets out a method for mixing, quartering and conditioning of asphalt mixes in the laboratory prior to use in laboratory test procedures in AS 2891.

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

AS

2891 Methods of sampling and testing asphalt

2891.1 Method 1: Sampling of asphalt

2891.12.1 Method 12.1: Determination of the permanent compressive strain characteristics of asphalt—Dynamic creep test

2891.13.1 Method 13.1: Determination of the resilient modulus of asphalt—Indirect tensile method

3 APPARATUS The following apparatus is required:

- (a) *Mechanical mixer*—preferably with a planetary action capable of mixing sufficient quantities of asphalt for the tests required.

NOTE: For mix characterization tests, about 6 kg of asphalt is required for mixes with a nominal maximum particle size less than or equal to 20 mm, and about 14 kg for mixes with a nominal maximum particle size greater than 20 mm.

- (b) *Mixing bowls and beater*.
- (c) *Ovens*—forced draught, thermostatically controlled, capable of maintaining temperature up to 200°C within 3°C of the set temperature.
- (d) *Balance*—of sufficient capacity, with a limit of performance not exceeding ± 5 g.
- (e) *Thermometer*—or other suitable temperature-measuring device, graduated at intervals not greater than 2°C and with an uncertainty not greater than 0.5°C.
- (f) *Timer*—capable of measuring an elapsed time of at least 60 min with an uncertainty not greater than 1 s over 10 min.
- (g) *Quartering apparatus*—such as suitable metal plates.
- (h) *Mittens and tongs*—insulated, for handling hot apparatus.
- (i) *Trays or dishes*—suitable for holding the mixed aggregates during heating.
- (j) *Scoop and trowel*—for hand mixing asphalt and batching aggregate.
- (k) *Containers*—suitable for heating and pouring the binder.
- (l) *Dishes*—of suitable size for conditioning the mixed asphalt.