Transport Roads & Maritime Services

NSW GOVERNMENT

Test method T661

Mixing, quartering and conditioning of asphalt prepared in the laboratory

NOVEMBER 2012

Revision Summary

Ed/Rev Number	Clause Number	Description of Revision	Authorisation	Date
Ed 1/Rev 0	All	New test method to allow for warm mix asphalt additives	J Friedrich	July 2011
Ed 2/ Rev 0	All	Reformatted RMS template	J. Friedrich	November 2012

Note that Roads and Maritime Services is hereafter referred to as 'RMS'.

The most recent revision to Test method T661 (other than minor editorial changes) are indicated by a vertical line in the margin as shown here.

Test method T661

Mixing, quartering and conditioning of asphalt prepared in the laboratory

1. Scope

This method sets out the procedure to mix, quarter and condition asphalt prepared in the laboratory.

(a) The method is for laboratory preparation of hot asphalt mixes (HMA) and warm mix asphalt (WMA).

(b) The following document is referred to in this Test Method:

(i) AS 2891.2.1 Methods of sampling and testing asphalt - Sample preparation - Mixing, quartering and conditioning of asphalt in the laboratory.

(ii) AG:PT/T102 Protocol for handling polymer modified binders in the laboratory.

2. Apparatus, Preparation, Procedure, Calculations and Reporting

This test method is identical to AS 2891.2.1 except for the following amendments:

(i) Replace Table 1 of AS 2891.2.1 with **Error! Reference source not found.** on the next page.

(ii) In Clause 5(f) mixing time must not exceed 3 min.

(iii) Replace Clause 5(i) with the following:

Record the conditioning temperature as the temperature nominated in **Error! Reference source not found.**.
Preheat a dish to the conditioning temperature.
Place each sub-sample in the preheated dish, and condition the sample at the conditioning temperature for the period required in **Error! Reference source not found.**.
Commence timing of the conditioning period.

NOTE: Check if subsequent testing needs to commence immediately after the conditioning period and manage testing accordingly.

(iv) Include reference to this test method in the report.

Table 1 – Standard Quality Indicator for Asphalt Mixes - Temperature and Conditioning Times

Mix & binder type	Binder Heating		Asphalt Mixing	Asphalt Conditioning	
	Temperature (°C)	Heating time (1)	Temperature (°C)	Temperature (°C)	Period min (1)
Dense graded HMA					
C320	150 ± 5	≤ 4 h	150 ± 5	150 ± 5	60 ± 10
AR450	150 ± 5	≤ 4 h	150 ± 5	150 ± 5	60 ± 10
C600	155 ± 5	≤ 4 h	155 ± 5	155 ± 5	60 ± 10
Multigrade 1000/320	155 ± 5	≤ 4 h	155 ± 5	155 ± 5	60 ± 10
Modified Binders	See Note (2)		160 ± 5	160 ± 5	60 ± 10
Open graded HMA					
Modified Binders	See Note (2)		135 ± 5	135 ± 5	60 ± 10
WMA					
All	See Note (3)	≤ 4 h	See Note (3)	See Note (3)	60 ± 10

NOTES: (1) The heating time or period is the time after the oven with sample first reaches the temperature tolerance.
(2) Prepare the binder in accordance with AG:PT/T102.
(3) The temperature specified by the manufacturer of the additive or process used by the manufacturer with a tolerance of ± 5°C.