

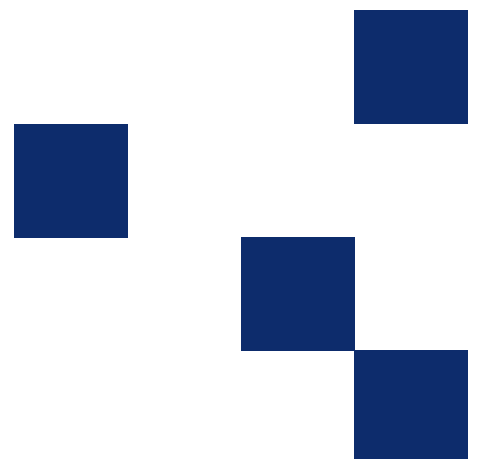


**Transport**  
Roads & Maritime  
Services

# Test method T660

Moisture content of hot bituminous mixes  
(Mass loss method)

NOVEMBER 2012



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## Revision Summary

Ed/Rev Number	Clause Number	Description of Revision	Authorisation	Date
Ed 1/Rev 0	All	New Issue	G Hall	July 2009
Ed 1/Rev 1	1, 3(a), 4(c), 5(e)	Hot added to titles. Balance MOU. No delay in test. Cooling time specified.	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 T660 (other than minor editorial changes) are indicated by a vertical line in the margin as shown here.

## Test method T660

# Moisture content of hot bituminous mixes (Mass loss method)

### 1. Scope

This test method sets out the procedure to determine moisture of freshly mixed hot bituminous mixes as a percentage of the dry mass.

### 2. General

- (a) This test is applicable to freshly mixed bituminous material (e.g. asphalt)
- (b) The test determines the mass loss of a sample when dried in an oven
- (c) The following document is referred to in this Test Method:
  - (i) AS 2891.1.1 Sampling of loose asphalt

### 3. Apparatus

- (a) Balance of not less than 5 kg capacity readable to 0.1 g and with a limit of performance of  $\pm 5\text{g}$
- (b) Thermostatically controlled oven capable of maintaining temperatures up to  $150^\circ \pm 5^\circ\text{C}$
- (c) Metal sample tin with a double tight friction lid and approximately 4 L capacity
- (d) Metal scoop
- (e) Metal spatula approximately the same size as the sample tin

### 4. Preparation

- (a) Take a sample directly from the exit to the plant mixing chamber or from the truck prior to leaving the plant in accordance with AS 2891.1.1
- (b) Determine the mass of the 4 L sample tin and lid ( $M_1$ )
- (c) Place the sample directly into the sampling tin until at least 50% full and seal the tin immediately
- (d) Without delay proceed to Step 5

### 5. Procedure

- (a) Determine the mass of the sample tin with moist sample and lid ( $M_2$ )
- (b) Determine the mass of the sample tin with moist sample and lid and the spatula ( $M_3$ )
- (c) Remove the lid from the tin and place the sample tin, sample and spatula, and the lid separate into the oven at  $150^\circ\text{C}$  for 30 min
- (d) Remove from the oven and use the spatula to mix the sample from bottom to top of sample tin. Ensure no material is lost
- (e) Dry the sample to constant mass as follows:
  - (ii) Place the sample tin with sample and spatula, and lid separate into the oven at  $150^\circ\text{C}$  for another 30 min
  - (iii) Remove the sample tin with sample and spatula, and lid from the oven and cool in air for at least 30 min
  - (iv) Determine the mass ( $M$ ) of the sample tin with sample and spatula, and lid to the nearest 0.1 g
  - (v) Repeat Step 5(e) until the change in mass between successive measurements is less than 0.5 g
- (f) Record the final mass ( $M_4$ ) of the sample tin with sample and spatula, and lid

## 6. Calculations

- (a) Calculate the moisture content ( $w$ ) as a percentage of the dry mass of the sample as follows:

$$w = \frac{(M_3 - M_4)}{(M_2 - M_1) - (M_3 - M_4)} \times 100\%$$

- Where
- $w$  = Moisture content (%)
  - $M_1$  = Mass of sample tin and lid (g)
  - $M_2$  = Mass of sample tin with moist sample and lid (g)
  - $M_3$  = Mass of sample tin with moist sample, lid and spatula (g)
  - $M_4$  = Mass of sample tin with dry sample, lid and spatula (g)

## 7. Reporting

Include the following results in the report:

- (a) The product identification, batch numbers, date of production and sampling point
- (b) The moisture content ( $w$ ) to the nearest 0.1%
- (c) Reference to this test method