

# TRANSPORT FOR NSW (TfNSW)

## QA SPECIFICATION 3261

### CUTBACK BITUMEN

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#### REVISION REGISTER

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Ed 9/Rev 1	Global	References to “Roads and Maritime Services” or “RMS” changed to “Transport for NSW” or “TfNSW” respectively.	DCS	22.06.20



# CUTBACK BITUMEN

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VERSION FOR: DATE:
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## FOREWORD

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### REVISIONS TO PREVIOUS VERSION

This document has been revised from Specification TfNSW 3261 Edition 9 Revision 0.

All revisions to the previous version (other than minor editorial and project specific changes) are indicated by a vertical line in the margin as shown here, except when it is a new edition and the text has been extensively rewritten.

### PROJECT SPECIFIC CHANGES

Any project specific changes are indicated in the following manner:

- (a) Text which is additional to the base document and which is included in the Specification is shown in bold italics e.g. ***Additional Text***.
- (b) Text which has been deleted from the base document and which is not included in the Specification is shown struck out e.g. ~~Deleted Text~~.

# **TfNSW QA SPECIFICATION 3261**

## **CUTBACK BITUMEN**

### **1 SCOPE**

This Specification sets out the requirements for the supply of cutback bitumen for sprayed bituminous surfacing.

### **2 STRUCTURE OF THE SPECIFICATION**

This Specification includes a series of annexures that detail additional requirements.

#### **2.1 (NOT USED)**

#### **2.2 SCHEDULE OF IDENTIFIED RECORDS**

The records listed in Annexure 3261/C are **Identified Records** for the purposes of Specification TfNSW Q Annexure Q/E.

#### **2.3 (NOT USED)**

#### **2.4 REFERENCED DOCUMENTS AND DEFINITIONS**

Unless specified otherwise, the applicable issue of a referenced document, other than a TfNSW Specification, must be the issue current at the date one week before the closing date for tenders, or where no issue is current at that date, the most recent issue.

Standards, specifications and test methods are referred to in abbreviated form (e.g. AS 2350). For convenience, the full titles are given in Annexure 3261/M.

The term “the Supplier” means the supplier of the product covered by the scope of this Specification.

### **3 (NOT USED)**

### **4 SUPPLIER’S QUALITY MANAGEMENT SYSTEM**

The Supplier must establish and maintain a Quality Management System complying with AS/NZS ISO 9001 as a means of ensuring that the product conforms to this Specification.

Provide evidence verifying compliance with this Clause.

## 5 MATERIAL REQUIREMENTS

### 5.1 CONSTITUENTS

The bitumen and cutter used to manufacture the cutback bitumen must comply with AS 2008 and AS 3568 respectively.

For the bitumen, obtain test results on NATA endorsed test documents for the refinery batch from which the bitumen was taken, with sampling no earlier than 7 days prior to delivery of the cutback bitumen.

For the cutter, obtain a certificate of compliance relating to NATA endorsed test results which are less than 3 years old for the formulation used.

### 5.2 CUTBACK BITUMEN

Grade cutback bitumen by its viscosity at 60°C according to any of the methods allowed by AS 2157. However, the viscosity limits shown in Table 3261.1 apply in lieu of those in AS 2157.

Cutback bitumen must comply with the properties for its grade, set down in AS 2157, except for viscosity.

**Table 3261.1 - Properties of Cutback Bitumen**

Classification	Grade Designation	Viscosity at 60°C Pa.s		Delivery Temperature Range °C	Approximate % Cutter by Volume *
		Min	Max		
Priming Classes	RTAMC 00	0.008	0.019	15 – 35	56
	RTAMC 0	0.020	0.054	40 – 55	44
	RTAMC 1	0.055	0.15	65 – 80	34
Primer-sealing & Premix Classes	RTAMC 2	0.16	0.48	80 – 100	27
	RTAMC 3	0.49	1.4	100 – 115	21
	RTAMC 4	1.5	4.6	115 – 135	16
Sealing Classes	RTAMC 5	4.7	11.9	130 – 150	11
	RTAMC 6	12	32	145 – 160	7
	RTAMC 7	33	86	160 – 175	3

\* Only for guidance when using Appendix Clause A1.

## 6 PRODUCT CERTIFICATION

Verify at the point of manufacture that every batch of the cutback bitumen complies with Clause 5.2.

Report the results of any tests, which the Supplier's Quality Management System demonstrates to be reliable indicators of compliance, on NATA endorsed test documents.



## **7 DELIVERY**

### **7.1 CONTAINERS**

All containers used to deliver the cutback bitumen must be in good condition.

### **7.2 DELIVERY PROCEDURES**

As part of the Quality Management System, implement delivery procedures which ensure that all containers are clean and free from any material (including volatile hydrocarbons) which could alter the properties of the cutback bitumen. The delivery procedures must include product auditing at the point of delivery to verify compliance with Clause 5.2.

If product auditing (whether internal or external) identifies a nonconforming product, take samples from each drummed batch for testing to verify compliance with Clause 5.2. The number of drums sampled must not be less than the cube root of the number of drums making up the batch. Report the test results on NATA endorsed test documents and submit them to the Principal within 14 days of delivery.

### **7.3 HANDLING TEMPERATURES**

When cutback bitumen is loaded at a refinery or supply depot, the temperature at loading must not be more than 15°C in excess of the upper limit of the delivery temperature in Table 3261.1 for that particular grade of cutback bitumen.

At the time of delivery, cutback bitumen delivered by road tanker, rail tanker or sprayer must be at a temperature within the range specified in Table 3261.1 for that particular grade of cutback bitumen.

### **7.4 DETAILS OF CONSIGNMENT**

Provide the following information with each delivery:

- (a) Manufacturer's name.
- (b) Batch number, or date of manufacture.
- (c) Relevant classification and grade designation.
- (d) Loading temperature.
- (e) Delivery temperature of cutback bitumen delivered by road tanker or sprayer.
- (f) Weighbridge tickets showing gross mass of the delivery, the mass of the empty vehicle or container and the net mass of cutback bitumen.
- (g) Certification that the delivery procedures in Clause 7.2 have been complied with for that delivery.
- (h) Documentary evidence that the bitumen and cutter used to manufacture the cutback bitumen comply with AS 2008 and AS 3568 respectively.

## **8 SAMPLING**

Samples for testing taken from rail or road tanker, sprayer or drums must be in accordance with the relevant procedures set out in the sampling section of AS 2157.

**ANNEXURES 3261/A TO 3261/B – (NOT USED)****ANNEXURE 3261/C – SCHEDULE OF IDENTIFIED RECORDS**

Refer to Clause 2.2.

The records listed below are Identified Records for the purposes of TfNSW Q Annexure Q/E.

<b>Clause</b>	<b>Description of Identified Record</b>
6	Certification at point of delivery that every batch of cutback bitumen complies with Clause 5.2 together with test results reported on NATA endorsed test documents

**ANNEXURES 3261/E TO 3261/L – (NOT USED)****ANNEXURE 3261/M – REFERENCED DOCUMENTS**

Refer to Clause 2.4.

**TfNSW Specification**

TfNSW Q                      Quality Management System

**Australian Standards**

AS 2008                      Residual bitumen for pavements  
AS 2157                      Cutback bitumen  
AS 3568                      Oils for reducing the viscosity of bitumen  
AS/NZS ISO 9001        Quality management systems – Requirements

## **APPENDIX A**

The requirements of this Appendix apply where the order on the Supplier of the cutback bitumen is placed directly by the Transport for NSW (TfNSW).

### **A1 ORDERING**

Cutback bitumen, also known as "Medium-Curing Cutback", should be ordered by quoting the RTAMC grade and not by percent cutter. If the desired percentage cutter is known, the nearest RTAMC grade should be selected with reference to Table 3261.1.

Information to be specified by the TfNSW at the time of ordering include:

- (a) Grade of cutback bitumen (e.g. RTAMC 00, RTAMC 0 or RTAMC 1 to 7);
- (b) Quantity, place and time of delivery;
- (c) Delivery temperature (within range indicated in Table 3261.1 unless specified otherwise);
- (d) Intended use (only if requested by Supplier).

### **A2 CONSIGNMENT**

With each consignment, provide the TfNSW with a weighbridge docket and a delivery docket on which the gross mass of the delivery, the mass of the empty vehicle or container and the net mass of cutback bitumen are shown. In the case of rail deliveries, forward the weighbridge and delivery dockets to the consignee by the first post following despatch of the cutback bitumen.

### **A3 DEMURRAGE CHARGES**

The Supplier must load the vehicles to be used for delivering the cutback bitumen and despatch them to their delivery destination promptly. The Supplier is liable for any demurrage or other charges that may be levied by the transport company as a result of any delay by the Supplier in loading and despatch of the vehicle.

### **A4 MEASUREMENT**

Measurement for payment purposes will be by net mass, exclusive of containers, as measured on an approved weighbridge. The delivery vehicle must be first weighed when empty, and again after loading.

The net mass of any cutback bitumen returned for credit will be determined by weighing the vehicle or container immediately on return to the Supplier's works, and again after emptying.

### **A5 PAYMENT**

Payment for cutback bitumen conforming to the specification will be made on the basis of the quantities measured in accordance with Clause A4.

In the case of cutback bitumen at the point of delivery having a viscosity at 60°C within the specified range according to Table 3261.1, but having any property (other than viscosity at 60°C) outside the range specified by AS 2157, consideration will be given to acceptance of the material, subject to deductions in payment of 2% of the quoted rate.

In the case of cutback bitumen at the point of delivery having a viscosity at 60°C outside the range specified in Table 3261.1 of this document, consideration may be given to the acceptance of the material subject to deductions in payment as follows:

- Viscosity in range of next adjoining grade - deduction 10% of quoted rate
- Viscosity in range of next but one adjoining grade - deduction 25% of quoted rate
- Viscosity beyond next but one adjoining grade - deduction 50% of quoted rate

The viscosity as determined by any method allowed by AS 2157 must be rounded to two significant figures in the direction favouring the Supplier. The range allowed in Table 3261.1 includes an allowance for the repeatability of the test. Do not make any attempt to include another allowance for repeatability.

#### **A6 WAITING TIME**

The Purchaser will at its discretion have the option of detaining a vehicle at the point of delivery should delays in unloading occur. In such event, the TfNSW will pay to the Supplier the rate indicated by the Supplier in its tender in respect of vehicle waiting time, after the first hour of unloading time.

Payment for waiting time must not commence until one hour after the cutback bitumen is within the delivery temperature range specified in Table 3261.1.

#### **A7 DEDUCTIONS FOR LATE DELIVERY AND REHEATING**

In the event of late delivery and/or time lost at the point of delivery in raising the temperature to the temperature specified at the time of ordering, the TfNSW may deduct by way of liquidated damages and not as a penalty for the following:

##### **1. Late Delivery**

After the first hour, \$300 per hour or part thereof for each hour delay in the delivery by road of the material.

##### **2. Reheating**

After the first hour, \$300 per hour or part thereof for each hour delay in attaining the temperature specified at the time of ordering.