

# TRANSPORT FOR NSW (TfNSW)

## SPECIFICATION D&C 3256

### CRUMB RUBBER

#### NOTICE

This document is a Transport for NSW D&C Specification. It has been developed for use with Design & Construct roadworks and bridgeworks contracts let by Transport for NSW. It is not suitable for any other purpose and must not be used for any other purpose or in any other context.

Copyright in this document belongs to Transport for NSW.

#### REVISION REGISTER

<b>Ed/Rev Number</b>	<b>Clause Number</b>	<b>Description of Revision</b>	<b>Authorised By</b>	<b>Date</b>
Ed 1/Rev 0		First issue.	GM, IC W Stalder	08.07.11
Ed 1/Rev 1		Updated to accord with base (non-D&C) Specification 3256 Ed 6/Rev 1.	MCQ	28.08.18
Ed 1/Rev 2	Global	References to “Roads and Maritime Services” or “RMS” changed to “Transport for NSW” or “TfNSW” respectively.  References to “RMS Representative” changed to “Principal”.	DCS	22.06.20





# CRUMB RUBBER

Copyright – Transport for NSW  
IC-DC-3256

VERSION FOR: DATE:
-----------------------



## CONTENTS

CLAUSE	PAGE
FOREWORD .....	ii
TfNSW Copyright and Use of this Document .....	ii
Base Specification .....	ii
1 SCOPE .....	1
2 STRUCTURE OF THE SPECIFICATION .....	1
2.1 (Not Used) .....	1
2.2 Schedule of Identified Records .....	1
2.3 (Not Used) .....	1
2.4 Referenced Documents .....	1
3 DEFINITIONS .....	1
4 QUALITY MANAGEMENT SYSTEM .....	2
5 RESOURCE RECOVERY EXEMPTION AND ORDER .....	2
6 MATERIAL PROPERTIES .....	2
7 DELIVERY .....	2
7.1 Delivery Procedures .....	2
7.2 Details on Packaging .....	3
7.3 Information to be Provided to the Principal .....	3
ANNEXURES 3256/A TO 3256/B – (NOT USED) .....	4
ANNEXURE 3256/C – SCHEDULE OF IDENTIFIED RECORDS .....	4
ANNEXURES 3256/D TO 3256/L – (NOT USED) .....	4
ANNEXURE 3256/M – REFERENCED DOCUMENTS .....	4
LAST PAGE OF THIS DOCUMENT IS .....	4

## **FOREWORD**

### **TfNSW COPYRIGHT AND USE OF THIS DOCUMENT**

Copyright in this document belongs to Transport for NSW.

#### **When this document forms part of a deed**

This document should be read with all the documents forming the Project Deed.

#### **When this document does not form part of a contract**

This copy is not a controlled document. Observe the Notice that appears on the first page of the copy controlled by TfNSW. A full copy of the latest version of the document is available on the TfNSW Internet website: <http://www.rms.nsw.gov.au/business-industry/partners-suppliers/specifications/index.html>

### **BASE SPECIFICATION**

This document is based on Specification TfNSW 3256 Edition 6 Revision 2.

# TfNSW SPECIFICATION D&C 3256

## CRUMB RUBBER

### 1 SCOPE

This Specification sets out the requirements for crumb rubber.

Crumb rubber is derived from retreader's buffings and/or mechanically comminuted vulcanised rubber from either truck or car tyres which may contain synthetic or natural rubber.

Two grades of crumb rubber are specified:

- (a) Grade A or size 16 (nominal size 1 mm);
- (b) Grade B or size 30 (nominal size 0.5 mm).

### 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 3256/C are **Identified Records** for the purposes of Specification TfNSW D&C Q6 Annexure Q/E.

#### 2.3 (NOT USED)

#### 2.4 REFERENCED DOCUMENTS

Standards, specifications and test methods are referred to in abbreviated form (e.g. AS 2350). For convenience, the full titles are given in Annexure 3256/M.

### 3 DEFINITIONS

The terms "you" and "your" mean "the Supplier" and "the Supplier's" respectively.

"The recovered tyres exemption 2014" ("exemption") refers to the exemption issued by the EPA under Part 9, Clauses 91 and 92, of the *Protection of the Environment Operations (Waste) Regulation 2014 (NSW)* to consumers of recovered tyres.

"The recovered tyres order 2014" ("order") refers to the order issued by the EPA under Part 9, Clause 93 of the *Protection of the Environment Operations (Waste) Regulation 2014 (NSW)* that must be met by suppliers of crumb rubber to which "the recovered tyres exemption 2014" applies.

## 4 QUALITY MANAGEMENT SYSTEM

Implement a Quality Management System conforming to AS/NZS ISO 9001 as a means of ensuring that the materials supplied conform to the requirements of this Specification.

The Principal may audit the system for compliance.

## 5 RESOURCE RECOVERY EXEMPTION AND ORDER

Comply, as applicable, with the conditions of exemption of “the recovered tyres exemption 2014” and the processor requirements of “the recovered tyres order 2014”.

Maintain records, including relevant test results, to demonstrate compliance with the “exemption” and “order”.

Provide evidence of this compliance to the Principal upon request.

## 6 MATERIAL PROPERTIES

The crumb rubber must comply with the properties specified in Table 3256.1 for its grade.

**Table 3256.1 – Properties of Crumb Rubber**

Test Description	Unit	Test Method	Grade	
			Grade A or Size 16	Grade B or Size 30
Grading	%	AG:PT/T143		
Passing 2.36 mm sieve			100	100
Passing 1.18 mm sieve			80 – 100	100
Passing 0.6 mm sieve			0 – 10	60 – 100
Passing 0.3 mm sieve			0	0 – 20
Particle length	mm	AG:PT/T143	3 max	3 max
Bulk density	kg/m <sup>3</sup>	AG:PT/T144	Report	Report
Moisture content	%	AG:PT/T143	1.0 max	1.0 max
Iron content	%	AG:PT/T143	0.1 max	0.1 max

**Legend:** max = maximum Report = no conformity criteria exist, but test results must be reported

## 7 DELIVERY

### 7.1 DELIVERY PROCEDURES

As part of the Quality Management System, implement delivery procedures to ensure that the moisture content at the point of delivery does not exceed 1 percent.



## **7.2 DETAILS ON PACKAGING**

Clearly and durably mark or tag the packaging with the following information:

- (a) Supplier's name.
- (b) Batch number or date(s) of manufacture.
- (c) Product identification and grade or mesh size.

## **7.3 INFORMATION TO BE PROVIDED TO THE PRINCIPAL**

Provide to the Principal with each delivery the following:

- (a) Certificate of conformity verifying that the crumb rubber supplied complies with the properties specified in Table 3256.1 for its particular classification, together with test results reported on a NATA endorsed test report.

The test results must not be older than 6 month at the time of submission to the Principal.

- (b) Documentary evidence that the delivery procedures in Clause 7.2 have been complied with for that delivery.

## **ANNEXURES 3256/A TO 3256/B – (NOT USED)**

## **ANNEXURE 3256/C – SCHEDULE OF IDENTIFIED RECORDS**

Refer to Clause 2.2.

The records listed below are Identified Records for the purposes of TfNSW D&C Q6 Annexure Q/E.

<b>Clause</b>	<b>Description of Identified Record</b>
7.3	Certificate of conformity of crumb rubber, including test results

## **ANNEXURES 3256/D TO 3256/L – (NOT USED)**

## **ANNEXURE 3256/M – REFERENCED DOCUMENTS**

Refer to Clause 2.4.

### **TfNSW Specification**

TfNSW D&C Q6      Quality Management System (Type 6)

### **Austrroads Test Methods**

AG:PT/T143      Particle size and properties of crumb rubber

AG:PT/T144      Morphology of crumb rubber - Bulk density test

### **Australian Standards**

AS 2008      Residual bitumen for pavements

AS/NZS ISO 9001      Quality management systems - Requirements