

TRANSPORT FOR NSW (TfNSW)

QA SPECIFICATION 3580

AGGREGATE FILTER MATERIALS FOR SUBSURFACE DRAINAGE

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REVISION REGISTER

Ed/Rev Number	Clause Number	Description of Revision	Authorised By	Date
Ed 1/Rev 0		New specification	GM, IC	08.04.11
Ed 1/Rev 1	Global	References to “Roads and Maritime Services” or “RMS” changed to “Transport for NSW” or “TfNSW” respectively.	DCS	22.06.20

GUIDE NOTES
(Not Part of Contract Document)

Specification 3580

The requirements in TfNSW 3580 were contained in previous RTA R32, which has been withdrawn.



AGGREGATE FILTER MATERIALS FOR SUBSURFACE DRAINAGE

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VERSION FOR: DATE:

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FOREWORD

TfNSW COPYRIGHT AND USE OF THIS DOCUMENT

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When this document forms part of a contract

This document should be read with all the documents forming the Contract.

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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>

REVISIONS TO PREVIOUS VERSION

This document has been revised from Specification TfNSW 3580 Edition 1 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 3580

AGGREGATE FILTER MATERIALS FOR SUBSURFACE DRAINAGE

1 SCOPE

This Specification sets out the requirements for the supply of aggregate filter materials associated with the provision of subsurface drainage system.

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 3580/C are **Identified Records** for the purposes of Specification TfNSW Q Annexure Q/E.

2.3 FREQUENCY OF TESTING

The minimum frequency of testing is shown in Annexure 3580/L.

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 3600). For convenience, the full titles are given in Annexure 3580/M.

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

3 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.

4 REQUIREMENTS

4.1 PRETREATMENT

Pretreatment of the aggregate for testing is mandatory unless exempted by the Principal. The minimum level required is Pretreatment by Artificial Weathering in accordance with Test Method TfNSW T103, followed by three (3) cycles of Repeated Compaction in accordance with Test Method TfNSW T102. The Principal may also specify further cycles of Repeated Compaction.

4.2 AGGREGATE FILTER MATERIAL

Aggregate filter material must comply with the requirements of Table 3580.1. Determine the particle size distribution by Test Method TfNSW T201.

When tested in accordance with Test Method TfNSW T215, pretreatment of the aggregate is not required. The Wet Strength of the aggregate must not be less than 100 kN and the Wet/Dry Strength Variation must not exceed 35%. The fraction to be tested must be the proportion not passing the sieve specified in Table 3580.1.

When tested in accordance with Test Method TfNSW T203, the percentage of material passing the 75µm sieve must not exceed 2% by mass.

Table 3580.1 - Aggregate Filter Particle Size Requirements

Grade	Nominal Aggregate Size ⁽¹⁾ (mm)	Maximum Coefficient of Uniformity (D_{60}/D_{10}) ⁽²⁾	Particle Size for Wet Strength Testing not passing Sieve (mm)
F20	20	1.3	13.2
F14	14	1.6	9.5
F10	10	1.9	6.7
F7	7	2.2	4.75
F5	5	2.5	2.36

Notes:

- (1) The nominal aggregate size is the designation of an aggregate which gives an indication of the largest aggregate size present. It is expressed as the next whole number above the largest sieve size on which aggregate may be retained.
- (2) D_{60} is the particle size interpolated from a log-linear plot of the TfNSW T201 sieve analysis, where exactly 60% of the sample is finer than the interpolated size. Similarly, D_{10} represents the particle size which 10% of the sample passes.

5 PRODUCT CERTIFICATION

Provide a certificate of compliance verifying that the filter aggregate complies with all the requirements of this Specification together with test results reported on NATA endorsed test documents. The certificate is for tests not more than six (6) months old.

ANNEXURES 3580/A TO 3580/B – (NOT USED)**ANNEXURE 3580/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.

Clause	Description of Identified Record
5	Certificate of compliance

ANNEXURES 3580/D TO 3580/K – (NOT USED)**ANNEXURE 3580/L – MINIMUM FREQUENCY OF TESTING**

Clause	Characteristics Tested	Test Method	Minimum Frequency of Testing
4.2	Coefficient of Uniformity of Aggregate Filter Material	TfNSW T201	One per 100 m ³ prior to placement
4.2	Percentage of material retained on 75 µm sieve	TfNSW T203	One per 100 m ³ prior to placement
4.2	Wet/Dry Variation of Aggregate Filter Material	TfNSW T215	One per 100 m ³ prior to placement

ANNEXURE 3580/M – REFERENCED DOCUMENTS**TfNSW Specifications**

TfNSW Q Quality Management System

TfNSW Test Methods

TfNSW T102 Pretreatment of Road Construction Materials by Compaction
TfNSW T103 Pretreatment of Road Construction Materials by Artificial Weathering
TfNSW T201 Particle Distribution of Aggregates (by Washing)
TfNSW T203 Particle Distribution of Aggregates Finer than 75 µm (by Washing)
TfNSW T215 Wet/Dry Strength Variation

Australian Standards

AS/NZS ISO 9001 Quality management systems – Requirements