

TRANSPORT FOR NSW (TfNSW)

QA SPECIFICATION 3556

RIGID STRIP FILTER DRAINS

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REVISION REGISTER

Ed/Rev Number	Clause Number	Description of Revision	Authorised By	Date
Ed 1		New specification.	GM, RNIC (W Ho)	20.05.97
Ed 2		Extensive revision specifying both rigid and flexible strip filters. Revised in the current format.	GM, RNIC	10.02.05
Ed 2/Rev 1	“Notice” Spec Ref No Foreword Global	RTA PO Box and Fax numbers updated Revision No added Copyright clause added Reformatting and minor editing. Clauses rearranged and renumbered	GM, IC	22.04.09
Ed 3/Rev 0	1 2.3 3 4 5	Specification title changed to “Rigid Strip Filters”. Previous Clause 3 “(Not Used)”, Clause 7 “Stiffness” and Clause 8 “Geotextile” deleted. Some clauses renumbered. Scope revised to exclude flexible strip filter. Flexible strip filter requirements deleted. Rigid strip filter requirements amended and relocated to Clause 5. New clause titled “Frequency of Testing” added. Previous Clause 4. Product certification and conformance requirements deleted. Previous Clause 5. Rigid strip filter requirements rewritten. Flexible strip filter requirements deleted. Previous Clause 6 retitled “Clear Water Opening” and reworded.	GM, IC	08.04.11

Ed/Rev Number	Clause Number	Description of Revision	Authorised By	Date
Ed 3/Rev 0 (cont'd)	6	New clause titled "Load Bearing Characteristics" added.		
	7	Previous Clause 9. Certificate of compliance to be not more than 6 months old instead of not more than 3 months old.		
	8	Previous Clause 10. 8(f) – option for product identification by coil number deleted.		
	Annex A	Strip filter options and Table for specifying details of strip filters deleted.		
	Annex C	Clause reference updated.		
	Annex L	New annexure.		
Annex M	Reference documents updated.			
Ed 3/Rev 1	Global	Title changed from "Rigid Strip Filters" to "Rigid Strip Filter Drains".	GM, IC	22.11.12
Ed 3/Rev 2	Global	References to "Roads and Maritime Services" or "RMS" changed to "Transport for NSW" or "TfNSW" respectively.	DCS	22.06.20



RIGID STRIP FILTER DRAINS

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VERSION FOR: DATE:

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FOREWORD

TfNSW COPYRIGHT AND USE OF THIS DOCUMENT

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REVISIONS TO PREVIOUS VERSION

This document has been revised from Specification TfNSW 3556 Edition 3 Revision 1.

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 3556

RIGID STRIP FILTER DRAINS

1 SCOPE

This Specification sets out the requirements for the supply of rigid strip filter drains together with their associated fittings for use in subsurface drainage.

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 3556/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 3556/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 1234). For convenience, the full titles are given in Annexure 3556/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

Rigid strip filter must consist of an elongated high density polyethylene corrugated core perforated or non-perforated.

The rigid strip filter together with its fittings must be manufactured from high density polyethylene and meet the requirements of ASTM D7001-06 - Class B.

Rigid strip filter must show no signs of cracks, splits or significant signs of indentation when tested in accordance with Test Methods TfNSW T1509 and TfNSW T1510.

Where a rigid strip filter is to be discharged to a 100 mm diameter outlet, use the manufacturer's specified couplings for the rigid strip filter. Subsequent outlet pipes must meet the requirements of Clause 5 of Specification TfNSW 3552.

Where rigid strip filter is used to substitute other pipes, it must provide a flow capacity in excess of that of the pipes it substitutes.

5 CLEAR WATER OPENING

Clear water opening is the area of drainage slots expressed as a percentage of the area of the panel above the bottom of the lowest row of slots. For both 150 mm and 300 mm rigid strip filters, the clear water opening must be not less than 3.5%.

Locate perforations at least 20 mm from the bottom of rigid strip filter.

6 LOAD BEARING CHARACTERISTICS

The load bearing characteristics of rigid strip filters must comply with the requirements of Table 3556.1.

Table 3556.1 – Load Bearing Requirements for Rigid Strip Filters

Property	Test Method	Requirement	
		150 mm Rigid Strip Filter	300 mm Rigid Strip Filter
Horizontal Compressive Strength at 20% Deflection	ASTM D2412-10	Minimum 200 kPa	Minimum 200 kPa
Change in Core Area	ASTM D6244-06	< 5% loss in internal core area	< 5% loss in internal core area

7 PRODUCT CERTIFICATION

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

8 PRODUCT IDENTIFICATION

Mark each Lot of strip filter supplied clearly with the following information on an adhesive label:

- (a) Manufacturer's name and/or trademark;
- (b) The nominal height and width of the strip filter;
- (c) The nominal slot width and length (if applicable);
- (d) Strip filter length;
- (e) Date of manufacture;
- (f) Unique batch number.

ANNEXURES 3556/A TO 3556/B – (NOT USED)**ANNEXURE 3556/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
7	Certificate of compliance

ANNEXURES 3556/D TO 3556/K – (NOT USED)**ANNEXURE 3556/L – MINIMUM FREQUENCY OF TESTING**

Clause	Characteristics Tested	Test Method	Minimum Frequency of Testing
6	Strength	ASTM D2412-10	One per 2,000 m or part thereof
6	Change in core area	ASTM D6244-06	One per 2,000 m or part thereof

ANNEXURE 3556/M – REFERENCED DOCUMENTS

TfNSW Specifications

TfNSW Q	Quality Management System
TfNSW 3552	Subsurface Drainage Pipe (Corrugated Perforated and Non-perforated Plastic)

TfNSW Test Methods

TfNSW T1509	Determination of the High Temperature Impact Resistance of Strip Filters
TfNSW T1510	Determination of Low Temperature Impact Resistance of Strip Filters

Australian Standards

AS/NZS ISO 9001	Quality management systems – Requirements
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ASTM Test Methods

ASTM D2412-10	Standard Test Method for Determining External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading
ASTM D6244-06	Standard Test Method for Vertical Compression of Geocomposite Pavement Panel Drains
ASTM D7001-06	Standard Specification for Geocomposites for Pavement Edge Drains and Other High-Flow Applications