

TRANSPORT FOR NSW (TfNSW)

SPECIFICATION D&C 3557

FLEXIBLE STRIP FILTER DRAINS

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REVISION REGISTER

Ed/Rev Number	Clause Number	Description of Revision	Authorised By	Date
Ed 1/Rev 0		First issue	GM, IC	22.11.12
Ed 1/Rev 1	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



**Transport
for NSW**

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IC-DC-3557

VERSION FOR: DATE:

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FOREWORD

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When this document forms part of a deed

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BASE SPECIFICATION

This document is based on Specification TfNSW 3557 Edition 1 Revision 1.

TfNSW SPECIFICATION D&C 3557

FLEXIBLE STRIP FILTER DRAINS

1 SCOPE

This Specification sets out the requirements for the supply of flexible geocomposite plastic strip filter drains and their associated fittings.

Such flexible strip filter drains are used in soil nailing and for other subsurface drainage applications, but not in situations where they may be subject to traffic loading such as for pavement subsurface drainage.

The flexible strip filter consists of a single or double cusped type plastic core, encased in a geotextile which may act as a part of the structural composite.

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 3557/C are **Identified Records** for the purposes of Specification TfNSW D&C Q6 Annexure Q/E.

2.3 FREQUENCY OF TESTING

The minimum frequency of testing is shown in Annexure 3557/L.

2.4 REFERENCED DOCUMENTS AND DEFINITIONS

Standards, specifications and test methods are referred to in abbreviated form (e.g. AS 1234). For convenience, the full titles are given in Annexure 3557/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.

The Quality Management System must include product certification and periodic verification of product conformity during production in accordance with Appendix A of AS 2439.1.

4 REQUIREMENTS

The flexible strip filter core together with its fittings must be manufactured from high density polyethylene composed of a cusped or sheet and post core wrapped with a geotextile serving as the outer boundary and drainage fabric.

The flexible strip filter core and fittings supplied must be packed, stored and transported to prevent damage.

If the flexible strip filter core is supplied in coils or bundles of straight lengths, any ties used must not cause permanent denting or deformation of the strip filter.

The flexible strip filter must show no signs of cracks, splits or significant signs of indentation when tested in accordance with Test Methods TfNSW T1508, T1509 and T1510.

5 LOAD BEARING CHARACTERISTICS

The flexible strip filter stiffness when tested in accordance with Test Method TfNSW T1507 in the horizontal direction must comply with the requirements of Table 3557.1.

Table 3557.1 – Stiffness Requirements for Flexible Strip Filter Drains

Horizontal Loading	Strip Filter Height		
	Up to 200 mm	200 to 400 mm	400 mm and above
Min force (kN) at 4 mm deflection	5.5	11	16.5

6 GEOTEXTILE

The geotextile wrapping must be a non woven geotextile meeting the requirements of strength class A and application class G3 in Specification TfNSW D&C R63.

7 PRODUCT CERTIFICATION

Provide a certificate of compliance verifying that the flexible strip filter 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.

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) Strip filter length;
- (d) Date of manufacture;
- (e) Unique coil/batch number.

ANNEXURES 3557/A TO 3557/B – (NOT USED)

ANNEXURE 3557/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.

Clause	Description of Identified Record
7	Certificate of compliance

ANNEXURES 3557/D TO 3557/K – (NOT USED)

ANNEXURE 3557/L – MINIMUM FREQUENCY OF TESTING

Clause	Characteristics Tested	Test Method	Minimum Frequency of Testing
5	Load bearing characteristic	T1507	One per 2,000 m or part thereof
4	Low temperature resistance during straightening	T1508	One per 2,000 m or part thereof
4	High temperature impact resistance	T1509	One per 2,000 m or part thereof
4	Low temperature impact resistance	T1510	One per 2,000 m or part thereof

ANNEXURE 3557/M – REFERENCED DOCUMENTS

Refer to Clause 2.4.

TfNSW Specifications

- | | |
|---------------|---|
| TfNSW D&C Q6 | Quality Management System (Type 6) |
| TfNSW D&C R63 | Geotextiles (Separation and Filtration) |

TfNSW Standard Test Methods

- | | |
|-------------|---|
| TfNSW T1507 | Determination of the Compressive Stiffness of Strip Filters |
| TfNSW T1508 | Determination of the Low Temperature Resistance of Strip Filters during Straightening |
| 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 2439.1 | Perforated plastics drainage and effluent pipe and fittings – Perforated drainage pipe and associated fittings |
| AS/NZS ISO 9001 | Quality management systems – Requirements |