

# TRANSPORT FOR NSW (TfNSW)

## SPECIFICATION D&C 3556

### RIGID STRIP FILTER DRAINS

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SPECIFICATION D&C 3556

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# RIGID STRIP FILTER DRAINS

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## **FOREWORD**

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### **BASE SPECIFICATION**

This document is based on Specification TfNSW 3556 Edition 3 Revision 2.

# **TfNSW SPECIFICATION D&C 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 D&C Q6 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**

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 D&C 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**

Clearly mark each Lot of strip filter supplied 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 D&C Q6 Annexure Q/E.

<b>Clause</b>	<b>Description of Identified Record</b>
7	Certificate of compliance

## **ANNEXURES 3556/D TO 3556/K – (NOT USED)**

### **ANNEXURE 3556/L – MINIMUM FREQUENCY OF TESTING**

<b>Clause</b>	<b>Characteristics Tested</b>	<b>Test Method</b>	<b>Minimum Frequency of Testing</b>
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 D&C Q6      Quality Management System (Type 6)  
TfNSW D&C 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

### **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