

# TECHNICAL DATASHEET

# FILDRAIN TYPE 7

## PRODUCT DESCRIPTION

FILDRAIN TYPE 7 is a high strength, robust preformed sub surface drainage system to remove infiltration water from the granular foundation layers of highway constructions. It consists of a high density polyethylene double-cuspated (dimpled) core wrapped in a geotextile filter. The product is permeable both sides of the central core. A slotted, unperforated pipe is required at the base to collect the water and transport it horizontally to the outfall. Ordinary pipe fittings may be used with Fildrain type 7. The fin is available in lengths of 50m or 100mm, in standard heights (exclusive of pipe) from 30mm to 1100mm and to special order of heights of 5000mm.

Fildrain type 7 meets the requirements of the UK Highways Agency Manual of Contract Documents for Highways Works (MCDHW) which defines a Type 7 Fin Drain, and by Clause 514 of the specification for Highways Works (SHW) which dictates certain parameters. Those parameters are highlighted on this datasheet in bold type.



MECHANICAL PROPERTIES	TEST METHOD	UNITS		VALUE
THICKNESS @ 2kPa	EN ISO 9863-1	mm		1.1
TENSILE STRENGTH MD/CD	EN ISO 10319	kN/m		14.4/15.5
ELONGATION AT BREAK MD/CD	EN ISO 10319	%		65/70
PUNCTURE RESISTANCE (CBR)	EN ISO 12236	N		2200
DYNAMIC PERFORATION CONE DROP	EN ISO 13433	mm		24
TEAR RESISTANCE	ASTM D4533	N		>200
APPARENT OPENING SIZE (O <sub>90</sub> )	EN ISO 12956	µm		70
WATER FLOW AT 50mm HEAD	EN ISO 11058	l/m <sup>2</sup> .s		75
BREAKTHROUGH HEAD	BS 6906 pt3	mm		0
TYPE AND MATERIAL	NON-WOVEN NEEDLE-PUNCHED LONG STAPLE FIBRE POLYPROPYLENE			
<b>COMPOSITE</b>				
THICKNESS AT 2kPa	EN ISO 9863-1	mm		8.3
MASS PER UNIT AREA	EN ISO 9864	g/m <sup>2</sup>		940
USABLE TENSILE STRENGTH MD/CMD	EN ISO 10319	kN/m		32
<b>IN-PLANE WATER FLOW MD/CMD AT 50kPa CONFINING PRESSURE</b>	<b>EN ISO 12958</b>	<b>l/m.s</b>	AT HG=1.0	HG= HYDRAULIC GRADIENT <b>1.20</b>
<b>AT 100kPa CONFINING PRESSURE</b>	<b>EN ISO 12958</b>	<b>l/m.s</b>		<b>0.95</b>
<b>SHORT-TERM EQUIVALENT LOAD</b>	<b>SHW CLAUSE 514</b>	<b>kPa</b>		<b>100</b>
WITH SOFT FOAM CONTACT SURFACES TO SIMULATE INTRUSION INTO THE CORE DUE TO SOIL PRESSURE				
RESISTANCE TO WEATHERING	EN 12224			TO BE COVERED IN 14 DAYS
DESIGN LIFE				120 YEARS (MANUFACTURERS DECLARATION)
CHEMICAL RESISTANCE	EN 14030			EXCELLENT RESISTANCE TO COMMON CHEMICALS
<b>PRODUCT DIMENSIONS</b>				
STANDARD ROLL DIMENSIONS	300 TO 1100mm widths x 50m or 100m. Other widths and lengths to order			

1. TCS Geotechnics is a trading name of Technical Civils Solutions Ltd.
2. TCS Geotechnics Ltd reserves the right to alter product specifications without prior notice.
3. It is the responsibility of all users to satisfy themselves that the above data is current.
4. The above figures are average values obtained from testing to current EN ISO standards.
5. TCS Ltd cannot accept responsibility for the performance of these products as the conditions of use are beyond our control.
6. Installation details are available on request.

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