



PRODUCT DATA SHEET

Sikaplan® W Tundrain Type D

Drainage and protection layer for waterproofing membranes

PRODUCT DESCRIPTION

Sikaplan® W Tundrain Type D is a 5 mm thick high void ratio drainage and protection sheet. It consists of 3-dimensional polypropylene (PP) monofilaments, heat bonded on one side with a filter geotextile, also made of PP.

WHERE TO USE

This product is used as a drainage and protection layer in combination with Sikaplan® waterproofing membrane systems, designed for application in mined tunnels.

CHARACTERISTICS / ADVANTAGES

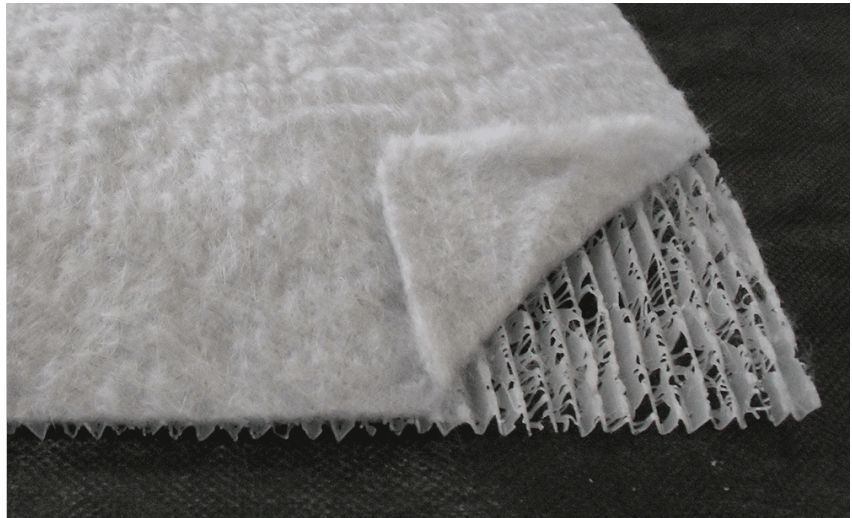
- High drainage capacity
- High durability
- High flexibility
- Combined drainage and protection in one layer
- Based on virgin material
- Easy to install and adapts well to the substrate profile
- Good resistance to all natural aggressive substances in groundwater and soil
- Suitable for contact with acidic (soft) water

APPROVALS / CERTIFICATES

- CE marking and declaration of performance based on EN 13252:2016 Geotextiles and geotextile-related products — Characteristics required for use in drainage systems — Filtration, separation and drainage (F + S + D)

PRODUCT INFORMATION

Packaging	Roll width	2.40 m ± 0.07 m
	Roll length	40.0 m ± 0.8 m
Refer to the current price list for available packaging variations.		
Shelf Life	5 years from date of production	
Storage Conditions	Rolls must be stored in their original packaging and in cool and dry conditions. They must be protected from direct sunlight, rain, snow and ice, etc.	



Thickness	At 2 kPa	5 mm ± 0.5 mm	(EN ISO 9863-1)
Mass per unit area	Geotextile	200 g/m ² ± 20 g/m ²	(ISO 9864)
	Drainage core	600 g/m ² ± 60 g/m ²	

SYSTEMS

System Structure	The Product is part of Sikaplan® WP/WT tunnel waterproofing system
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TECHNICAL INFORMATION

Resistance to Dynamic Puncture	Geotextile side	≤ 15 mm	(EN ISO 13433)
	Drainage side	≤ 15 mm	
Tensile Strength	Longitudinal (MD)	16 kN/m +0/-3 kN/m	(EN ISO 10319)
	Transversal (CMD)	16 kN/m +0/-3 kN/m	
Elongation at maximum tensile force	Longitudinal (MD)	75 % ± 30 %	(EN ISO 10319)
	Transversal (CMD)	75 % ± 30 %	
Ambient Maximum Temperature of Liquids	+40 °C (water)		
Drain Flow Capacity	0.15 L/(m·s) (R/R, i=0.04)		(ISO 12958-2)
	1.30 L/(m·s) (R/R, i=1)		
Chemical Resistance	Ageing in acid solution:	< 50 %	(EN 14030; EN 12226)
	Change in tensile strength aged 56 days at +60 °C		
	Ageing in basic solution:	< 50 %	
	Change in tensile strength aged 56 days at +60 °C		
	Ageing in basic solution:	< 50 %	
	Change in elongation aged 56 days at +60 °C		

	Hydrolysis: Change in tensile strength aged 90 days at +95 °C	< 50 %	(EN 12447)
	Hydrolysis: Change in elongation aged 90 days at +95 °C	< 50 %	
Resistance to Oxidation	Change in tensile strength aged 56 days at +110 °C	< 50 %	(EN ISO 13438; EN 12226)
	Change in elongation aged 56 days at +110 °C	< 50 %	
Microbiological Resistance	Change in tensile strength, aged 16 weeks	< 50 % (+26 °C / 95 % r.h)	(EN 12225)
	Change in elongation, aged 16 weeks	< 50 % (+26 °C / 95 % r.h)	
Resistance to UV Exposure	Not permanently UV stable		
Resistance to Weathering	Not resistant to permanent weathering		
Reaction to Fire	Class E		(EN 13501-5)

BASIS OF PRODUCT DATA

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

ENVIRONMENT, HEALTH & SAFETY

This product is a manufactured article that does not require Safety Data Sheets to be marketed, transported or applied at the jobsite, according to the Hazardous Product Act - Section 2. Based on our current knowledge, this product is not classified as dangerous and does not contain any hazardous materials. Always wear personal protective equipment (including safety goggles and gloves) to manipulate and install Sika® products.

APPLICATION INSTRUCTIONS

IMPORTANT

Strictly follow installation procedures

Strictly follow installation procedures as defined in Method Statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

SUBSTRATE QUALITY

Refer to the following Sika® Method Statements:

- Sikaplan® WP sheet membrane (PVC) system for waterproofing tunnels
- Sikaplan® WT sheet membrane (FPO) system for waterproofing tunnels

APPLICATION

For information on application, refer to the following:

- Sikaplan® WP sheet membrane (PVC) system for waterproofing tunnels
- Sikaplan® WT sheet membrane (FPO) system for waterproofing tunnels

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

LEGAL NOTES

The information, and in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request or may be downloaded from our website at: www.sika.ca

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Product Data Sheet

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