

# TECHNICAL DATASHEET

## PP GEOMEMBRANE

### PRODUCT DESCRIPTION

A geomembrane manufactured from maximum quality Polypropylene PP resin, duly contrasted, that comply with the most rigorous requirements established for their use.

TCS PP contains 97% of pure polymer, and approximately 2,5% of Carbon Black, antioxidants and thermal stabilisers. The product does not contain plasticisers or fillers that can migrate over time.

The geomembrane Polypropylene is manufactured under permanent quality controls.



TESTED PROPERTY	UNIT	TEST METHOD	VALUES				
<b>RAW MATERIAL IDENTIFICATION</b>							
DENSITY OF RAW MATERIAL	g/cm <sup>3</sup>	UNE EN ISO 1183-1	0.87 - 0.91				
DENSITY OF GEOMEMBRANE	g/cm <sup>3</sup>	UNE EN ISO 1183-1	0.88 - 0.92				
MELT FLOW INDEX	g/10min	UNE EN ISO 1133-1 (230°C/ 2.16 KG)	1.00				
		UNE EN ISO 1133-1 (230°C/ 5 KG)	4.00				
CARBON BLACK CONTENT	%	ASTM D 4218	2.0 - 2.5				
<b>DURABILITY</b>							
OXIDATION	%	UNE EN 14575	15				
<b>FUNCTIONAL PROPERTIES</b>							
LOW TEMPERATURE BRITTLINESS (t <sup>o</sup> : -40°C)	-	UNE EN 495-5	NO CRACKS				
WATER PERMEABILITY	m <sup>3</sup> /m <sup>2</sup> .day	UNE EN 14150	<1.10 <sup>-6</sup>				
COEFFICIENT OF LINEAR THERMAL EXPANSION	1/°C	ASTM D 696	1,15.10 <sup>-4</sup>				
WATER ABSORPTION	%	UNE EN ISO 62 (24h)	0.2				
		UNE EN ISO 62 (6 DAYS)	1.0				
<b>STRENGTH CHARACTERISTICS QUALITY OF FINAL PRODUCT</b>							
THICKNESS	mm	UNE-EN 1849-2	1.00	1.20	1.50	2.00	2.50
MEDIUM THICKNESS TOLERANCE	%		±5				
PUNCTUAL MINIMUM THICKNESS TOLERANCE	%		±10				
<b>MECHANICAL PROPERTIES (*)</b>							
TENSILE STRENGTH AT BREAK	N/mm	UNE EN ISO 527	15 (12)	18 (14)	23 (18)	30 (24)	38 (30)
ELONGATION AT BREAK	%		600 (500)				
TEAR RESISTANCE	N	ISO 34-1	60.00	72.00	90.00	120.00	150.00
PUNCTURE RESISTANCE	KN	UNE-EN ISO 12236	0.8	1.0	1.1	1.4	1.5
EXPLODING RESISTANCE	%	pr EN 14151	>15				
DIMENSIONAL STABILITY	%	UNE EN ISO 14632 (100°C, 1h)	±1,5				

PARAMETER	UNIT	1.00				
<b>PRESENTATION (STANDARD SIZES)</b>						
WIDTH X LENGTH	m x m	2 x 20/ 2 x 40m				
ROLL WEIGHT	Kgs	36/72				

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.
7. Values indicated are medium. In brackets minimum values with 95% confidence level.

#### REGISTERED OFFICE ADDRESS

Units 2 & 5 Tetbury Close  
Martland Industrial Park  
Wigan  
Greater Manchester  
WN5 0LA

