

# TECHNICAL DATASHEET

## HDPE 6/6.3/7.5

### PRODUCT DESCRIPTION

HD is a geomembrane manufactured from maximum quality high density polyethylene HDPE resins, duly contrasted, that comply with the most rigorous requirements established for their use.

HD contains 97.5% 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 HD 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	<0.932			
DENSITY OF GEOMEMBRANE	g/cm <sup>3</sup>	UNE EN ISO 1183-1	0.946 ± 0.004			
MELT FLOW INDEX	g/10min	UNE EN ISO 1133-1 (190°C/ 5 KG)	≤1.30			
		UNE EN ISO 1133-1 (190°C/ 2.16 KG)	≤0.40			
CARBON BLACK CONTENT	%	ASTM D 4218	2.0-2.5			
CARBON BLACK DISPERSION	-	ISO 18553	≤3			
<b>DURABILITY</b>						
OXIDATIVE INDUCTION TIME STANDARD OIT HIGH PRESSURE OIT	min	UNE EN 728 ASTM D 3895 (200°C) ASTM D 5885	≥100 ≥400			
STRESS CRACK RESISTANCE. SP-NCTL	H	ASTM D 5397	≥3.000			
OVEN AGING AT 85°C HP O.I.T % RETAINED AFTER 90 DAYS	%	ASTM D 5721 ASTM D 5885	≥80			
UV RESISTANCE. HP OIT, % RETAINED AFTER 1600 HRS	%	ASTM D 7238 ASTM D 5885	≥75			
OXIDATION	%	UNE EN 14575	≥15			
<b>FUNCTIONAL PROPERTIES</b>						
LOW TEMPERATURE BRITTLINESS (t <sup>3</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	2.15-10 <sup>-4</sup>			
WATER ABSORPTION	%	UNE EN ISO 62 (24h)	≤0.2			
		UNE EN ISO 62 (6 DAYS)	≤1			
<b>STRENGTH CHARACTERISTICS QUALITY OF FINAL PRODUCT</b>						
THICKNESS	mm		0.75	1.00	1.50	2.00
AVERAGE THICKNESS TOLERANCE	%	UNE-EN 1849-2	±5			
PUNCTUAL MINIMUM THICKNESS TOLERANCE	%		±10			
<b>MECHANICAL PROPERTIES (*)</b>						
TENSILE STRENGTH AT YIELD	N/mm		13 (12)	18 (16)	26 (24)	35 (32)
ELONGATION AT YIELD	%	UNE-EN ISO 527,	12 (9)			
TENSILE STRENGTH AT BREAK	N/mm	(TYPE 5), lo 25mm	23 (19)	31 (26)	47 (39)	62 (52)
ELONGATION AT BREAK	%		800 (700)			
TEAR RESISTANCE	N	ISO 34-1	≥101	≥135	≥202	≥270
PUNCTURE RESISTANCE	KN	UNE-EN ISO 12236	2.1 (1.8)	2.8 (2.4)	4.0 (3.8)	5.0 (4.8)
AXI-SYMMETRIC BREAK RESISTANCE STRAIN	%	EN 14151	≥15			
DIMENSIONAL STABILITY	%	UNE EN ISO 14632 (100°C, 1h)	±1.5			

PARAMETER	UNITS	0.75	1.00	1.50	2.00
<b>PRESENTATION ( STANDARD SIZES)</b>					
ROLL WIDTH		6/6.30/7.50			
ROLL LENGTH	m	280	210	140	105

### REGISTERED OFFICE ADDRESS

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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.

