

Raw Material

High Density Polyethylene

ATARFIL TM-TMT_(M5) is a **structured geomembrane** manufactured from maximum quality high density polyethylene resins.

ATARFIL TM-TMT_(M5) contains 97,5% of pure polymer, and approximately 2,5% of Carbon Black, antioxidants and thermal stabilizers. The product does not contain plasticizers or fillers that can migrate over time. The geomembrane ATARFIL TM-TMT_(M5) is manufactured under rigorous quality controls.

Surface	TM Structured 1 side TMT Structured 2 sides	Surface	Black
		RAL Code	-

	Tested Property	Unit	Test Method	Value
Raw Material Identification	Density of Raw Material	g/cm ³	UNE EN ISO 1183-1	0,932
	Density of Geomembrane	g/cm ³	UNE EN ISO 1183-1	0,946 ± 0,004
	Melt Flow Index	g/10 min	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	
Durability	Oxidative Induction Time Std O.I.T	min	UNE EN 728 / ASTM D 3895 (200°C)	100
	HP O.I.T		ASTM D 5885	400
	Stress Crack Resistance SP-NCTL ⁽¹⁾	h	ASTM D 5397	3000
	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 ⁽¹⁾	%	UNE EN 14575	15

	Tested Property	Unit	Test Method	Value
Functional Properties	Low Temperature Brittleness (t ³ : -40°C)	-	UNE EN 495-5	No cracks
	Water Permeability	m ³ /m ² -day	UNE EN 14150	< 1·10 ⁻⁶
	Coefficient of Linear Thermal Expansion	1/°C	ASTM D 696	2,15·10 ⁻⁴
	Water Absorption	%	UNE EN ISO 62 (24h)	0,2
			UNE EN ISO 62 (6 days)	1
	Asperity Height ⁽³⁾	mm	ASTM D 7466	0.70

⁽¹⁾is conducted on representative smooth membrane samples

	Tested Property	Unit	Test Method	Value					
Strength Characteristics Quality of Final Product	Nominal Thickness	mm	UNE EN 1849-2	1.00	1.50	2.00	2.50	3.00	
	Medium thickness tolerance	%		± 5					
	Punctual minimum thickness tolerance	%		± 10					
	Mechanical Properties^(*)								
	Tensile strength at Yield	N/mm	UNE-EN ISO 527 (Type 5), lo 25mm	18 (16)	26 (24)	35 (32)	44 (40)	53 (48)	
	Elongation at Yield	%		12 (9)					
	Tensile strength at Break	N/mm		17 (15)	25 (22)	34 (30)	42 (37)	51 (45)	
	Tensile strength at Break ^(**)	N/mm		31 (26)	47 (39)	62 (52)	78 (65)	94 (78)	
	Elongation at Break	%		500 (400)					
	Elongation at Break ^(**)	%		800 (700)					
	Tear Resistance	N	ISO 34-1	135	202	270	337	405	
	Puncture Resistance ^(**)	KN	UNE-EN ISO 12236	2.8 (2.4)	4.0 (3.8)	5.0 (4.8)	6.0 (5.8)	6.3 (6.0)	
	Exploding Resistance	%	pr EN 14151	> 15					
Dimensional Stability	%	UNE EN ISO 14632 (100°C, 1h)	± 1,5						

180716	PRESENTATION (Standard Sizes)	Parameter	Units	1,00		1,50		2,00		2,50		3,00	
				TM	TMT	TM	TMT	TM-TMT	TM-TMT	TM-TMT	TM-TMT		
				Roll width	m	6	6	6	6	6	6	6	
Roll Length	m	200	170	150	145	110	90	65					
Surface	m ²	1200	1020	900	870	660	540	390					

^(*)Values indicated are MEDIUM. In brackets minimum values with 95% confidence level.

^(**) Values obtained from the smooth part of geomembrane.

⁽²⁾ Certificates belonging to the Environmental and Quality Integrated System of Atarfil.

⁽³⁾The value indicated is medium. Minimum value 0.50mm.

Esta información se facilita sólo a título orientativo. ATARFIL no se hace responsable del uso que pueda hacerse de esta información ni del uso final al que se destine el producto, siempre y cuando no sea de aplicaciones propias de la geomembrana. Podrá ser revisada en cualquier momento o al menos cada 2 años, por lo que está sujeta a cambios de forma permanente.