

MACLINE® Geomembranes **MACLINE® ATARFIL LLDS**

Raw Material

Linear Low Density Polyethylene

DESCRIPTION

MACLINE® ATARFIL LLDS is a two-colour coextruded geomembrane manufactured from maximum quality linear low density polyethylene LLDPE resins to which pigments with a UV stabilizer are added. As a result of its colour, the product obtains a high integration with environment, or enhance the superficial appearance of the geomembrane in ornamental applications. Available colours: Green, Blue, Turquoise, Ochre, Grey and White. Other colours under request for minimum orders, indicating RAL code. Thickness of coextruded layer can be modified.

MACLINE® ATARFIL LLDS contains 97.5% of pure polymer, and approximately 2.5% of Carbon Black, antioxidant, thermal stabilizers and signal layer in white colour. The product does not contain plasticizers of fillers that can migrate over time. Atarfil quarantees both UV resistance and colour stability for a variable time limit depending on the selected colour.

The geomembrane MACLINE® ATARFIL LLDS is manufactured under rigorous quality controls.

SURFACE SMOOTH	COLOUR	BLACK + COLOUR							
	RAL Code	Green 6001	Blue 5012	Ochre 1001	Turquoise 5018	Grey 7040	White 9016		

	Tested Property	Unit	Test Method	Value	
Raw Material Identification	Density of Raw Material	g/cm³	UNE EN ISO 1183-1	< 0,932	
	Density of Geomembrane	g/cm ³	UNE EN ISO 1183-1	0.940	
	Melt Flow Index	g/10	UNE EN ISO 1133-1 (190°C/2,16 Kg)	1.2	
	Meit Flow Index	min	UNE EN ISO 1133-1 (190°C/2,16 Kg)	3.5	
	Carbon Black Content	%	ASTM D 4218	2,0 - 2,5	
	Carbon Black Dispersion	-	ISO 18553	3	
Durability	Oxidative Induction Time (OIT)	min	UNE EN 728 (200°C)	> 100	
	Oven aging at 85°C (min. ave.)	%	UNE EN 14575	≤ 15	

	Tested Property	Unit	Test Method	Value	
Functional Properties	Low Temperature Brittleness (ta: -40°C)	-	UNE EN 495-5	No cracks	
	Water Permeability	m³/m²·- day	UNE EN 14150	< 1·10 ⁻⁶	
	Coefficient of Linear Thermal Expansion	1/K	ASTM D 696	1,93·10 -4	
	Mater Absoration	%	UNE EN ISO 62 (24h)	0,1	
	Water Absorption	%	UNE EN ISO 62 (6 days)	0, 5	
	Thickness of Co-extruded Layer	%	UNE EN 1849-2	50	
	Asperity Height	mm	ASTM D 7466	-	

	Tested Property		Unit	Test	Method	Value				
llity of	Thickness		mm	UNE E	N 1849-2	1.00	1.50	2.00	2.50	3.00
	Medium thickness tolerance		%		-		± 5			
Quality	Punctual minimun thickness tolerance		%		-	± 10				
Strength Characteristics Final Product	Tensile Properties ⁽¹⁾									
	Tensile strength at Yield		N/mm	UNE-EN ISO 527		13 (26)	45 (39)	62 (52)	77 (65)	93 (78)
	Elongation at Break		%	UNE-E	N 150 521		800 (750)			
	Tear Resistance		N	ISO 34-1		98	145	195	245	290
	Puncture Resistance		KN	UNE-EN ISO 12236		2.40	2.90	4.40	4.90	5.90
	Exploding Resistance		%	pr EN	N 14151	> 15				
	Dimensional Stability		%	UNE EN ISO 1	14632 (100°C, 1h)	± 1.5				
		Parameter	Units	0.75	1,00	1,50	2,00		2,50	3,00
250613	PRESENTATION (Standard Sizes)	Roll width	m	7.50*	7.50*	7.50*	7.50	*	7.50*	7.50*
		Roll Length	m	280	210	140	105		84	70
		Surface	m²	2100	1575	1050	787		630	525

- (1) Values indicated are medium. In brackets values with 95% confidence level. (2) Certificates belonging to the Environmental and Quality Integrated Sistem of Atarfil (*) Geomembrane manufactured in Dubai Plant.

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