

MACLINE Geomembranes MACLINE® ATARFIL HD

Raw Material

High Density Polyethylene

DESCRIPTION

MACLINE® ATARFIL 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.

MACLINE® ATARFIL HD 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 **MACLINE® ATARFIL HD** is manufactured under permanent quality controls.

SURFACE	SMOOTH	COLOUR	BLACK
		RAL Code	-

	Tested Property	Unit	Test Method	Value
Raw Material Identification	Density of Raw Material	g/cm3	ASTM D 792	>0,932
	Density of Geomembrane	g/cm3	ASTM D 792	0,946 + 0.004
	Melt Flow Index	g/10 min	ASTM D 1238 (190°C/5 Kg)	<1,30
	Carbon Black Content	%	ASTM D 4218	2,0 - 2,5
	Carbon Black Dispersion	-	ASTM D 5596	10/10 views in cat. 1 or 2

Durability	Oxidative Induction Time (OIT)	min	ASTM D 3895 (200°C)	> 100
	Stress Crack Resistance/NCTL	h	ASTM D 5397	> 600
	Oven aging at 85°C (min. ave.)	%	ASTM D 3895	> 55
	UV Resistance. High Pressure OIT - % retained after 1600 hrs	%	GM 11 / ASTM D 5885	> 70
	Oxidation	%	UNE EN 14575	> 15

	Tested Property	Unit	Test Method	Value
Functional Properties	Low Temperature Brittleness (t ^o : -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/K	ASTM D 696	2,15·10 ⁻⁴
	Water Absorption	%	ASTM D 570 (24h)	0,1
			ASTM D 570 (6 days)	0,1
	Thickness of Co-extruded Layer	%	ASTM D 5199	-
Asperity Height	mm	ASTM D 7466	-	

	Tested Property	Unit	Test Method	Value						
Strength Characteristics Quality of Final Product	Thickness	mm	ASTM D 5199	0.75	1.00	1.50	2.00	2.50	3.00	
	Medium thickness tolerance			+ 5						
	Punctual minimum thickness Tolerance	%	-	+ 10						
	Tensile Properties ⁽¹⁾									
	Tensile strength at Yield	N/mm	ASTM D 638 (Type IV)	13 (11)	18 (16)	26 (24)	35 (32)	44 (40)	53 (48)	
	Elongation at Yield	%		12						
	Tensile strength at Break	N/mm		23 (19)	31 (26)	47 (39)	62 (52)	78 (65)	94 (78)	
	Elongation at Break	%		800 (700)						
	Tear Resistance	N	ASTM D 1004	100	135	202	270	337	405	
	Puncture Resistance	N	ASTM D 4833	>240	> 320	>480	>640	>800	>960	
Exploding Resistance	%	pr EN 14151	> 15							
Dimensional Stability	%	ASTM D 1204 (100°C, 1h)	± 1,5							

	Parameter	Units	0,75	1,00	1,50	2,00	2,50	3,00
190713 PRESENTATION (Standard Sizes)	Roll width	m	7.5	7.5	7.5	7.5	7.5	7.5
	Roll Length	m	280	210	140	105	84	70
	Surface	m ²	2100	1575	050	787	630	525

(1) Values indicated are MEDIUM. In brackets values with 95% confidence level.

Maccaferri NZ Ltd

14 Goodman Place, PO Box 12536, Penrose, Auckland, New Zealand
T: (+64) 9 6436495 F: (+64) 9 634 6492, FREEPHONE 0800 60 60 20
E: sales@maccaferri.co.nz

www.maccaferri.co.nz

Quality System AS/NZS ISO 9001:2008.

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