

Raw Material

Linear Low Density Polyethylene

ATARFIL LLD is a geomembrane manufactured from maximum quality linear low density polyethylene LLDPE resins, duly contrasted, that comply with the most rigorous requirements established for their use.

ATARFIL LLD 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 LLD 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/cm ³	ASTM D 792	< 0,932
	Density of Geomembrane	g/cm ³	ASTM D 792	0.940
	Melt Flow Index	g/10 min	ASTM D 1238 (190°C/2,16 Kg)	1.2
			ASTM D 1238 (190°C/5 Kg)	3.5
	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) Standard OIT	min	ASTM D 3895 (200°C)	100
	High Pressure OIT		ASTM D 5885	400
	Oven aging at 85°C HP O.I.T. % retained after 90 days	%	ASTM D 5721 ASTM D 5885	60
	UV Resistance. HP OIT. % retained after 1600 hrs	%	ASTM D 7238 ASTM D 5885	35

	Tested Property	Unit	Test Method	Value
Functional Properties	Low Temperature Brittleness (t _r : -40°C)	-	ASTM D 746	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	1,93·10 ⁻⁴
	Water Absorption	%	ASTM D 570 (24h)	0,2
			ASTM D 570 (6 days)	1

	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					
Mechanical Properties⁽¹⁾									
Strength Characteristics Quality of Final Product	Tensile strength at Break	N/mm	ASTM D 6693 (Type IV), lo 50mm	23 (20)	31 (26)	46 (39)	62 (52)	77 (65)	93 (78)
	Elongation at Break	%		800 (750)					
	Tear Resistance	N	ASTM D 1004	74	98	145	195	245	290
	Puncture Resistance	N	ASTM D 4833	> 225	> 300	>470	>620	>780	>800
	Exploding Resistance	%	pr EN 14151	> 15					
	Dimensional Stability	%	ASTM D 1204 (100°C, 1h)	± 1.5					

80716	PRESENTATION (Standard Sizes)	Parameter	Units	0,75	1,00	1,50	2,00	2,50	3,00
		Roll width	m	6 / 6,30/ 7,50*	6 / 6,30/ 7,50*	6 / 6,30/ 7,50*	6 / 6,30/ 7,50*	6 / 6,30/ 7,50*	6 / 6,30/ 7,50*
		Roll Length	m	280	210	140	105	84	70
	Surface	m ²	1680/1764/2100	1260/1323/1575	840/882/1050	630/661/787	504/529/630	420/441/525	

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

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

⁽¹⁾ Geomembrane manufactured in Dubai Plant.