ATARFIL HD EVO
ALKALINE RESISTANCE

ATARFIL HD EVO AR geomembranes are manufactured from best in class Polyethylene (HDPE) resins coupled with specific antioxidant package by the most advanced in-house flat-die technology. This result in a quality and consistency product with maximum durability and long term performance. Scoring the highest STRESS CRACK RESISTANCE value in the industry, together with an unrivalled mechanical and chemical properties, makes it the best choice for any application.

Atarfil has developed the **EVOLUTION** range to exceed the most demanding best-practice environmental guidelines. These Geomembranes provide unrivaled resin properties demonstrated by Stress Crack Resistance > 3000hrs and HDPE formulations that increase key longevity properties established by Std OIT & HP OIT, Oven Aging and UV resistance testing. It has been specially designed to get the largest durability when exposed to very high pH.

PHYSICAL PROPERTIES

Property	Test Method	Unit	Value	Frequency[1]
Density of Raw Material	ASTM D 792	g/cc	≥ 0.932	-
Melt Flow Index	ASTM D 1238 (190°C/2.16 Kg)	g/10 min	≤ 0.40	1 per batch
Density of Geomembrane	ASTM D 792	g/cc	0.946 ± 0.004	90,000 kg
Carbon Black Content	ASTM D 4218	%	2.0 – 2.5	Per roll
Carbon Black Dispersion	ASTM D 5596	Category	Note 3	20,000 kg
Dimensional Stability	ASTM D 1204 (100°C/1h)	%	± 1.5	Per day
Low Temperature Brittleness (t° -70°C)	ASTM D 746	-	No cracks	Per formulation

ENDURANCE PROPERTIES

Property	Test Method	Unit	Value	Frequency[1]
Stress Crack Resistance	ASTM D 5397/ ISO18488[4]	h	≥ 3,000	90,000 kg
Oxidative Induction Time (OIT) Std OIT HP OIT	 ASTM D 8117 ASTM D 5885	min	 ≥ 160 ≥ 800	90,000 kg
Oven Aging at 85°C. % retained aft 90days: Std OIT HP OIT	ASTM D 5721 ASTM D 8117 ASTM D 5885	%	 ≥ 55 ≥ 80	Per formulation
UV Resistance HP OIT % retained after 1600h	ASTM D 7238 ASTM D 5885	%	≥ 75	Per formulation
Oxidation at 85°C	EN 14575	%	≤ 15	Per formulation

MANUFACTURING PROPERTIES

Property	Test Method	Unit	Value				Frequency[1]
Thickness (Nominal)	ASTM D 5199	mm	1.50	2.00	2.50	3.00	Per roll
Thickness (Minimum Average)		mm	1.50	2.00	2.50	3.00	
Thickness (Minimum Individual Value)		%	- 10				
Mechanical Properties[2]							
Tensile Strength at Yield	ASTM D 6693 Type IV	N/mm	26 (24)	35 (32)	44 (40)	53 (48)	9,000 kg
Elongation at Yield		%	≥ 13				
Tensile Strength at Break		N/mm	48 (40)	64 (53)	80 (67)	96 (80)	
Elongation at Break		%	800 (700)				
Tear Resistance	ASTM D 1004	N	≥ 202	≥ 270	≥ 337	≥ 405	20,000 kg
Puncture Resistance	ASTM D 4833	N	≥ 490	≥ 640	≥ 810	≥ 980	20,000 kg

STANDARD SIZES

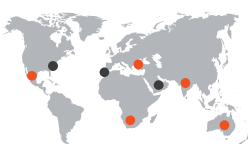
Thickness (mm)	1.50	2.00	2.50	3.00
Roll Width (m)	Roll Length (m)			
6 / 6.30 / 7.50	140	105	84	70

06052022

(1) Indicated frequency is minimum.
(2) Indicated values are average. In brackets minimum values with 95% confidence level.
(3) Carbon black dispersion (only near spherical agglomerates) for 10 different views: in Categories 1 or 2 only.
(4) Additional information regarding correlation between Test Methods ISO 18488 and ASTM D 5397 available upon request.

This product specifications meet or exceed GRI GM13.
This Geomembrane meet or exceed EPA Victoria's Best Practice Environmental Management Publication Siting, design, operation and rehabilitation of landfills (Landfill BPEM)
The information contained in this document is provided for informational purposes only. Atarfil reserves the right to change this information without prior notice.

ATARFIL HD M EVO AR GRI, ASTM ENG MM ID 6829



Manufacturing plants: Atarfil | Europe | Middle East | America

Sales offices: Spain, UAE, USA, Mexico, Turkey, India, South Africa and Australia.

Safe Containment
Waste Water Mining