



CERTIFICATE

TO WHOM IT MAY CONCERN

ATARFIL certifies that:

Temperature resistance and permeability properties depend on the HDPE resin used during manufacturing process, which is common for both smooth and textured geomembranes manufactured by ATARFIL.

The tables below are extracted from TRI USA report #45630.

Material: Atarfil 60 mil Smooth HDPE Geomembrane
Sample Identification: D1K108136Q
TRI Log #: 45630

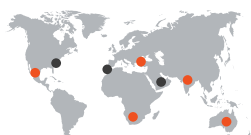
| PARAMETER | TEST REPLICATE NUMBER | | | | | | | | | | MEAN | STD. DEV. |
|----------------------------------------------------------------------------|-----------------------|----------|----------|------|------|---|---|---|---|----|-----------|-----------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| Low Temperature Brittleness (ASTM D 746, NSF 54, -70C) | | | | | | | | | | | | |
| | | | | | | | | | | | % passing | |
| MD (Pass/Fail) | Pass | Pass | Pass | Pass | Pass | | | | | | 100 | |
| TD (Pass/Fail) | Pass | Pass | Pass | Pass | Pass | | | | | | 100 | |
| permeability to Liquids/Water Vapor Transmission (EN 14150) | | | | | | | | | | | | |
| WVT (gm/hr-m ²) | | 0.0006 | 0.0006 | | | | | | | | 0.001 | 0.000 |
| WVT (gm/day-m ²) | | 0.0153 | 0.0144 | | | | | | | | 0.015 | 0.001 |
| WVT (grains/hr-ft ²) | | 0.0009 | 0.0012 | | | | | | | | 0.001 | 0.000 |
| Metric Perms (gm/Pa-hr-m ²) | | 5.46E-07 | 5.13E-07 | | | | | | | | 0.000 | 0.000 |
| Perms (inch-pounds) | | 0.0033 | 0.0025 | | | | | | | | 0.003 | 0.001 |
| Permeability (cm/sec) | | 2.27E-15 | 2.13E-15 | | | | | | | | 2.20E-15 | 9.77E-17 |
| Permeability(m/sec) | | 2.27E-17 | 2.13E-17 | | | | | | | | 2.20E-17 | 9.77E-19 |
| Average Flow/Unit Area (m ³ *m ⁻² *d ⁻¹) | | 1.53E-08 | 1.44E-08 | | | | | | | | 1.49E-08 | 6.36E-10 |

In witness my hand and seal, this December 1st, 2023.

Gabriel Martín Sevilla
Technical Director
ATARFIL



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📍 Manufacturing plants: Atarfil | Europe | Middle East | America

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

Safe Containment
Waste Water Mining