

1349-CPD-014

06

EN 13361, EN 13362, EN 13491,

EN 13492, EN 13493

ATARFIL LLD



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 rigourous 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

Raw Material Identification

Durability

Functional Properties

|  |  |  |  |
| --- | --- | --- | --- |
| Tested Property Unit Test Method Value | | | |
| Low Temperature Brittleness (tª: -40ºC) | - | UNE EN 495-5 | No cracks |
| Water Permeability | m3/m2·day | UNE EN 14150 | < 1·10 -6 |
| Coefficient of Linear Thermal Expansion | 1/ºK | ASTM D 696 | 1,93·10 -4 |
| Water Absorption | % | UNE EN ISO 62 (24h) | ≤ 0,1 |
| UNE EN ISO 62 (6  days) | ≤ 0,5 |
| Thickness of Coextruded Layer | % | UNE EN 53213-2 | - |
| Asperity Height | mm | GRI GM 12 | - |

|  |  |  |  |
| --- | --- | --- | --- |
| Oxidative Induction  Time (OIT) | min | UNE EN 728 (200ºC) | > 100 |
| Stress Crack Resistance/NCTL | h | ASTM D 5397 | > 300 |
| Oxidation | % | UNE EN 14575 | ≤ 15 |

|  |  |  |
| --- | --- | --- |
| Smooth | Colour  RAL Code | Black |
|  | - |

|  |  |  |  |
| --- | --- | --- | --- |
| Tested Property Unit Test Method Value | | | |
| Density of Raw  Material | g/cm3 | UNE EN ISO 1183-1 | < 0,932 |
| Density of  Geomembrane | g/cm3 | UNE EN ISO 1183-1 | ≤ 0,940 |
| Melt Flow Index | g/10 min | UNE EN ISO 1133 D  Condition (190ºC/2,16 Kg) | ≤ 1,2 |
| UNE EN ISO 1133 T  Condition (190ºC/5 Kg) | ≤ 3,5 |
| Carbon Black  content | % | ASTM D 4218 | 2,0 - 2,5 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Thickness | mm | UNE EN 1849-2 | 1.00 | 1.50 | 2.00 | 2.50 | 3.00 |
| Confidence level 95% | % | - | Tolerance: ± 6 | | | | |
| Confidence level 90% | % | - | Tolerance: ± 4 | | | | |
| Tensile Properties (\*) | | | | | | | |
| Tensile strenth at Break | N/mm | UNE-EN ISO 527  (Type V) | 31 (26) | 46 (39) | 62 (52) | 77 (65) | 93 (78) |
| Elongation at Break | % | 800 (≥750) | | | | |
| Tear Resistance | N | ISO 34-1 | ≥ 100 | ≥ 150 | ≥ 200 | ≥ 250 | ≥ 300 |
| Puncture Resistance | KN | UNE-EN ISO 12236 | 2.50 | 3.00 | 4.50 | 5.00 | 6.00 |
| Exploding Resistance | % | pr EN 14151 | < 15 | | | | |
| Dimensional Stability | % | UNE EN ISO 14632 (100ºC, 1h) | ± 1,5 | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Parameter | Units | 1,00 | 1,50 | 2,00 | 2,50 | 3,00 |
| Roll width | m | 6 | 6 | 6 | 6 | 6 |
| Roll Length | m | 210 | 140 | 105 | 84 | 70 |
| Surface | m2 | 1260 | 840 | 630 | 504 | 420 |

(\*) Values indicated are medium. In brackets values with 95% confidence level.

Tested Property

Unit

Test Method

Value

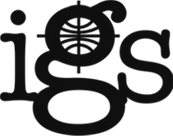
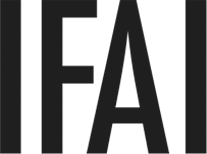
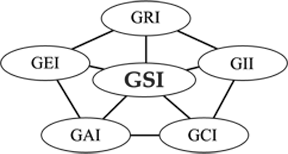
PRESENTATION

(Standard Sizes)

Strength Characteristics Quality of Final Product

90708

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