

# DATASHEET

## DULINE – 2.5mm

DULINE is a black, smooth, high quality, high density polyethylene Geomembrane produced from specialty formulated, virgin polyethylene resin. It contains approximately 97.5% polyethylene and 2.5% carbon black. It has outstanding chemical resistance, mechanical properties, environmental stress crack resistance, dimension stability, and thermal aging characteristics. It also has an excellent resistance to UV radiation and is suitable for exposed applications. Some test procedures have been modified for application to Geosynthetics. These product specifications meet or exceed GRI-GM13.

| Tested Properties                    | Test Method   | Values (*)                     |
|--------------------------------------|---|--------------------------------|
| Thickness (a)                        | ASTM D 5199   | 2.5 mm                         |
| Density                              | ASTM D 1505/792   | ≥ 0.94 g/cm <sup>3</sup>       |
| Tensile Strength at Yield            | ASTM D 638 / D 6693 Type IV                             | 38 N/mm                        |
| Tensile Strength at Break            | ASTM D 638 / D 6693 Type IV                             | 71 N/mm                        |
| Elongation at Yield                  | ASTM D 638 / D 6693 Type IV<br>(33mm gauge length)      | 13%                            |
| Elongation at Break                  | ASTM D 638 / D 6693 Type IV<br>(50mm gauge length)      | 700%                           |
| Puncture Resistance                  | ASTM D 4833   | 881 N                          |
| Tear Resistance                      | ASTM D 1004   | 311 N                          |
| Stress Crack Resistant               | ASTM D 5397, Appendix                                   | ≥400 hours                     |
| Carbon Black Content                 | ASTM D 1603, modified                                   | 2% to 3%                       |
| Carbon Black Dispersion              | ASTM D 5596   | Category 1 / 2 (b)             |
| Dimension Stability (each direction) | ASTM D 1204, (120°C/lb)                                 | ±2%                            |
| Melt Flow Index (c)                  | ASTM D 1238 (190°C/5.0kg)<br>ASTM D 1238 (190°C/2.16kg) | ≤3.0 g/10 min<br>≤1.0 g/10 min |
| Oxidative Induction Time (OIT)       | ASTM D 3895   | ≥100 min                       |
| Low Temperature Brittleness          | ASTM D 746  | -77 °C                         |

(\*) All values - unless otherwise noted - are nominal values.

(a) Tolerance + 10% - Special Thickness available upon request.

(b) Carbon Black Dispersion only applies to near spherical agglomerates. 9 of 10 views shall be category 1 or 2. No more than 1 view from category 3.

(c) Standard test Conditions: 190 °C / 5.0 kg.

(d) All procedures and values are subject to change without prior notification.

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