

# DATASHEET

## DULINE – 3.0mm

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	3.0 mm
Density	ASTM D 1505/792	≥ 0.94 g/cm <sup>3</sup>
Tensile Strength at Yield	ASTM D 638 / D 6693 Type IV	45 N/mm
Tensile Strength at Break	ASTM D 638 / D 6693 Type IV	85 N/mm
Elongation at Yield	ASTM D 638 / D 6693 Type IV (33mm gauge length)	13%
Elongation at Break	ASTM D 638 / D 6693 Type IV (50mm gauge length)	700%
Puncture Resistance	ASTM D 4833	1059 N
Tear Resistance	ASTM D 1004	373 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) ASTM D 1238 (190°C/2.16kg)	≤3.0 g/10 min ≤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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