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AquaBlock HM Textured Geomembrane

AquaBlock HM Textured Geomembrane is a single-sided or double-sided textured, black, high quality, high density polyethylene (HDPE) geomembrane produced from specially formulated polyethylene resin. The polyethylene resin is designed specifically for flexible and durable geomembrane applications. Aquablock HM Textured Geomembrane contains approximately 97.5% polyethylene, 2.5% carbon black and trace amounts of antioxidants and heat stabilisers. Aquablock HM Textured Geomembrane has outstanding chemical resistance, mechanical properties, environmental stress crack resistance, dimensional stability and thermal aging characteristics. Aquablock HM Textured Geomembrane has excellent resistance to UV radiation and is suitable for exposed applications. This product allows the design of projects with steeper slopes since frictional characteristics are enhanced and the smooth edges (width approx. 15 cm) allow for an easier, quicker welding process according to the state of the art. These product specifications meet or exceed GRI-GM 13.

Tested Property	Unit	Test Method		Values (*)		
Thickness[a]	mm	ASTM D 5199	**0.75**	**Industry Standard 1.0**	**1.5**	**2.0**
Density	g/cm³	ASTM D 792	≥ 0.94	≥ 0.94	≥ 0.94	≥ 0.94
Tensile Properties (each Direction) Strength at Yield Elongation at Yield Strength at Break Elongation at Break	 N/mm % N/mm %	ASTM D 638 / D 6693; type IV 50 mm/min lo = 33 mm 200 mm/min lo = 50 mm	 13 (11) 14 (12) 26 (20) 800 (700)	 16 (15) 16 (13) 33 (27) 800 (700)	 24 (22) 16 (13) 49 (40) 800 (700)	 32 (30) 16 (13) 66 (53) 800 (700)
Tear Resistance	N	ASTM D 1004	100 (95)	140 (130)	205 (190)	275 (250)
Puncture Resistance	N	ASTM D 4833	340 (240)	420 (320)	560 (480)	690 (640)
Carbon Black Content	%	ASTM D 1603	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0
Carbon Black Dispersion	Category	ASTM D 5596	1 / 2 [b]	1 / 2 [b]	1 / 2 [b]	1 / 2 [b]
Dimensional Stability (each Direction)	%	ASTM D 1204 (120 °C/1h)	± 2	± 2	± 2	± 2
Melt Flow Index [c]	g/10 min	ASTM D 1238 (190 °C / 5.0 kg) (190 °C / 2.16 kg)	 ≤ 3.0 ≤ 1.0	 ≤ 3.0 ≤ 1.0	 ≤ 3.0 ≤ 1.0	 ≤ 3.0 ≤ 1.0
Stress Crack Resistance (NCTL)	h	ASTM D 5397; Appendix	≥ 336	≥ 400	≥ 400	≥ 400
Oxidative Induction Time (OIT)	min	ASTM D 3895 (200°C; Pure O_2; 1 atm)	≥ 100	≥ 100	≥ 100	≥ 100
Reference Property	**Unit**	**Test Method**		**Values**		
Low Temperature Brittleness	°C	ASTM D 746	- 77	- 77	- 77	- 77
UV Resistance [e] HP-OIT retained after 1,600 hrs [F]	%	GRI-GM 11 ASTM D 5885	 ≥ 50	 ≥ 50	 ≥ 50	 ≥ 50
Roll Width [g]	m	---	**6.95**	**7.5 / 6.95**		**7.5**
Surface	---	---	**double-sided smooth**			

(*): All values - unless otherwise noted - are nominal values. Values in brackets are minimum values within the 95% confidence interval

(a): Tolerance ±10% - Special thickness available upon request.
(b): 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/5.0kg.
(d) Test-Conditions: 20 hours UV cycle at 75°C followed by 4 hours condensation at 60°C; total: 1,600 hours.
(e) UV resistance is based on percent retained value regardless of the original High Pressure - OIT value.
(f) Roll widths and lengths have a tolerance of ± 1%

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