



HYMA HDPE is a high density polyethylene geomembrane, high quality black produced from specially designed resin formulated for flexible and durable geomembrane applications. The resin contains approximately 2.5% carbon black and sufficient amount of antioxidants, UV and heat stabilizers. HYMA HDPE has an excellent mechanical properties, chemical resistance, dimensional stability, thermal aging well as environmental stress crack resistance characteristics. These product specifications meet and exceed the known international specifications limits.

HYMA- HDPE Product Data Sheet (Available from 0.5 – 1.5 mm)

Tested Property	Unit	Test Method	Values			
			0.5	0.75	1.0	1.5
Thickness	mm	ASTM D5199	0.5	0.75	1.0	1.5
Density	g/cm ³	ASTM D792	0.94	0.94	0.94	0.94
Tensile Properties (each Direction)		ASTM D 638/D6693; type IV				
Strength at Yield	N/mm	50 mm/min	5	7	15	23
Elongation at Yield	%	l ₀ = 33 mm	20	20	20	20
Strength at Break	N/mm	200 mm/min	12	15	25	45
Elongation at Break	%	l ₀ = 50 mm	900	900	900	900
Tear Resistance	N	ASTM D 1004	50-80	80-150	130-140	150-250
Puncture Resistance	N	ASTM D 4833	150-250	200-350	300-400	450-600
Carbon Black Content	%	ASTM D 1603	2-3	2-3	2-3	2-3
Carbon Black Dispersion	Category	ASTM D 5596	1/2	1/2	1/2	1/2
Dimensional Stability (each Direction)	%	ASTM D1204(120°C/1h)	± 2	± 2	± 2	± 2
Melt Flow Index	g/10min	ASTM 1238 (190°C/5.0kg) (190°C/2.16 kg)	≤1.0	≤1.0	≤1.0	≤1.0
Stress Crack Resistance (NCTL)	h	ASTM D 5397; Appendix	≥ 420	≥ 420	≥ 420	≥ 420
Reference Property	Unit	Test Method	values			
Low Temperature Brittleness	°C	ASTM D 746	-80	-80	-80	-80
Oxidative Induction Time (OIT)	min	ASTM D 3895 (200°C; Pure O ₂ ; 1atm)	> 40	> 40	> 40	> 40
UV Resistance HP-OIT retained after 1,600h	%	GRI-GM11 ASTM D5885	≥ 50	≥ 50	≥ 50	≥ 50
Roll Width (approx.)	m	-----	4-8	4	4	3
Surface	----	-----	Both sides smooth			

All values – unless otherwise noted – are normal values.