



PRIME HMWPE 1000

PRIME 1000 is a High molecular weight Polyethylene thermoplastic sheet designed for automotive, leisure, transportation and general thermoforming applications. PRIME 1000 has a high impact resistance across a wide temperature range, excellent ESCR characteristics & a much greater stiffness than standard HDPE grades.

Property	Unit	ASTM	Value	
PHYSICAL				
Density	g/cc	D1505	.97	
Melt Flow (190°C/5kg)	g/10min	D1238	0.3-0.5	
MECHANICAL				
Stress @ Yield	MPa	50mm/min	D638 Type IV	26
Ultimate elongation	%	50mm/min	D638 Type IV	>600
Flexural Modulus	MPa		D790	1200
Brittleness Temperature	°C		D746	-75
ESCR				
Cond.B (100% igepal),F ₅₀	h		D1693	>600
Shore 'D' Hardness			D2240	68
FLAMMABILITY RATING				
HDT @0.45 MPa	°C		UL94	HB 78

Finishing

Aluminium tool construction is recommended with a temperature control function to ensure consistent moulding & finished part dimensional tolerances. A constant tool temperature (typically 75°C for PRIME HMWPE 1000) should be maintained throughout the production run. Cooling using air or water spray will speed up the cooling cycle to provide efficient production output. Once removed from the tool, it is recommended that the component is clamped in a frame for a short period to optimise dimensional stability & reduce the risk of warping. Shrinkage rates are available on application.

Colour, Textures, Capabilities

PRIME HMWPE 1000 is available in a full range of colours (subject to minimum order quantities) either colour matched to specific colour references, or to customer sample. A range of more standard colours is available for non-specific requirements. PRIME HMWPE 1000 is available with a smooth or with a textured finish. Emboss swatches are available on request.

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