

Nylon 12 AF

Parts that require the feel of cast aluminum. A rigid composite with a high resistance to heat.

General Properties			
Appearance	Visual	Light grey metallic	
Density (tap)	@ 25 °C (77 °F)	0.89	g/cm ³
Density (bulk)	@ 25 °C (77 °F)	0.69	g/cm ³
Mechanical Properties			
Tensile modulus	ASTM D638	3960 (574)	MPa (ksi)
Tensile strength	ASTM D638	35 (5060)	MPa (psi)
Elongation at break	ASTM D638	1.5	%
Flexural strength	ASTM D790	44 (6290)	MPa (psi)
Flexural modulus	ASTM D790	3517 (510)	MPa (ksi)
Impact strength (unnotched Izod)	ASTM D256	130	J/m
Hardness	Shore D	75	-
Thermal Properties			
Heat deflection temperature (HDT)	ASTM D 648 @ 0.45 MPa/66 psi @ 1.82 MPa/264 psi	180 (356) 137 (279)	°C (°F)
Co-efficient of thermal expansion	ASTM E 831 TMA (35 - 172 °C)	109 x 10 ⁻⁶	m/m °C
Glass transition (Tg)	DSC	40 (104)	°C (°F)
Electrical Properties			
Volume resistivity	ASTM D257	1.6 X 10 ¹³	Ω/cm
Surface resistivity	ASTM D257	6.0 X 10 ¹²	Ω
Dielectric constant	ASTM D150	14.5	-
Dielectric strength	ASTM D149	1.8 X 10 ²	v/mm
Chemical Resistance			
Alkalines, hydrocarbons, fuels and solvents			

Detailed test conditions are available upon request. Test samples were produced on a HiQ™ SLS® system, using new material.