

MATERIAL DATA SHEET: ALUMIDE

Material	Composition
ALUMIDE PA	NYLON PA 12 ALUMINIUM

Material Properties		Test Method
Density	1.36 g/cm ³	
Tensile strength	48 Mpa	EN ISO 527
Tensile modulus	3800 Mpa	
Elongation at break	4%	
Flexural modulus	3600 Mpa	
Flexural strength	72 Mpa	EN ISO 178
Charpy-Impact strength	29 kJ/m ²	EN ISO 179
Charpy-Notched impact strength	4.6 kJ/m ²	
Izod-Impact strength	32.8 kJ/m ²	EN ISO 180
Izod-Notched impact strength	4.4 kJ/m ²	
Ball indentation hardness	78 N/mm ²	EN ISO 2039
Shore D - hardness	76	ISO 868
Melting point	172-180 °C	EN ISO 11357-1
Heat deflection temperture B/50	351 °F	ASTM D468 (0.45 Mpa)
Vicat softening temperature B/50	169 °C	EN ISO 306
Heat conductivity (170 °C)	0.5-0.8 W(mk)-1	Hot wire method
Surface resistance [10V]	3 x 10 ¹² Ω	IEC 93
Specific surface resistance	5 x 10 ¹⁴ Ω	
Volume resistance [10V]	6 x 10 ¹² Ω	
Specific volume resistance	3 x 10 ¹⁴ Ω	
Dielectric breakdown strength	0.1 kV/mm	EN 60243-1
Dielectric constant (1 kHz)	13 ± 1.5 (100 Hz) 10 ± 0.5 (1 MHz)	DIN 53483
Dielectric loss factor (1 kHz)	0.018 ± 0.002	

Design Guidelines

Maximum printable size X x Y x Z (white natural)	650x350x550 mm	Minimum wall tickness	0.7 mm
Maximum printable size X x Y x Z (coloured)	270x150x150 mm	Minimum wires	0.8 mm
Construction support required	No	Layer tickness	100 μ m
Minimum size details	0.4 -0.5 mm	Accuracy	\pm 0.15 mm +0,15%
Interlocking parts	YES	Minimum space assembly	0.5 mm
Enclosed parts	YES	Clearance	0.5 mm