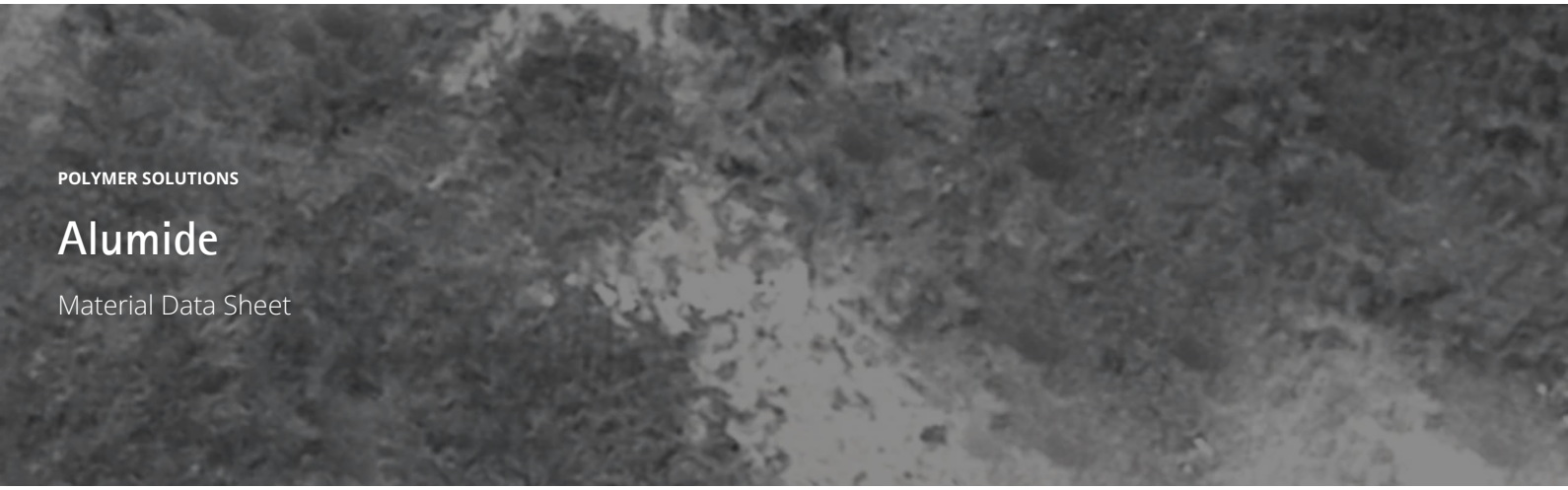

POLYMER SOLUTIONS

Alumide

Material Data Sheet

ALUMIDE

Product Description

Alumide is a metallic gray, aluminium-filled polyamide 12 powder. Parts made from Alumide are characterized by high stiffness, metallic appearance and good post-processing possibilities. The surfaces of alumide components can be very easily refined by grinding, polishing or coating. Machining is simplified by the chip-breaking effect of the aluminium filling (50 wt%).

MAIN CHARACTERISTICS

- Thermal conductivity (limited)
- High stiffness
- Easy postprocessing

TYPICAL APPLICATIONS

- Design elements
- Production equipment like jigs and fixtures
- Injection mold for small batch production

MECHANICAL PROPERTIES	DRY / CONDITIONED	UNIT	TEST STANDARD
Tensile Modulus			ISO 527-1/-2
X Orientation	3800 / -	MPa	
Y Orientation	3800 / -	MPa	
Tensile Strength			ISO 527-1/-2
X Orientation	48 / -	MPa	
Y Orientation	48 / -	MPa	
Strain at Break			ISO 527-1/-2
X Orientation	4 / -	%	
Flexural Modulus			ISO 178
X Orientation	3600 / -	MPa	
Flexural Strength			ISO 178
X Orientation	72 / -	MPa	
Charpy Impact Strength (+23°C)			ISO 179/1eU
X Orientation	29 / -	kJ/m²	
Charpy Notched Impact Strength (+23°C)			ISO 179/1eA
X Orientation	4.6 / -	kJ/m²	
Shore D Hardness			ISO 7619-1
X Orientation	76 / -	-	

THERMAL PROPERTIES	DRY / CONDITIONED	UNIT	TEST STANDARD
Melting Temperature	176	°C	ISO 11357-1/-3
Temperature of Deflection under Load 1.80 MPa			ISO 75-1/-2
X Orientation	144	°C	
Temperature of Deflection under Load 0.45 MPa			ISO 75-1/-2
X Orientation	175	°C	
Vicat Softening Temperature			ISO 306/B50
X Orientation	169	°C	

ELECTRICAL PROPERTIES	DRY / CONDITIONED	UNIT	TEST STANDARD
Volume Resistivity **X Orientation**	3E12 / -	Ohm•m	IEC 62631-3-1
Surface Resistivity **X Orientation**	5E14 / -	Ohm	IEC 62631-3-2
Relative Permittivity 100 Hz **X Orientation**	13 / -	-	IEC 62631-2-1
Relative Permittivity 1 MHz **X Orientation**	10 / -	-	IEC 62631-2-1
Dissipation Factor 1 MHz **X Orientation**	180 / -	E-4	IEC 62631-2-1
Electric Strength **X Orientation**	0.1 / -	kV/mm	IEC 60243-1

OTHER PROPERTIES	VALUE	UNIT	TEST STANDARD
Density	1.36	g/cm^3	EOS Method
Powder Color	grey	-	-
Components Color	grey	-	-

HEADQUARTERS

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Status as of 02.04.2026. Subject to technical modifications. EOS is certified according to ISO 9001.