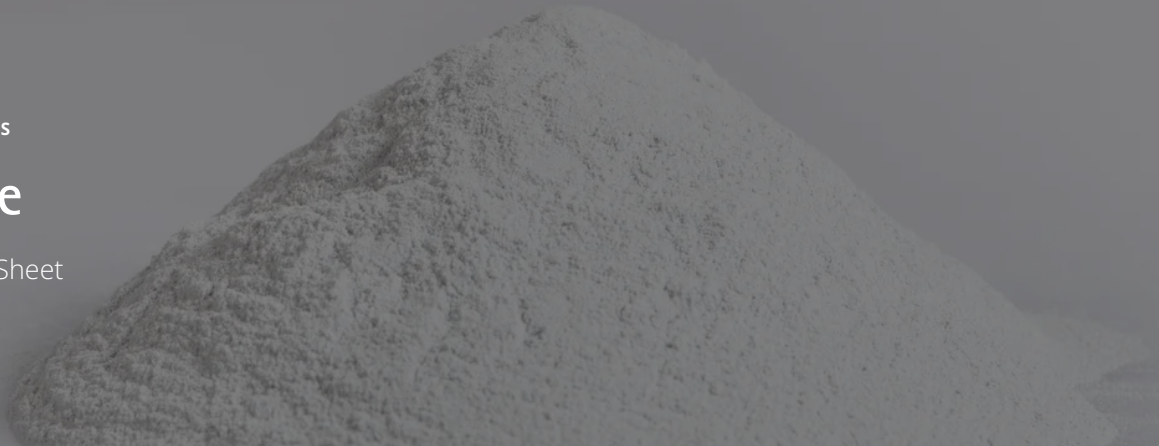


## POLYMER SOLUTIONS

# 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.

### 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/m <sup>2</sup>	
Charpy Notched Impact Strength (+23°C)			ISO 179/1eA
X Orientation	4.6 / -	kJ/m <sup>2</sup>	
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 <sup>3</sup>	EOS Method
Powder Color	grey	-	-
Components Color	grey	-	-

## HEADQUARTERS

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This powder has not been developed, tested or certified as a medical device according to Directive 93/42/EEC (MDD) or Regulation (EU) 2017/745 (MDR) and is not intended to be used as a medical device, in particular for the purposes specified in Art. 2 No. 1 MDR. Insofar as you intend to use the powder as raw material for the manufacture of pharmaceutical products or medical devices (e.g. as raw material which as a material must meet the requirements of Annex 1, Chapter II MDR), the responsibility and liability for all analyses, tests, evaluations, procedures, risk assessments, conformity assessments, approval and certification procedures as well as for all other official and regulatory measures required for this purpose shall lie solely with you both with regard to the pharmaceutical product and/or medical device manufactured by you and with regard to the properties, suitability, testing, evaluation, risk assessment, other requirements for use of the powder as raw material. In this respect, the limitations of liability pursuant to our General Terms and Conditions and the system sales or material contracts shall apply.

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Status as of 12.05.2024. Subject to technical modifications. EOS is certified according to ISO 9001.

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