Alumide
production based on PA 12 + Al

Mechanical properties	Standard	Unit	Values *
Coefficient of elasticity	ISO 527-1/-2		
x-direction		MPa	3800
y-direction		MPa	3800
z-direction		MPa	-
Tensile strength	ISO 527-1/-2		
x-direction		MPa	48
y-direction		MPa	48
z-direction		MPa	-
Breaking elongation	ISO 527-1/-2		
x-direction		%	4
y-direction		%	-
z-direction		%	-
Flexural modulus of elasticity	ISO 178		
x-direction		MPa	3600
Impact toughness (Charpy)	ISO 179-1/1eU		
x-direction		kJ/m²	29
Notched impact toughness (Charpy)	ISO 179-1/1eA		
x-direction		kJ/m²	4.6
Izod impact strength	ISO 180/1A		
x-direction		kJ/m²	-
Shore hardness D	ISO 868		
x-direction		-	76

Thermal properties	Standard	Unit	Values *
Melting temperature	ISO 11357-1/-3	°C	176
Vicat softening temperature	ISO 306/B50		
x-direction		°C	169
Temperature of heat resistance	ISO 75-1/-2		
x-direction		°C	144
z-direction		°C	-
Burning behaviour (sample thickness 0,5/1,6/3,2 mm)	UL94		-/-/-

Electrical properties	Standard	Unit	Values *
Electric strength	IEC 60243-1		
x-direction		kV/mm	0,1
Volume resistivity	DIN EN 62631-3-1		
x-direction		Ohm × cm	3×10^{14}
Surface resistivity	DIN EN 62631-3-2		
x-direction		Ohm	5×10^{14}
Comparative tracking index (CTI)	DIN EN 60112		
x-direction		V	-
y-direction		V	-
z-direction		V	-

Other properties	Standard	Unit	Values *
Density (laser sintered)	EOS method	g/cm³	1,36
Powder colour			grey
Component colour			grey
Food safe according to regulation EU 10/2011			No
Food safe according to FDA regulations			No
Detectability			-

Legend

The property data table, partly based on data from our raw material suppliers, is intended to assist you in quickly comparing plastics and selecting suitable materials. The values given are short-term values that may be influenced by numerous processing, environmental, and application conditions. The suitability of the selected material for its specific application always lies within the responsibility of the customer.

Important note: This data sheet is based on the technical information provided by EOS GmbH – Electro Optical Systems.

The information corresponds to our current knowledge and experience at the time of publication. It does not, on its own, constitute a sufficient basis for component design. Certain properties of the product or a component, or the suitability of the product or components for a specific application, are neither agreed upon nor guaranteed hereby. The producer or supplier of this component is responsible for verifying the properties and suitability for a specific application. This also applies with regard to the observance of possible intellectual property rights as well as existing laws and regulations. As part of the continuous development and improvement processes carried out by EOS, the information may be subject to change without prior notice.

* measured on dry test specimens
** using MurPearl® and MurPearl® Air
*** MDB: metall detecable; VDB: visually detecable

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