



Alumide

PA12-MED(AI)

EOS GmbH - Electro Optical Systems

Mechanical properties	Value	Unit	Test Standard
Shore D hardness	76	-	ISO 7619-1

3D Data	Value	Unit	Test Standard
The properties of parts manufactured using additive manufacturing technology (e.g. laser sintering, stereolithography, Fused Deposition Modelling, 3D printing) are, due to their layer-by-layer production, to some extent direction dependent. This has to be considered when designing the part and defining the build orientation.			
Tensile Modulus			ISO 527
X Direction	3800	MPa	
Y Direction	3800	MPa	
Tensile Strength			ISO 527
X Direction	48	MPa	
Y Direction	48	MPa	
Strain at break (X Direction)	4	%	ISO 527
Charpy impact strength (+23°C, X Direction)	29	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C, X Direction)	4.6	kJ/m ²	ISO 179/1eA
Flexural Modulus (23°C, X Direction)	3600	MPa	ISO 178
Flexural Strength (X Direction)	72	MPa	ISO 178
Temp. of deflection under load			ISO 75-1/-2
1.80 MPa, X Direction	144	°C	
0.45 MPa, X Direction	175	°C	
Volume resistivity (X Direction)	3E12	Ohm*m	IEC 62631-3-1

Thermal properties	Value	Unit	Test Standard
Melting temperature (20°C/min)	176	°C	ISO 11357-1/-3
Temp. of deflection under load			ISO 75-1/-2
1.80 MPa	144	°C	
0.45 MPa	175	°C	
Vicat softening temperature (50°C/h 50N)	169	°C	ISO 306

Electrical properties	Value	Unit	Test Standard
Relative permittivity			IEC 62631-2-1
100Hz	13	-	
1MHz	10	-	
Dissipation factor (1MHz)	180	E-4	IEC 62631-2-1
Surface resistivity	5E14	Ohm	IEC 62631-3-2
Electric strength	0.1	kV/mm	IEC 60243-1

Other properties	Value	Unit	Test Standard
Density (lasersintered)	1360	kg/m ³	EOS Method

Characteristics

Processing

Laser Sintering, Rapid Prototyping

Delivery form

Powder