Prosilas

PA12 Flame Retardant [Halogen free]

SLS MATERIAL

3D Data	Dry/cond	Unit	Test Standard
The properties of parts manufactured using additive manufacturing technology (e.g. lasers sintering, stereolithography, Fused Deposition Modelling, 3D printing) are due to their layer-by-layer production, to some extend direction dependent. This has to be considered when designing the part and defining the build orientation.			
Tensile Modulus x Direction y Direction z Direction	 **2500/2400** **2500/2400** **2300/2200**	 MPa MPa Mpa	ISO 527
Tensile Strength x Direction y Direction z Direction	 **46/43** **46/43** **41/38**	 MPa MPa Mpa	ISO 527
Strain at Tensile Strength x Direction y Direction z Direction	 **4/6** **4/6** **3/4**	 % % %	ISO 527
Strain at Break x Direction y Direction z Direction	 **4/7** **4/7** **3/4**	 % % %	ISO 527
Flexural Modulus (+23°C, x Direction)	**2300/-**	Mpa	ISO 178
Flexural Strength (x Direction)	**65/-**	Mpa	ISO 178

Thermal properties	Dry/cond	Unit	Test Standard
Melting temperature (20°C/min)	**185/***	°C	ISO 11357-1/-3
Flammability Test passed, 12 Ignition Time Test passed, 12 Ignition Time	 **1.7** **2.0**	 mm mm	CS 25/JAR25/FAR 25 § 25-853

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Additive Manifacturing Service & Consulting

+39 0733 892665
info@prosilas.com
www.prosilas.com

Thermal properties	Dry/cond	Unit	Test Standard
Smoke Density			ABD 0031 (Issue:F), method: AITM 2.0007
Test passed	**1.7**	mm	
Test passed	**2.0**	mm	
Toxicity			ABD 0031 (Issue:F), method: AITM 3.0005
Test passed	**1.7**	mm	
Test passed	**2.0**	mm	
Burning behaviour			UL94
Test passed, HB	**1.1**	mm	
Test passed, HB	**1.2**	mm	
Test passed, HB	**1.3**	mm	
Test passed, HB	**1.4**	mm	
Test passed, HB	**3.0**	mm	
Test passed, V-O	**2.0**	mm	
Test passed, V-O	**2.4**	mm	
Test passed, V-O	**3.2**	mm	
Test passed, V-O	**4.0**	mm	

Other properties	Dry/cond	Unit	Test Standard
Density (lasersintered)	**1060/-**	Kg/m3	Eos Method
Powder color (acc. to safety data sheet)	**white**	-	-
Color of the components	**white**	-	-

Characteristics

Processing	Features
Laser sintering,Additive Manufacturing, Laser sintering, Rapid Prototyping , 3D printing	High Crystallinity, Thermal stability, Homopolymer

Chemical Resistance	Delivery form
General Chemical Resistance, Grease Resistance, Oil resistance	Powder

Special Characteristics	Applications
Flame retardant	Aircraft, Aerospace, Electrical, Electronical

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