



Ester based thermoplastic polyurethane TPU Powder, white color

Physical Properties	Test Method	Specimen	Units	Typical Value	
Specific Gravity	ISO 1183	Sintered part	g/cm ³	1.2	
Water Absorption	23 °C, 24 h		%	< 0.5	
Melt Volume Rate	MVR 190 °C/2.16 kg	Power	cm ³ /10 min	18.0	
Glass Transition Temp	ISO 6721-1		°C	-13.6	
Shrinkage	Measured on test prints		%	3.0	
Mechanical Properties					
at 23 °C/ 50 % rh (according to build orientation)					
Shore Hardness A	ISO 868	Sintered part	-	88	
Flexural Modulus 20°C	1 Hz, 2 °C/min	ISO 6721-1	Sintered part	MPa	27
Flexural Modulus 60°C	1 Hz, 2 °C/min	ISO 6721-1	Sintered part	MPa	72
Tensile Strength (x-direction)	DIN 53504	Sintered S1-bar	MPa	20	
Tensile Strength (z-direction)	DIN 53504	Sintered S1-bar	MPa	15	
Elongation (x-direction)	DIN 53504	Sintered S1-bar	%	520	
Elongation (z-direction)	DIN 53504	Sintered S1-bar	%	500	
Abrasion Resistance (x-direction)	ISO 4649	Sintered part	mm ³	31	
Abrasion Resistance (z-direction)	ISO 4649	Sintered part	mm ³	28	
Compression Strength (x-direction)	ISO 604	Type A	MPa	33	
Compression Strength (z-direction)	ISO 604	Type A	MPa	40	
Compression Modulus (x-direction)	ISO 604	Type B	MPa	15	
Compression Modulus (z-direction)	ISO 604	Type B	MPa	20	
Poisson ratio (Hencky)	0.2 mm/s			0.45	
Thermal Properties					
Vicat-softening Temperature	VST A	ISO 306	MPTS ISO 3167 A	°C	90
Melting Temperature		ISO 11357		°C	160
Powder Properties					
x10	Laser diff.		µm	20	
x50	Laser diff.		µm	50	
x90	Laser diff.		µm	105	
Bulk Density			g/cm ³	0.457	
Part bed powder density			g/cm ³	0.600	

Application Examples

Powder for laser sintering (additive manufacturing). Elastic parts with high strength and high abrasive resistance for shoe and sports industry, pipes, sealings, prosthetics and many more applications.

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