

Prosilas

TPU BLACK [Thermoplastic Polyurethane powder]

SLS MATERIAL

General Properties	Test Method	Typical Values
Bulk Density / g/cm ³	DIN EN ISO 60	0.5
Printed Part Density / g/cm ³	DIN EN ISO 1183-1	1.1
Mean Particle Size d ₅₀ / μm	ISO 13320	70-90
Glass transition Temperature / °C	ISO 11357 (20 K/min)	-48
Melting Temperature / °C	ISO 11357 (20 K/min)	120-150

Thermal Properties	Test Method	Typical Values x direction
Vicat/A (10 N) / °C	DIN EN ISO 306	101.7

Mechanical Properties	Test Method	Typical Values x direction	Typical Values z direction
Hardness Shore A	DIN ISO 7619-1	86-88	86-88
Tensile Strength / MPa	DIN 53504, S2	8	5
Tensile Elongation at break / %	DIN 53504, S2	360	100

Mechanical Properties	Test Method	Typical Values x direction	Typical Values z direction
Tensile Modulus / MPa	ISO 527-2, 1A	85	85
Rebound Resilience / %	DIN 53512	63	64
Abrasion Resistance / mm ³	DIN ISO 4649	121	123
Charpy Impact Strength (notched, -30°C) / kJ/m ²	DIN EN ISO 179-1	No break	No break
Fatigue Behavior (Rosflex, 100k cycles, 23°C)	ASTM D1052	No cut growth	
Compression Set B (23°, 72h) / %	DIN ISO 815-1	24	28