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Preliminary Technical Data

Ultrasint TPU 88A

Technical Data Sheet for Ultrasint TPU 88A

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General Properties	Test Method	Typical Values
Bulk Density / g/cm³	DIN EN ISO 60	0.5
Printed Part Density / g/m³	DIN EN ISO 1183-1	1.1
Mean particle size d50 / 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[1] X-Direction	Typical Values[1] Z-Direction
Vicat/A (10 N) / °C	DIN EN ISO 306	98	98

Mechanical Properties	Test Method	Typical Values[1] X-Direction	Typical Values[1] Z-Direction
Hardness Shore A	DIN ISO 7619-1	88	88
Tensile Strength / MPa	DIN 53504, S2	8	7
Tensile Elongation at break / %	DIN 53504, S2	250	130
Tensile Modulus / MPa	ISO 527-2, 1A	80	80
Flexural Modulus / MPa	DIN EN ISO 178	70	70
Tear resistance (propagation, Trouser) / kN/m	DIN ISO 34-1, A	26	26
Tear resistance (initiation, Graves) / kN/m	DIN ISO 34-1, B	40	35
Compression Set B (23°C, 72h) / %	DIN ISO 815-1	24	25
Rebound resilience / %	DIN 53512	62	62
Abrasion resistance / mm³	DIN ISO 4649	90	95
Charpy Impact Strength (notched, 23°C) / kJ/m²	DIN EN ISO 179-1	No break	No break
Charpy Impact Strength (notched, -10°C) / kJ/m²	DIN EN ISO 179-1	59	58

1) Measured after conditioning 3 days at 23°C and 50% r.h.

All values represent the stable part performance obtained when using the recommended refresh rate of 20% fresh + 80% recycled powder.