

Technical Data Sheet

Ultracur3D[®] ST 45

Reactive Urethane Photopolymer

General Properties	Norm	Typical Values
Viscosity, 30 °C	Cone/Plate Rheometer ¹	215 mPas
Viscosity, 50 °C	Cone/Plate Rheometer ¹	80 mPas
Density	ASTM D792	1.2 g/cm ³
Density (liquid resin)	ASTM D4052-18a	1.12 g/cm ³

Tensile Properties	Norm	Typical Values
E Modulus	ASTM D638	2300 MPa
Ultimate Tensile Strength	ASTM D638	62 MPa
Elongation at Break	ASTM D638	25 %

Flexural Properties	Norm	Typical Values
Flexural Modulus	ASTM D790	2430 MPa
Flexural Strength	ASTM D790	109 MPa

Impact Properties	Norm	Typical Values
Notched Izod (Machined), -30 °C	ASTM D256	20.2 J/m
Notched Izod (Machined), 23 °C	ASTM D256	20.8 J/m
Charpy notched, 23 °C	ISO 179-1	1.39 kJ/m ²

Thermal Properties	Norm	Typical Values
HDT at 0.45 MPa	ASTM D648	73 °C
HDT at 1.82 MPa	ASTM D648	61 °C
Flammability	UV 94 1.5 mm	HB

Hardness	Norm	Typical Values
Shore D	ASTM D2240	81

Other	Norm	Typical Values
Biocompatibility	ISO 10993	Information available on request

1) Determined with TA-Instrument DHR rheometer, cone/plate, diameter 60 mm, shear rate 100 s⁻¹

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