

Technical Data Sheet

Ultracur3D® ST 45

Multi-purpose resin with optimum toughness
and processing speed.

| General Properties | Norm | Typical Values |
|------------------------|-----------------------------------|------------------------|
| Appearance | - | Clear |
| Viscosity, 30 °C | Cone/Plate Rheometer ¹ | 210 mPas |
| Viscosity, 50 °C | Cone/Plate Rheometer ¹ | 80 mPas |
| Density (printed part) | ASTM D792 | 1.2 g/cm ³ |
| Density (liquid resin) | ASTM D4052-18a | 1.12 g/cm ³ |

| Tensile Properties | Norm (5 mm/min) | Typical Values |
|---------------------------|-----------------|----------------|
| E Modulus | ASTM D638 | 2300 MPa |
| Ultimate Tensile Strength | ASTM D638 | 60 MPa |
| Elongation at Break | ASTM D638 | 25 % |

| Flexural Properties | Norm | Typical Values |
|---------------------|-----------|----------------|
| Flexural Modulus | ASTM D790 | 2400 MPa |
| Flexural Strength | ASTM D790 | 110 MPa |

| Impact Properties | Norm | Typical Values |
|---------------------------------|-----------|-----------------------|
| Notched Izod (Machined), -30 °C | ASTM D256 | 20 J/m |
| Notched Izod (Machined), 23 °C | ASTM D256 | 30 J/m |
| Unnotched Izod, 23 °C | ASTM D256 | 509 J/m |
| Charpy notched, 23 °C | ISO 179-1 | 1.3 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 | UL 94 1.5 mm | HB |

| Hardness | Norm | Typical Values |
|----------|------------|----------------|
| Shore D | ASTM D2240 | 80 |

| Other | Norm | Typical Values |
|---|-----------|----------------------------------|
| Biocompatibility | ISO 10993 | Information available on request |
| Water Absorption, Short Term (24 hours) | ASTM D570 | 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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