

Technical Data Sheet for Ultrasint® PP 1400

Version No.: 2, revised 10/2022

General Properties	Test Method	Typical Values
Bulk Density / kg/m <sup>3</sup>	DIN EN ISO 60	330
Printed Part Density / kg/m <sup>3</sup>	ISO 61	890
Mean Particle Size d50 / μm	Laser Diffraction	60-70
Melting Temperature / °C	ISO 11357 (10 K/min)	140
Crystallization Temperature / °C	ISO 11357 (10 K/min)	100
Melt Volume Flow Rate / cm <sup>3</sup> /10min	ISO 1133 (230 °C, 2.16 kg)	14

Thermal Properties	Test Method	Typical Values
HDT/A (1.8 MPa) / °C	ISO 75-2	62
HDT/B (0.45 MPa) / °C	ISO 75-2	102
Vicat/A (10 N) / °C	ISO 306	131
Vicat/B (50 N) / °C	ISO 306	90
UL Flammability	UL 94	HB (0.9-3.3mm)

Electrical Properties	Test Method	Typical Values (X-direction)	Typical Values (Z-direction)
Specific Volume Resistivity / Ωcm	IEC 62631-3-1	>1•10 <sup>6</sup>	>1•10 <sup>6</sup>
Specific Surface Resistivity / Ω	IEC 62631-3-2	>1•10 <sup>6</sup>	>1•10 <sup>6</sup>
Dielectric Strength (1mm) / kV/mm	IEC 60243-1	40	40

Skin Contact	Test Method	Typical Value
Cytotoxicity	ISO 10993-5	Pass
In vitro Skin Irritation Testing	ISO 10993-10, OECD Guideline No. 439	Pass
In vivo Sensitization Testing	ISO 10993-10, OECD Guideline No. 429	Pass

Mechanical Properties	Test Method	Typical Values X-direction	Typical Values Z-direction
Tensile Strength / MPa	ISO 527-2	28	28
Tensile Modulus / MPa	ISO 527-2	1400	1400
Tensile Elongation at Break / %	ISO 527-2	30	10
Flexural Modulus / MPa	DIN EN ISO 178	1250	1500
Charpy Impact Strength (notched) / kJ/m <sup>2</sup>	ISO 179-1	3.3	3.2

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Mechanical Properties	Test Method	Typical Values X-direction	Typical Values Z-direction
Charpy Impact Strength (unnotched) / kJ/m <sup>2</sup>	ISO 179-1	29	20
Izod Impact Strength (notched) / kJ/m <sup>2</sup>	ISO 180	3.5	3.0
Izod Impact Strength (unnotched) / kJ/m <sup>2</sup>	ISO 180	24	16

 Detailed material data and support for FEA simulations available on request ([sales@basf-3dps.com](mailto:sales@basf-3dps.com)).