printing performance polymers

Technical Data

Precision HR

This high-performance photopolymer is perfect for producing miniature and micro components with exceptional dimensional accuracy. It stands out for its excellent mechanical properties, ensuring stability and functionality even in delicate, detailed parts. With a layer thickness of 20 µm, it enables the printing of ultra-fine and highly detailed structures with tight tolerances and high resolution. Whether in medical technology, microelectronics, or precision engineering, Precision HR is the ideal choice when maximum precision and quality are required at a small scale.

Mechanical properties

Property	Standard	Print orientation	Experimental condition	Result
Tensile strength	ISO 527 (Type 5A)	XYZ	10 mm min^{-1}	75 MPa
Young's Modulus	ISO 527 (Type 5A)	XYZ	1 mm min^{-1}	2720 MPa
Elongation at break	ISO 527 (Type 5A)	XYZ	10 mm min^{-1}	10 %
Flexural strength	ISO 178	XYZ	10 mm min^{-1}	118 MPa
Flexural modulus	ISO 178	XYZ	2 mm min^{-1}	2690 MPa
Charpy unnotched	ISO 179-1/1eU	XYZ	5 J	42 kJ m^{-2}
Izod notched	ASTM D 256	XYZ	5.5 J	34 J m^{-2}
Shore hardness	ISO 868	XYZ	D	85
HDT A	ISO 75	XYZ	@ 1.8 MPa	80 °C
HDT B	ISO 75	XZY	@ 0.55 MPa	96 °C

Physical data

Density	ISO 1183	XYZ	-	1.22 g cm^{-3}

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Fire resistance

Property	Standard	Print orientation	Experimental condition	Result
Flammability	UL 94	YZX	1.00 mm	HB

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