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SLA RESIN

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SLA RESIN is an easy-to-use single cure resin with enhanced toughness, appropriate for use in prototypes and manufacturing jigs and fixtures

SLA RESIN

Extended TDS

TENSILE PROPERTIES ASTM D638, TYPE I, 50 MM/MIN	APM LED UV-CUBE II (1 MIN PER SIDE)	APM LED UV-CUBE II (15 MIN PER SIDE)	DYMAX (1 MIN PER SIDE)
Tensile Modulus	1400 MPa	1800 MPa	2100 MPa
Ultimate Tensile Strength	30 MPa	40 MPa	45 MPa
Yield Strength	30 MPa	40 MPa	45 MPa
Yield Strain	7%	6%	4%
Elongation at Break	30%	15%	6%





CATEGORY	METRIC	US
Tensile Properties - ASTM D638, Type I, 50 mm/min		
Tensile Modulus	1400 MPa	200 ksi
Ultimate Tensile Strength	30 MPa	4.4 ksi
Yield Strength	30 MPa	4.4 ksi
Yield Strain	7%	7%
Elongation at Break	30%	30%
Tensile Properties - ASTM D638, Type V, 10 mm/min		
Tensile Modulus	1400 MPa	200 ksi
Ultimate Tensile Strength	30 MPa	4.4 ksi
Yield Strength	30 MPa	4.4 ksi
Yield Strain	7%	7%
Elongation at Break	30%	30%
Flexural Properties - ASTM D790-B		
Flexural Stress at 5% strain	50 MPa	7 ksi
Flexural Modulus (Chord, 0.5-1%)	1200 MPa	174 ksi
Impact Properties		
Notched Izod (Machined), 23 °C ASTM D256	30 J/m	0.6 ft-lb/in
Notched Charpy (Machined) ISO 179-1/1eA	2.8 kJ/m^2	1.3 ft-lb/in^2
Thermal Properties		
Heat Deflection Temperature at 0.455 MPa/66 psi, ASTM D648	45 °C	113 °F
Heat Deflection Temperature at 1.82 MPa/264 psi, ASTM D648	35 °C	95 °F
General Properties		
Hardness, ASTM D2240	86, Shore D	
Density, ASTM D792	1.20 g/cm^3	
Density (liquid resin)	1.10 g/cm^3	

Standard: ASTM D4065
Instrument: TA DMA Q800
DMA Mode: Tension
Sample Dimensions: L=20 mm, W=10 mm, t=1 mm (rectangular block)
Strain Amplitude: 0.1% (linear regime of viscoelasticity)
Oscillation frequency: 1 Hz
Temperature Range: -80 oC to 160 oC
Ramp Rate: 1.5 oC/min
Print Conditions: Samples were hand-wiped and not washed with solvent. Values may differ based on post-processing conditions.

SLA RESIN BIOCOMPATIBILITY

BIOCOMPATIBILITY TESTING

Printed parts were provided to NAMSA for evaluation in accordance with ISO 10993-5, Biological evaluation of medical devices - Part 5: Tests for in vitro cytotoxicity, and ISO 10993-10, Biological evaluation of medical devices - Part 10: Tests for irritation and skin sensitization (GPMT). **The results for all tests indicated that SLA RESIN passed the requirements for biocompatibility according to the above tests.**