

Accura[®] Sapphire

High-resolution material for accurate master patterns for jewelry manufacturing



Technical Data

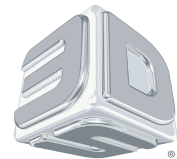
Post-Cured Material			
Measurement	Condition	Metric	U.S.
Tensile Strength (MPa/PSI)	ASTM D 638	20-24	2900-3480
Tensile Modulus (MPa/KSI)	ASTM D 638	910-1110	132-161
Elongation at Break	ASTM D 638	9-16 %	9-16 %
Flexural Strength (MPa/PSI)	ASTM D 790	28-38	4060-5510
Flexural Modulus (MPa/KSI)	ASTM D 790	1080-1420	157-206
Impact Strength (J/m /Ft-lbs/in)	ASTM D 256	29-40	0.5-0.7
Heat Deflection Temperature	ASTM D 648 @ 66 PSI @ 264 PSI	38 °C 33 °C	100 °F 91 °F
Coefficient of Thermal Expansion (CTE)	ASTM E 831-93 TMA (T<T _g , 25-50 °C) TMA (T<T _g , 75-140 °C)	135 µm/m-°C 165 µm/m-°C	75 µm/m-°C 92 µm/m-°C
Glass Transition (T _g)	DMA, E''	51 °C	124 °F
Shore D		72	72

Liquid Material

Measurement	Condition	Value
Viscosity	@ 30 °C (86 °F)	160-200 cps
Penetration Depth (D _p)		2.9 mils
Critical Exposure (E _c)		8.23 mJ/cm ²
Color		Sapphire blue
Solid Density	@ 25 °C (77 °F)	1.18 g/cm ³ at 25 °C
Liquid Density	@ 25 °C (77 °F)	1.1 g/cm ³ at 25 °C

Features

- Accurate high-resolution master patterns
- High resolution in X, Y and Z dimensions
- Manufacture master patterns for jewelry and other microcasting applications
- Low ash formation



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