



Accura[®] Sapphire

Specialty Class

High-resolution material for accurate master patterns for jewelry manufacturing

Post-Cured Material

MEASUREMENT	CONDITION	VALUE	U.S.
Tensile Strength (MPa/PSI)	ASTM D 638	20-24	9280-9720
Tensile Modulus (MPa/KSI)	ASTM D 638	910-1110	406-577
Elongation at Break (%)	ASTM D 638	9-16	4-7
Flexural Strength (MPa/PSI)	ASTM D 790	28-38	15200-17100
Flexural Modulus (MPa/KSI)	ASTM D 790	1080-1420	400-493
Impact Strength (J/m /Ft-lbs/in)	ASTM D 256	29-40	0.4-0.5
Heat Deflection Temperature	ASTM D 648 @ 66 PSI @ 264 PSI	38 °C 33 °C	100 °F 91 °F
Coefficient of Thermal Expansion (µm/m-°C / µm/in-°F)	ASTM E 831-93 TMA (T<Tg, 25-50 °C)	135	75
	TMA (T<Tg, 75-140 °C)	165	92
Glass Transition (Tg)	DMA, E''	51 °C	124 °F
Hardness, Shore D		72	72

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

Liquid Material

MEASUREMENT	CONDITION	VALUE
Viscosity	@ 30 °C (86 °F)	138 cps
Penetration Depth (Dp)		2.9 mils
Critical Exposure (Ec)		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



Warranty/Disclaimer: The performance characteristics of these products may vary according to product application, operating conditions, or with end use. 3D Systems makes no warranties of any type, express or implied, including, but not limited to, the warranties of merchantability or fitness for a particular use.

© 2020 by 3D Systems, Inc. All rights reserved. Specifications subject to change without notice. 3D Systems, the 3D Systems logo, and Accura are registered trademarks of 3D Systems, Inc.