

## 3D Systems Accura® 45HC Plastic for SLA® Systems

Category : Polymer , Rapid Prototyping Polymer

### Material Notes:

A high speed material, with excellent thermal and moisture resistance for producing functional prototypes in 3D Systems' SLA 250 systems. Applications: High temperature testing: Automotive "under-the-hood" parts, Lighting components and accessories, HVAC components, Thin-wall enclosures that require high stiffness and durability, Parts involved in water-base or high humidity testing, Consumer appliance, Fluid flow/visualization, Form, fit and function testing, General purpose prototyping, Investment casting using QuickCast™ build style, Rigid snap-fit assemblies. All information provided by 3D Systems.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_3D-Systems-Accura-45HC-Plastic-for-SLA-Systems.php](http://www.lookpolymers.com/polymer_3D-Systems-Accura-45HC-Plastic-for-SLA-Systems.php)

Physical Properties	Metric	English	Comments
Density	1.14 g/cc	0.0412 lb/in <sup>3</sup>	Liquid
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	1.20 g/cc	0.0434 lb/in <sup>3</sup>	Solid
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Viscosity	475 cP	475 cP	
	@Temperature 30.0 °C	@Temperature 86.0 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	87	87	
Tensile Strength, Yield	59.0 - 61.0 MPa	8560 - 8850 psi	ASTM D638
Elongation at Break	4.8 - 5.4 %	4.8 - 5.4 %	ASTM D638
Tensile Modulus	2.76 - 2.96 GPa	400 - 429 ksi	ASTM D638
Flexural Strength	94.0 - 101 MPa	13600 - 14600 psi	ASTM D790
Flexural Modulus	2.76 - 2.90 GPa	400 - 421 ksi	ASTM D790
Izod Impact, Notched	0.110 - 0.160 J/cm	0.206 - 0.300 ft-lb/in	ASTM D256
Penetration	5.1	5.1	mils

Thermal Properties	Metric	English	Comments
CTE, linear	72.0 µm/m-°C	40.0 µin/in-°F	T<Tg; ASTM E831-93
	@Temperature 0.000 - 20.0 °C	@Temperature 32.0 - 68.0 °F	
	160 µm/m-°C	88.9 µin/in-°F	

Thermal Properties	Metric @ Temperature 90.0 - 150 °C	English @ Temperature 194 - 302 °F	Comments ASTM D648   E831-93
Deflection Temperature at 0.46 MPa (66 psi)	58.0 °C	136 °F	ASTM D648
	103 °C	217 °F	with 160°C thermal postcure; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	51.0 °C	124 °F	ASTM D648
Glass Transition Temp, Tg	66.0 - 87.0 °C	151 - 189 °F	DMA, E"

Descriptive Properties	Value	Comments
Appearance	Clear amber	
Critical Exposure (mJ/cm <sup>2</sup> )	7.4	
Tested Build Styles	FAST™, EXACT™, and QuickCast™	

## Contact Songhan Plastic Technology Co.,Ltd.

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