

DSM Somos® ProtoGen™ O-XT 18420 Epoxy Resin for Stereolithography, UV Postcure at HOC -2

Category : Polymer , Rapid Prototyping Polymer , Thermoset , Epoxy

Material Notes:

Description DSM Somos® ProtoGen O-XT 18420 is a liquid, ABS-like, photopolymer that produces accurate parts ideal for general purpose applications. ProtoGen resins are the first SL resins to demonstrate different material properties based on machine exposure control. Based on Somos oxetane chemistry, ProtoGen O-XT 18420 offers superior chemical resistance, a wide processing latitude and excellent tolerance to a broad range of temperatures and humidities, both during and after build. Application This high-temperature, ABS-like photopolymer is used in the solid imaging process to build three-dimensional parts. Somos® ProtoGen O-XT 18420 provides considerable processing latitude and is ideal for the medical, electronic, aerospace and automotive markets that demand: Accurate RTV patterns Durable concept models Highly accurate parts Humidity and temperature tolerant parts Information Provided by DSM Desotech Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_DSM-Somos-ProtoGen-O-XT-18420-Epoxy-Resin-for-Stereolithography-UV-Postcure-at-HOC-2.php

Physical Properties	Metric	English	Comments
Density	1.16 g/cc	0.0419 lb/in ³	
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Water Absorption	0.68 %	0.68 %	ASTM D570-98
Viscosity	350 cP	350 cP	
	@Temperature 30.0 °C	@Temperature 86.0 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	86 - 88	86 - 88	ASTM D2240
Tensile Strength, Yield	42.2 - 43.8 MPa	6120 - 6350 psi	ASTM D638M
Elongation at Break	8.0 - 16 %	8.0 - 16 %	ASTM D638M
Tensile Modulus	2.18 - 2.31 GPa	316 - 335 ksi	ASTM D638M
Flexural Strength	66.7 - 70.5 MPa	9670 - 10200 psi	ASTM D790M
Flexural Modulus	1.19 - 2.13 GPa	173 - 309 ksi	ASTM D790M
Poissons Ratio	0.43 - 0.45	0.43 - 0.45	ASTM D638M
Izod Impact, Notched	0.200 - 0.220 J/cm	0.375 - 0.412 ft-lb/in	ASTM D256A

Thermal Properties	Metric	English	Comments
	74.6 - 75.5 µm/m-°C	41.4 - 41.9 µin/in-°F	

CTE linear Thermal Properties	Metric @Temperature -40.0 - 0.000 °C	English @Temperature -40.0 - 32.0 °F	ASTM E831-00 Comments
	101.2 - 110.3 µm/m-°C	56.22 - 61.28 µin/in-°F	ASTM E831-00
	@Temperature 0.000 - 50.0 °C	@Temperature 32.0 - 122 °F	
	114.4 - 135.8 µm/m-°C	63.56 - 75.44 µin/in-°F	ASTM E831-00
	@Temperature 50.0 - 100 °C	@Temperature 122 - 212 °F	
	129.5 - 138.1 µm/m-°C	71.94 - 76.72 µin/in-°F	ASTM E831-00
	@Temperature 100 - 150 °C	@Temperature 212 - 302 °F	
Deflection Temperature at 0.46 MPa (66 psi)	53.0 - 56.0 °C	127 - 133 °F	ASTM D648-98c
Deflection Temperature at 1.8 MPa (264 psi)	46.0 - 47.0 °C	115 - 117 °F	ASTM D648-98c
Glass Transition Temp, Tg	57.0 - 59.0 °C	135 - 138 °F	ASTM E1545-00

Electrical Properties	Metric	English	Comments
Dielectric Constant	3.1 - 3.3	3.1 - 3.3	ASTM D150-98
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.4 - 3.5	3.4 - 3.5	ASTM D150-98
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	3.5 - 3.6	3.5 - 3.6	ASTM D150-98
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
	13.2 - 14.2 kV/mm	335 - 361 kV/in	ASTM D149-97a

Descriptive Properties	Value	Comments
Appearance	White	
Dp (mm)	0.11	Slope of cure-depth vs. ln(E) curve
E10 (mJ/cm2)	67.6	Exposure that gives 0.254mm thickness
Ec (mJ/cm2)	6.73	Critical exposure

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215, Fengxian District, Shanghai City, China