

DSM Somos® ProtoGen™ O-XT 18420 Epoxy Resin for Stereolithography, UV Postcure at HOC +3

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-3.php

Physical Properties	Metric	English	Comments
Density	1.16 g/cc	0.0419 lb/in ³	
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Viscosity	350 cP	350 cP	
	@Temperature 30.0 °C	@Temperature 86.0 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	56.9 - 57.1 MPa	8250 - 8280 psi	ASTM D638M
Elongation at Break	8.0 - 12 %	8.0 - 12 %	ASTM D638M
Tensile Modulus	2.54 - 2.62 GPa	368 - 380 ksi	ASTM D638M
Flexural Strength	83.8 - 86.7 MPa	12200 - 12600 psi	ASTM D790M
Flexural Modulus	2.40 - 2.45 GPa	348 - 355 ksi	ASTM D790M

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	65.0 - 70.0 °C	149 - 158 °F	ASTM D648-98c
Deflection Temperature at 1.8 MPa (264 psi)	53.0 - 54.0 °C	127 - 129 °F	ASTM D648-98c

Descriptive Properties	Value	Comments
Appearance	White	

<small>D₀ (mm)</small> Descriptive Properties	<small>0.11</small> Value	<small>Slope of cure-depth vs. ln(E) curve</small> Comments
E10 (mJ/cm ²)	67.6	Exposure that gives 0.254mm thickness
Ec (mJ/cm ²)	6.73	Critical exposure

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