

## DSM Somos® ProtoGen™ 18920 Liquid Photopolymer, UV Postcure at HOC +3

Category : Polymer , Rapid Prototyping Polymer

### Material Notes:

**Product Description** DSM Somos® ProtoGen 18920 is a liquid photopolymer that produces accurate, ABS-like 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 18920 offers superior chemical resistance, a wide processing latitude and excellent tolerance to a broad range of temperatures and humidities, both during and after build. **Applications** This high-temperature resistant, ABS-like photopolymer is used in solid imaging processes, like stereolithography, to build three-dimensional parts. Somos ProtoGen 18920 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 and humidity & temperature resistant parts. **Key Product Benefits** Humidity & Temperature Tolerant Excellent Dimensional Stability Fast Processing Speeds Information Provided by DSM Desotech Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_DSM-Somos-ProtoGen-18920-Liquid-Photopolymer-UV-Postcure-at-HOC-3.php](http://www.lookpolymers.com/polymer_DSM-Somos-ProtoGen-18920-Liquid-Photopolymer-UV-Postcure-at-HOC-3.php)

Physical Properties	Metric	English	Comments
Density	1.16 g/cc	0.0419 lb/in <sup>3</sup>	
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Water Absorption	0.74 %	0.74 %	ASTM D570-98
Viscosity	350 cP	350 cP	
	@Temperature 30.0 °C	@Temperature 86.0 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	86.1 - 87.1	86.1 - 87.1	ASTM D2240
Tensile Strength, Yield	56.1 - 56.9 MPa	8140 - 8250 psi	ASTM D638M
Elongation at Break	4.9 - 12.3 %	4.9 - 12.3 %	ASTM D638M
Tensile Modulus	2.577 - 2.623 GPa	373.8 - 380.4 ksi	ASTM D638M
Flexural Strength	85.0 - 87.0 MPa	12300 - 12600 psi	ASTM D790M
Flexural Modulus	2.442 - 2.518 GPa	354.2 - 365.2 ksi	ASTM D790M
Izod Impact, Notched	0.220 - 0.260 J/cm	0.412 - 0.487 ft-lb/in	ASTM D256A

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	62.8 °C	145 °F	ASTM D648-98c
Deflection Temperature at 1.8 MPa (264 psi)	53.3 °C	128 °F	ASTM D648-98c

Thermal Properties Descriptive Properties	Metric Value	English Comments	Comments
Appearance	Gray		
Dp (mm)	0.107	Slope of cure-depth vs. ln(E) curve	
E10 (mJ/cm <sup>2</sup> )	75.7	Exposure that gives 0.254mm thickness	
Ec (mJ/cm <sup>2</sup> )	7	Critical exposure	

## Contact Songhan Plastic Technology Co.,Ltd.

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