



Somos® 9420 White

A fast-building stereolithography material specifically designed to produce accurate, detailed parts with superb memory retention

Product Description

Somos® 9420 is an opaque white stereolithography resin that is easy to use and fast to process. This stereolithography resin produces accurate parts that are semi-flexible. Parts produced with Somos® 9420 are comparable to polypropylene in mechanical properties and offer a good combination of flexibility and toughness.

Somos® 9420 is ideal for applications such as the design and testing of snap-fits, electronic and automobile components as well as packaging.

Key Benefits

- Flexible
- Incredible Memory Retention
- Tough & Durable
- Bright Opaque-White Color

Ideal Applications

- Prototypes where polypropylene will be the final production plastic
- Packaging design
- Snap fits, bottle tops, fittings

Somos® 9420 White Technical Data

Liquid Properties		Optical Properties		
Appearance	Off White	E_c	15.0 mJ/cm ²	[critical exposure]
Viscosity	~475 cps @ 30°C	D_p	5.4 mils	[slope of cure-depth vs. ln (E) curve]
Density	~1.13 g/cm ³ @ 25°C	E_{10}	96 mJ/cm ²	[exposure that gives 0.254 mm (.010 inch) thickness]

Mechanical Properties		UV Postcure	
ASTM Method	Property Description	Metric	Imperial
D638M	Tensile Strength at Break	19 MPa	2.8 ksi
D638M	Elongation at Break	28%	
D638M	Poisson's Ratio	0.43	
D638M	Tensile Elasticity	700 MPa	102 ksi
D790M	Flexural Strength	27 MPa	3.9 ksi
D2240	Flexural Modulus	834 MPa	121 ksi
D256A	Izod Impact (Notched)	0.46 J/m	0.86 ft-lb/in
D2240	Hardness (Shore D)	72	
D570-98	Water Absorption	0.93%	

Thermal/Electrical Properties		UV Postcure	
ASTM Method	Property Description	Metric	Imperial
E831-05	C.T.E. -40 - 0°C (-40 - 32°F)	96.8 µm/m°C	53.8 µin/in°F
E831-05	C.T.E. 0 - 50°C (32 - 122°F)	149.5 µm/m°C	83.0 µin/in°F
E831-05	C.T.E. 50 - 100°C (122 - 212°F)	178.7 µm/m°C	99.3 µin/in°F
E831-05	C.T.E. 100 - 150°C (212 - 302°F)	144.0 µm/m°C	80.0 µin/in°F
D150-98	Dielectric Constant 60 Hz	5.33	
D150-98	Dielectric Constant 1 KHz	4.66	
D150-98	Dielectric Constant 1 MHz	3.94	
D149-97A	Dielectric Strength	14.1 kV/mm	358 V/mil
D648	HDT @ 0.46 MPa (66 psi)	49°C	120°F
D648	HDT @ 1.81 MPa (264 psi)	37°C	99°F

These values may vary and depend on individual machine processing and post-curing practices.

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