

Product Description

Somos® NeXt is an extremely durable stereolithography (SL) resin that produces very accurate parts with high feature detail. Based on the DMX-SL technology, Somos® NeXt is a next generation of material that facilitates the production of tough, complex parts with improved moisture resistance and greater thermal properties.

Applications

Somos® NeXt produces parts that are much more resistant to breakage than parts made with standard SL resins. It is ideal for use in functional testing applications as well as low-volume manufacturing applications where toughness is required. Market segments include aerospace, automotive, consumer products and electronics.

This resin is ideal for: Functional end-use performance prototypes, like: snap-fit designs, impellers, duct work, connectors and electronic covers, automotive housings and dashboard assemblies, packaging and sporting goods.

Technical Data: Liquid Properties

Appearance	White
Viscosity	~1,000 cps @ 30°C
Density	1.17 g/cm ³ @ 25°C

Technical Data: Optical Properties

E _c	12.0 mJ/cm ²	[critical exposure]
D _p	5.80 mils	[slope of cure-depth vs. ln(E) curve]
E ₁₀	67.0 mJ/cm ²	[exposure that gives 0.254 mm (.010 inch) thickness]

(continued)

For technical service, please visit: <http://www.dsmsomos.com>



Somos® NeXt is a next generation of SL resin technology: creates durable, accurate parts with high feature detail and excellent finishing characteristics, combined with exceptional moisture resistance and improved thermal properties.

Key Product Benefits:

- SL accuracy, sintered-like durability
- High feature detail
- Stiff & durable
- Outstanding moisture resistance
- Easy finishing and processing

Rev Date: 04/10

Somos® NeXt

Technical Data: Mechanical Properties

		Somos® NeXt Postcure	
		Metric	Imperial
ASTM Method	Property Description		
D638M	Tensile Modulus	2,370 – 2,490 MPa	343 – 361 ksi
D638M	Tensile Strength at Break	31.0 – 34.6 MPa	4.5 – 5.0 ksi
D638M	Tensile Strength at Yield	41.1 – 43.3 MPa	5.9 – 6.3 ksi
D638M	Elongation at Break	8 – 10%	8 – 10%
D638M	Elongation at Yield	3%	3%
D638M	Poisson's Ratio	0.42 – 0.44	0.42 – 0.44
D790M	Flexural Strength	67.8 – 70.8 MPa	9.8 – 10.3 ksi
D790M	Flexural Modulus	2,415 – 2,525 MPa	350 – 366 ksi
D2240	Hardness (Shore D)	82	82
D256A	Izod Impact (Notched)	0.47 – 0.52 J/cm	0.88 – 0.97 ft-lb/in
D570-98	Water Absorption	0.39 – 0.41%	0.39 – 0.41%

Technical Data: Thermal/Electrical Properties

		Somos® NeXt Postcure	
		Metric	Imperial
E831-05	C.T.E. -40°C - 0°C (-40°F – 32°F)	71.5 – 74.3 $\mu\text{m}/\text{m}^\circ\text{C}$	39.7 – 41.3 $\mu\text{in}/\text{in}^\circ\text{F}$
E831-05	C.T.E. 0°C - 50°C (32°F – 122°F)	106.5 – 114.5 $\mu\text{m}/\text{m}^\circ\text{C}$	59.2 – 63.6 $\mu\text{in}/\text{in}^\circ\text{F}$
E831-05	C.T.E. 50°C - 100°C (122°F – 212°F)	168.6 – 175.4 $\mu\text{m}/\text{m}^\circ\text{C}$	93.7 – 97.4 $\mu\text{in}/\text{in}^\circ\text{F}$
E831-05	C.T.E. 100°C - 150°C (212°F – 302°F)	168.8 – 176.4 $\mu\text{m}/\text{m}^\circ\text{C}$	93.8 – 98.0 $\mu\text{in}/\text{in}^\circ\text{F}$
D150-98	Dielectric Constant 60 Hz	4.65	4.65
D150-98	Dielectric Constant 1KHz	3.97	3.97
D150-98	Dielectric Constant 1MHz	3.62	3.62
D149-97a	Dielectric Strength	14.9 – 15.5 kV/mm	379 – 395 V/mil
E1545-00	Tg	43 – 47 °C	109 – 116°F
D648	HDT @ 0.46 MPa (66 psi)	55 – 57°C	131 – 134°F
D648	HDT @ 1.81 MPa (264 psi)	48 – 51°C	118 – 124°F

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www.dsmsomos.com



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