

a DSM Product

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]



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

(continued)

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

Rev Date: 04/10

Somos® NeXt

Technical Data: Mechanical Properties

		Somos® NeXt Postcure	
		Metric	Imperial
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	6.4 – 6.6 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 – 9.9 ksi
D790M	Flexural Modulus	2,415 – 2,525 MPa	331 – 333 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	119 – 124°F

Rev Date: 04/10

www.dsmsomos.com

DSM 

DSM Somos®
1122 St. Charles Street
Elgin, Illinois 60120 USA
Tel: +1-847-697-0400
Fax: +1-847-468-7785

DSM Desotech bv
3150 AB Hoek van Holland
The Netherlands
Tel: +31-1743-15391
Fax: +31-1743-15530

DSM Desotech-China
476 Li Bing Road
Zhangjiang Hi-Tech Park,
Pudong New Area
Shanghai 201203, China
Tel: +(86) 21-6141 8064
Fax: +(86) 21-6141 8088

NOTICE : DSM Somos is an unincorporated subsidiary of DSM Desotech Inc. The information presented herein is based on generally accepted analytical and testing practices and is believed to be accurate. However, DSM Desotech expressly disclaims any product warranties which may be implied including warranty of merchantability and/or fitness for a particular purpose. DSM Desotech's products are sold subject to DSM Desotech's standard terms and conditions of sale, copies of which are available upon request. Purchasers are responsible for determining the suitability of the product for its intended use and the appropriate manner of utilizing the product in purchaser's production processes and applications so as to insure safety, quality and effectiveness. Purchasers are further responsible for obtaining necessary patent rights to practice any invention in connection with the use of purchased product and any other product or process. DSM Desotech reserves the right to change specifications of their products without notice.