Somos® NeXt

Unspecified

DSM Somos®

Message:

Somos® NeXt is an extremely durable stereolithography (SL) resin that produces very accurate parts with high feature detail. Based on the Somos® DMX 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, medical, consumer products and electronics.
This resin is ideal for functional end-use performance prototypes such as: snap- fit designs, impellers, duct work, connectors and electronic covers, automotive housings and dashboard assemblies, packaging and sporting goods.

General Information			
Features	Good Impact Resistance Good Toughness Moisture Resistant		
Uses	Aerospace Applications Automotive Applications Automotive Instrument Panel Connectors Consumer Applications Electrical/Electronic Applications Housings Medical/Healthcare Applications Packaging Protective Coverings Prototyping Sporting Goods		
Appearance	White		
Processing Method	3D Printing, Stereolithography		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density	1.17	g/cm^3	
Water Absorption (Equilibrium)	0.39 to 0.41	%	ASTM D570
Viscosity (30°C)	1.00	Pa·s	
Critical Exposure	12.0	mJ/cm^2	
Penetration Depth	147.3	µm	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore D)	82		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**

Tensile Modulus	2370 to 2490	MPa	ASTM D638
Tensile Strength			ASTM D638
Yield	41.1 to 43.3	MPa	
Break	31.0 to 34.6	MPa	
Tensile Elongation			ASTM D638
Yield	3.0	%	
Break	8.0 to 10	%	
Flexural Modulus	2420 to 2530	MPa	ASTM D790
Flexural Strength	67.8 to 70.8	MPa	ASTM D790
Poisson's Ratio	0.42 to 0.44		ASTM D638
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact	47 to 52	J/m	ASTM D256A
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	55.0 to 57.0	°C	
1.8 MPa, Unannealed	48.0 to 51.0	°C	
Glass Transition Temperature	43.0 to 47.0	°C	ASTM E1545
CLTE - Flow			ASTM E831
-40 to 0°C	7.2E-4 to 7.4E-4	cm/cm/°C	
0 to 50°C	1.1E-3	cm/cm/°C	
50 to 100°C	1.7E-3 to 1.8E-3	cm/cm/°C	
100 to 150°C	1.7E-3 to 1.8E-3	cm/cm/°C	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Dielectric Strength	15 to 16	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
60 Hz	4.65		
1 kHz	3.97		
1 MHz	3.62		

Recommended distributors for this material

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