Somos® NeXt

Stereolithography

covestro

An extremely durable stereolithography material that creates parts ready for functional testing.

Somos® NeXt is a highly durable stereolithography material which produces very accurate parts with high feature resolution. This material is ideal for the production of tough, complex parts that also exhibit excellent moisture and thermal resistance. **Somos® NeXt** has a look and feel that is almost indistinguishable from finished traditional thermoplastics, making it perfect for building parts and prototypes for functional testing applications – resulting in time, money and material savings during product development.

Seeing was believing for Warrior Sports

During a test game that used professional athletes, hard rubber balls (weighing 5.25 ounces) were caught and thrown using **Somos® NeXt** prototype lacrosse heads. Speeds of 90+ mph were achieved to test the durability of not only the design of the head, but also, the durability of **Somos® NeXt**.

Key Benefits

- Superior strength and durability
- Exceptionally versatile
- Thermoplastic-like performance, look and feel

Ideal Applications

- Aerospace, automotive, medical, consumer products and electronic applications
- Tough, functional end-use prototypes
- Snap-fit designs
- Jigs and fixtures
- Packaging and sporting goods

Technical Data

Liquid Properties		Optical Properties		
Appearance	White	E_C	12 mJ/cm²	[critical exposure]
Viscosity	~1,000 cps @ 30°C	D_P	5.8 mils	[slope of cure-depth vs. ln (E) curve]
Density	~1.17 g/cm³ @ 25°C	E_{10}	67 mJ/cm²	[exposure that gives 0.254 mm (.010 inch) thickness]

Mechanical Properties		UV Postcure	
ASTM Method	**Property Description**	**Metric**	**Imperial**
D638M	Tensile Modulus	2,430 MPa	352 ksi
D638M	Tensile Strength at Yield	42.2 MPa	6.1 ksi
D638M	Tensile Strength at Break	32.8 MPa	4.8 ksi
D638M	Elongation at Break	9%	
D638M	Elongation at Yield	3%	
D638M	Poisson's Ratio	0.43	
D790M	Flexural Strength	69.3 MPa	10.1 ksi
D2240	Flexural Modulus	2,470 MPa	358 ksi
D256A	Izod Impact (Notched)	50 J/m	0.94 ft-lb/in
D2240	Hardness (Shore D)	82	
D570-98	Water Absorption	0.40%	

Thermal/Electrical Properties		UV Postcure	
ASTM Method	**Property Description**	**Metric**	**Imperial**
E831-05	C.T.E. -40–0°C (-40–32°F)	73 µm/m°C	40.6 µin/in°F
E831-05	C.T.E. 0–50°C (32–122°F)	111 µm/m°C	61.7 µin/in°F
E831-05	C.T.E. 50–100°C (122–212°F)	172 µm/m°C	95.6 µin/in°F
E831-05	C.T.E. 100–150°C (212–302°F)	173 µm/m°C	96.2 µin/in°F
D150-98	Dielectric Constant 60 Hz	4.7	
D150-98	Dielectric Constant 1 KHz	4	
D150-98	Dielectric Constant 1 MHz	3.6	
D149-97a	Dielectric Strength	15.2 kV/mm	386 V/mil
D648	HDT @ 0.46 MPa (66 psi)	56°C	133°F
D648	HDT @ 1.81 MPa (264 psi)	50°C	122°F

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

More information at am.covestro.com

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