

# DMX-SL™ 100

Extremely tough/durable SL resin for stereolithography

### Description

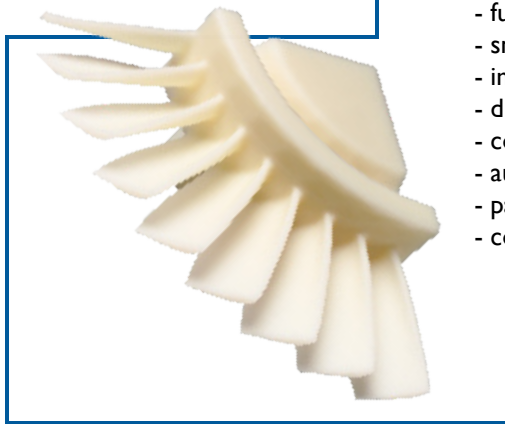
DSM Somos® DMX-SL 100 is an extremely durable SL resin that produces very accurate parts with high feature detail. Based on a whole new chemistry platform that gives the material high impact resistance similar to thermoplastics, it is a breakthrough in Stereolithography resin technology. Tough, complex parts can be built with a superb surface finish compared with competing technologies.

### Application

This product produces parts that are much more resistant to breakage than parts made with standard SL resin, and 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 firms.

Applications include:

- functional end-use performance prototypes
- snap fit designs
- impellers
- duct work
- connectors and electronic covers
- automotive housings and dashboard assemblies
- packaging applications
- consumer sporting goods



Container above made with DMX-SL 100.

### Physical Properties –

Appearance	Natural White
Viscosity	1200 - 1400 cps at 30°C
Density	1.166 g/cm <sup>3</sup> at 25°C

### Optical Properties at 355 nm

E <sub>c</sub>	15.0 mJ/cm <sup>2</sup> <small>[critical exposure]</small>
D <sub>p</sub>	0.139 mm (~0.0055 inch) <small>[slope of cure-depth vs. ln(E) curve]</small>
E <sub>10</sub>	74.6 mJ/cm <sup>2</sup> <small>[exposure that gives 0.254 mm (.010 inch) thickness]</small>

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## Preliminary Product Data Sheet

# Mechanical Properties (Metric)

ASTM Method	Description	DMX-SL 100
D638M	Tensile Strength	40 - 43 MPa
	Elongation at Break	12 - 20 %
	Tensile Modulus	2,000 - 2,400 MPa
D790M	Flexural Modulus	2,100 - 2,300 MPa
D256A	Izod Impact-Notched	0.65 - 0.80 J/cm

## Thermal & Electrical Properties (Metric)

ASTM Method	Description	DMX-SL 100
D648-98c	HDT @ 0.46 MPa	45 °C

*T<sub>g</sub>* = Glass Transition Temperature  
*HDT* = Deflection Temperature

## Mechanical Properties (Imperial)

ASTM Method	Description	DMX-SL 100
D638M	Tensile Strength	5.8 - 6.2 ksi
	Elongation at Break	12 - 20 %
	Tensile Modulus	290 - 350 ksi
D790M	Flexural Modulus	305 - 335 ksi
D256A	Izod Impact-Notched	1.2 - 1.5 ft lb/in

## Thermal & Electrical Properties (Imperial)

ASTM Method	Description	DMX-SL 100
D648-98c	HDT @ 66 psi	113 °F

*T<sub>g</sub>* = Glass Transition Temperature  
*HDT* = Deflection Temperature