

Product Data

Somos® Tusk Solidgrey

Product Description

Somos® Tusk Solidgrey creates tough, abs-like parts with a high modulus while maintaining a low viscosity for effortless cleaning. Somos® Tusk Solidgrey has good water resistance and thermal properties. This third generation Somos® high impact material focuses on creating quality resins that can produce tough, complex parts.

Applications

Somos® Tusk Solidgrey produces parts that are more resistant to fracture and cracking than standard SL resins. It is ideal for use in functional testing and low-volume manufacturing applications.

This resin is excellent for functional end-use performance parts, especially snap-fit designs, impellers, connectors, and sporting goods.

Technical Data: Liquid Properties

Appearance	Opaque Grey
Viscosity	480 MPas @ 30°C
Density	1.12 g/cm³ @ 25°C

Technical Data: Optical Properties

E_c	14.6 mJ/cm²	[critical exposure]
D_p	5.16 mils	[slope of cure-depth vs. ln(E) curve]
E_{10}	101.2 mJ/cm²	[exposure that gives 0.254 mm (.010 inch) thickness]

(continued)



Somos® Tusk Solidgrey is a low viscosity and high modulus liquid photopolymer stereolithography resin that produces very tough and temperature tolerant parts.

Key Product Benefits:

- Low viscosity
- Minimal finishing
- Temperature tolerant
- Water and humidity resistant

Technical Data: Mechanical Properties

		Somos® Tusk Solidgrey Postcure	
ASTM Method	Property Description	Metric	Imperial
D638M	Tensile Modulus	2,970 – 3,285 MPa	431 – 476 ksi
D638M	Tensile Strength at Yield	60 – 66 MPa	8.7 – 9.6 ksi
D638M	Elongation at Yield	3.0%	3.0%
D638M	Elongation at Break	4.6 – 7.2%	4.6 – 7.2%
D790M	Flexural Stress at 5% Strain	77.4	4.6 – 7.2%
D790M	Flexural Modulus	1,843 – 2,017 MPa	267 – 292 ksi
D2240	Hardness (Shore D)	84	84
D256-06a	Izod Impact (Notched)	0.30 – 0.35 J/cm	0.56 – 0.66 ft-lb/in
D570-98	Water Absorption	0.36 – 0.40%	0.36 – 0.40%

Technical Data: Thermal/Electrical Properties

		Somos® Tusk Solidgrey Postcure	
ASTM Method	Property Description	Metric	Imperial
E831-06	C.T.E. before Tg (-44°C)	74.3 – 80.5 $\mu\text{m}/(\text{m}^\circ\text{C})$	41.2 – 44.7 $\mu\text{in}/(\text{in}^\circ\text{F})$
E831-06	C.T.E. after Tg (-44°C)	218 – 236 $\mu\text{m}/(\text{m}^\circ\text{C})$	121.1 – 131.1 $\mu\text{in}/(\text{in}^\circ\text{F})$
D150-98	Dielectric Constant and Dissipation Factor 1 kHz	$k' = 3.75$, $D = 0.02$	$k' = 3.75$, $D = 0.02$
D149-09a	Dielectric Strength	21.6 – 23.4 kV/mm	549 – 594 V/mil
E1545-05a	Tg	40 – 48°C	104 – 118°F
D648-07B	Deflection Temperature (0.46 MPa)	53 – 57°C	127 – 135°F
D648-07B	Deflection temperature (1.82 Mpa)	49 – 57°C	120 – 135°F

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

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

DSM Functional Materials-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

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