

a **DSM** Product

Product Description

Somos[®] GP Plus is a low-viscosity liquid photopolymer that produces water-resistant, durable and accurate three-dimensional parts. Somos GP Plus has a white, opaque appearance with performance that mirrors production plastics like ABS and PBT.

Applications

Somos GP Plus is ideal for many applications in the automotive, aerospace and consumer product industries. With USP Class VI and ISO 10993 approval, this material may also be used in certain biomedical, dental and skin contact applications. GP Plus is successful in creating:

- functional prototypes
- accurate medical and dental devices
- humidity / water-resistant concept models
- durable low volume production parts

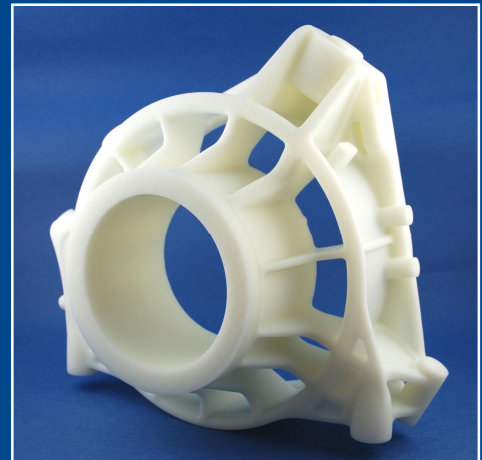
Technical Data: Liquid Properties

Appearance	Opaque white
Viscosity	~340 cps @ 30° C
Density	1.16 g/cm ³ @ 25° C

Technical Data: Optical Properties

E _c	13.0 mJ/cm ²	[critical exposure]
D _p	6.25 mils	[slope of cure-depth vs. ln(E) curve]
E ₁₀	64 mJ/cm ²	[exposure that gives 0.254 mm (.010 inch) thickness]

For technical service, please visit: www.dsmsomos.com



Somos[®] GP Plus is a low-viscosity liquid photopolymer that produces durable, accurate, and water-resistant parts.

Key Product Benefits:

- Water and humidity resistant
- USP Class VI and ISO 10993 medical approval
- Accuracy
- Fast Processing Speeds
- Minimal Finishing

Date: 9/09

Somos® GP Plus

Technical Data: Mechanical Properties

ASTM Method	Property Description	Metric	Imperial
D638M	Tensile Strength at Yield	47.2 - 47.6 MPa	6.8 - 6.9 ksi
D638M	Tensile Stress at Break	33.8 - 40.2 MPa	4.9 - 5.8 ksi
D638M	Elongation at Break	6% - 9%	6% - 9%
D638M	Elongation at Yield	3%	3%
D638M	Modulus of Elasticity	2370 - 2650 MPa	344 - 384 ksi
D790M	Poisson's Ratio	0.41	0.41
D790M	Flexural Strength	66.8 - 67.8 MPa	9.7 - 9.8 ksi
D2240	Flexural Modulus	2178 - 2222 MPa	315 - 322 ksi
D256A	Izod Impact (notched)	23 - 29 J/m	0.43 - 0.54 ft-lb/in
D3763	High Speed Puncture-Impact	4.6 J	3.36 ft-lbf
D570-98	Hardness (Shore D)	79	79
D570-98	Water Absorption	0.40%	0.40%

Technical Data: Thermal/Electrical Properties

ASTM Method	Property Description	Metric	Imperial
E831-05	C.T.E. -40°C - 0°C (-40°F - 32°F)	63 $\mu\text{m}/\text{m}^\circ\text{C}$	37 $\mu\text{in}/\text{in}^\circ\text{F}$
E831-05	C.T.E. 0°C - 50°C (32°F - 122°F)	89 $\mu\text{m}/\text{m}^\circ\text{C}$	52 $\mu\text{in}/\text{in}^\circ\text{F}$
E831-05	C.T.E. 50°C - 100°C (122°F - 212°F)	170 $\mu\text{m}/\text{m}^\circ\text{C}$	87 $\mu\text{in}/\text{in}^\circ\text{F}$
E831-05	C.T.E. 100°C - 150°C (212°F - 302°F)	172 $\mu\text{m}/\text{m}^\circ\text{C}$	100 $\mu\text{in}/\text{in}^\circ\text{F}$
D150-98	Dielectric Constant 60 Hz	3.8	3.8
D150-98	Dielectric Constant 1KHz	3.7	3.7
D150-98	Dielectric Constant 1MHz	3.4	3.4
D149-97a	Dielectric Strength	17.9 kV/mm	457 V/mil
E1545-00	T _g	41 - 43°C	111°F
D648-98c	HDT @ 0.46 MPa (66 psi)	46°C	115°F
D648-98c	HDT @ 1.81 MPa (264 psi)	41°C	105°F

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