



Somos® GP Plus 14122

A universal stereolithography material designed to produce accurate, detailed parts across a wide range of applications.

Product Description

Somos® GP Plus 14122 sets the standard for 3D printing prototypes. It is easily integrated in production cycles to test designs ensuring proper functionality of parts before they are launched into full production — providing customers the opportunity to get to market quickly.

Parts produced with Somos® GP Plus 14122 are durable, accurate and moisture resistant. This material is ideal for functional prototypes, concept models and low volume production parts.

Key Benefits

- Extremely accurate
- Excellent humidity resistance
- Very durable

Ideal Applications

- Aerospace parts
- Automotive parts
- Consumer product parts
- Low volume production parts

Somos® GP Plus 14122 Technical Data

Liquid Properties		Optical Properties		
Appearance	Opaque White	E_c	13.0 mJ/cm ²	[critical exposure]
Viscosity	~340 cps @ 30°C	D_p	6.25 mils	[slope of cure-depth vs. ln (E) curve]
Density	~1.16 g/cm ³ @ 25°C	E_{10}	64 mJ/cm ²	[exposure that gives 0.254 mm (.010 inch) thickness]

Mechanical Properties		UV Postcure	
ASTM Method	Property Description	Metric	Imperial
D638M	Tensile Modulus	2,510 MPa	364 ksi
D638M	Tensile Strength	37 MPa	5.4 ksi
D638M	Elongation at Break	7.5%	
D638M	Elongation at Yield	3%	
D790M	Flexural Strength	67.3 MPa	9.8 ksi
D2240	Flexural Modulus	2,200 MPa	319 ksi
D256A	Izod Impact (Notched)	26 J/m	0.49 ft-lb/in
D638M	Poisson's Ratio	0.41	
D2240	Hardness (Shore D)	79	
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)	63 $\mu\text{m}/\text{m}^\circ\text{C}$	35 $\mu\text{in}/\text{in}^\circ\text{F}$
E831-05	C.T.E. 0 - 50°C (32 - 122°F)	89 $\mu\text{m}/\text{m}^\circ\text{C}$	49 $\mu\text{in}/\text{in}^\circ\text{F}$
E831-05	C.T.E. 50 - 100°C (122 - 212°F)	170 $\mu\text{m}/\text{m}^\circ\text{C}$	95 $\mu\text{in}/\text{in}^\circ\text{F}$
E831-05	C.T.E. 100 - 150°C (212 - 302°F)	172 $\mu\text{m}/\text{m}^\circ\text{C}$	96 $\mu\text{in}/\text{in}^\circ\text{F}$
D150-98	Dielectric Constant 60 Hz	3.8	
D150-98	Dielectric Constant 1 KHz	3.7	
D150-98	Dielectric Constant 1 MHz	3.4	
D149-97A	Dielectric Strength	17.9 kV/mm	454 V/mil
D648	HDT @ 0.46 MPa (66 psi)	46°C	115°F
D648	HDT @ 1.81 MPa (264 psi)	41°C	106°F

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

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