

Somos® GP Plus 14122

Unspecified

DSM Somos®

Message:

DSM's Somos® GP Plus 14122 is a low-viscosity liquid photopolymer that produces water-resistant, durable and accurate three-dimensional parts. Somos® GP Plus 14122 has a white, opaque appearance with performance that mirrors production plastics like ABS and PBT.

Applications

Somos® GP Plus 14122 is ideal for many applications in the automotive, aerospace and consumer product industries. Somos® GP Plus 14122 is successful in creating functional prototypes, humidity / water-resistant concept models, and durable low volume production parts.

General Information			
Features	Durable		
	Humidity Resistant		
	Low to No Water Absorption		
	Low Viscosity		
Uses	Aerospace Applications		
	Automotive Applications		
	Consumer Applications		
	Engineering Parts		
	Modeling Material		
	Prototyping		
Appearance	Opaque		
	White		
Forms	Liquid		
Processing Method	3D Printing, Stereolithography		
Physical	Nominal Value	Unit	Test Method
Density	1.16	g/cm ³	
Water Absorption (Equilibrium)	0.40	%	ASTM D570
Viscosity (30°C)	340	mPa · s	
Critical Exposure	13.0	mJ/cm ²	
Penetration Depth	158.8	µm	
Puncture Energy - High Speed Puncture-Impact	4.60	J	ASTM D3763
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	79		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2370 to 2650	MPa	ASTM D638
Tensile Strength			ASTM D638
Yield	47.2 to 47.6	MPa	

Break	33.8 to 40.2	MPa	
Tensile Elongation			ASTM D638
Yield	3.0	%	
Break	6.0 to 9.0	%	
Flexural Modulus	2180 to 2220	MPa	ASTM D790
Flexural Strength	66.8 to 67.8	MPa	ASTM D790
Poisson's Ratio	0.41		ASTM D638
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	23 to 29	J/m	ASTM D256A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	46.0	°C	
1.8 MPa, Unannealed	41.0	°C	
Glass Transition Temperature	41.0 to 43.0	°C	ASTM E1545
CLTE - Flow			ASTM E831
-40 to 0°C	6.3E-5	cm/cm/°C	
0 to 50°C	8.9E-5	cm/cm/°C	
50 to 100°C	1.7E-4	cm/cm/°C	
100 to 150°C	1.7E-4	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength	18	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
60 Hz	3.80		
1 kHz	3.70		
1 MHz	3.40		

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