ProtoCast 19122

Unspecified

DSM Somos®

Message:

DSM's Somos® ProtoCast 19122 is a breakthrough for the investment casting industry. It is an antimony-free liquid photopolymer specifically formulated for producing investment casting patterns.
Applications
Ideal for use in foundry applications, Somos® ProtoCast 19122 is totally antimony-free, which eliminates the risk of contamination in specialty alloys. Antimony is traditionally present in the photoinitiators that activate the stereolithography chemistry. No other metals are present in this unique photopolymer chemistry.
The absence of antimony also allows stereolithography patterns to burn out more completely, resulting in significantly lower residual ash than is produced by burning out conventional stereolithography patterns. Studies have shown that the residual ash of Somos® ProtoCast 19122 is less than 0.015% after burnout at 1500°F for two hours.

General Information			
Features	Antimony Free		
	Clean/High Purity		
	Good Surface Finish		
	High Heat Resistance		
	High Stiffness		
Uses	Automotive Applications		
	Consumer Applications		
	Electrical Housing		
	Engineering Parts		
	Mold Making		
	Molds/Dies/Tools		
	Prototyping		
Appearance	Clear/Transparent		
	Light Color		
	Pink		
Forms	Liquid		
Processing Method	3D Printing, Stereolithography		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density	1.13	g/cm^3	
Water Absorption (Equilibrium)	0.70	%	ASTM D570
Viscosity (30°C)	100	mPa·s	
Critical Exposure	11.5	mJ/cm^2	
Penetration Depth	132.1	µm	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore D)	84 to 86		ASTM D2240

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2010 to 2190	MPa	ASTM D638
Tensile Strength (Break)	44.5 to 45.3	MPa	ASTM D638
Tensile Elongation (Break)	6.0	%	ASTM D638
Flexural Modulus	2140 to 2270	MPa	ASTM D790
Flexural Strength	73.0 to 76.0	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact	17 to 29	J/m	ASTM D256A
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	59.0	°C	
1.8 MPa, Unannealed	50.0	°C	
Glass Transition Temperature	49.0	°C	ASTM E1545
CLTE - Flow			ASTM E831
-40 to 0°C	7.4E-5	cm/cm/°C	
0 to 50°C	9.6E-5	cm/cm/°C	
50 to 100°C	1.4E-4	cm/cm/°C	
100 to 150°C	1.8E-4	cm/cm/°C	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Dielectric Strength	15	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
60 Hz	3.16		
1 kHz	3.12		
1 MHz	2.94		

Recommended distributors for this material

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