

Product Data

Somos[®] 8120

Description

DSM's Somos[®] 8120 is a high-speed liquid photopolymer that produces flexible, high-impact strength, accurate parts using stereolithography machines. It has a wide processing latitude and excellent tolerance to a wide range of temperatures and humidity during and after the build.

Applications

Somos[®] 8120 photopolymer is used in the solid imaging process to build three-dimensional parts. This material is especially useful in functional applications where flexibility and impact strength are critical requirements (e.g., plastic bottles, packaging, automobile panels, electronic enclosures, medical products and snap-fit parts).

TECHNICAL DATA - LIQUID PROPERTIES		TECHNICAL DATA - OPTICAL PROPERTIES		
Appearance	Transparent amber	E _c	6.75 mJ/cm ²	[critical exposure]
Viscosity	~600 cps @ 30°C	D _p	6.2 mils	[slope of cure-depth vs. ln (E) curve]
Density	~1.11 g/cm ³ @ 25°C	E ₁₀	35 mJ/cm ²	[exposure that gives 0.254 mm (.010 inch) thickness]

TECHNICAL DATA					
Mechanical Properties		Somos [®] 8120 UV Postcure		Polyethylene*	
ASTM Method	Property Description	Metric	Imperial	Metric	Imperial
D638M	Tensile Strength	26 MPa	3.8 ksi	13 - 28 MPa	1.9 - 4.1 ksi
D638M	Elongation at Yield	27%	27%	100 - 965%	100 - 965%
D638M	Young's Modulus	276 - 703 MPa	40 - 102 ksi	262 - 517 MPa	38 - 76 ksi
D790M	Flexural Strength	26 MPa	100 ksi	N/A	N/A
D790M	Flexural Modulus	690 MPa	76 ksi	276 - 724 MPa	4 - 10.5 ksi
D2240	Hardness (Shore D)	76	76	44 - 50	44 - 50
D256A	Izod Impact (Notched)	59 J/m	1.1 ft-lb/in	53 J/m	0.99 ft-lb/in
D648-07	Deflection Temperature	54°C	129°F	55 - 56°C	131 - 132°F

*Low and medium density polyethylene linear copolymer (Reference: Modern Plastics Encyclopedia, 1998).



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