



Somos 9120

Technical Data



Material Overview

Somos 9120 is a liquid photopolymer that produces robust, functional and accurate parts using stereolithography machines. The material offers superior chemical resistance and a wide processing latitude. With mechanical properties that mimic many engineering plastics, parts created from Somos 9120 exhibit superior fatigue properties, strong memory retention and high quality up-facing and down-facing surfaces. It also offers a good balance of properties between rigidity and functionality. This material is also useful in creating parts for applications where durability and robustness are critical requirements (e.g., automobile components, electronic housings, medical products, large panels and snap-fit parts).

Advantage

- > Easy to clean & finish
- > High strength & durability
- > good balance of properties between rigidity and functionality
- > superior chemical resistance

Ideal Applications

- > Automobile components
- > electronic housings
- > medical products
- > large panels and snap-fit parts

Technical Datasheet

Liquid Properties		Optical Properties		
Appearance	Off white	Dp	5.6 mils	[slope of cure-depth vs. ln (E) curve]
Viscosity	~450 cps@ 30°C	Ec	10.9 mJ/cm ²	[critical exposure]
Density	~1.13 g/cm ³ @ 25°C	Building layer thickness	0.08–0.012mm	

Mechanical properties		UV Postcure		polypropylene*	
ASTM Method	Property Description	Metric	Imperial	Metric	Imperial
D638M	Tensile strength	30–32 MPa	4.4–4.7 ksi	31–37.2 MPa	4.5–5.4 ksi
D638M	Elongation at yield	15–25%	15–21%	7–13%	7–13%
D638M	Young's modulus	1,227–1,462 MPa	178–212 ksi	1,138–1,551 MPa	165–225 ksi
D790M	Flexural strength	44–46 MPa	6.0–6.7 ksi	41–55 MPa	6.0–8.0 ksi
D790M	Flexural modulus	1,310–1,455 MPa	190–210 ksi	1,172–1,724 MPa	170–250 ksi
D2240	Hardness (Shore D)	80–82	80–82	N/A	IN/A
D256A	Izod impact (Notched)	48–53 J/m	0.9–1.0 ft-lb/in	21–75 J/m	0.4–1.4 ft-lb/in
D648-07	Deflection temperature	52–61°C	126–142°F	107–121°C	225–250°F

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