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# Somos® Element

A stereolithography material engineered to create flawless investment castings

## Product Description

Through continuous interaction with our customers, pattern makers and foundries, Somos has developed the next generation of stereolithography resins specifically designed for producing Investment Casting patterns.

Somos® Element is a new antimony-free SL material that has been specifically created to improve the repeatability and quality of 3D printed casting patterns. Patterns created with Somos® Element have strong green strength, are dimensionally stable during storage and leave a minimal amount of ash residue after burnout. Any residue that is left behind is easily removed, leaving a perfectly clean void in the ceramic mold. This translates into less mold prep and lower rates of rework saving customers time and money.

## Key Benefits

- Very clean burnout with low residual ash
- Low viscosity
- Dimensionally stable

Liquid Properties		Optical Properties		
Appearance	Clear	E <sub>C</sub>	11.25 mJ/cm <sup>2</sup>	[critical exposure]
Viscosity	~110 cps @ 30°C	D <sub>p</sub>	6.1 mils	[slope of cure-depth vs. ln (E) curve]
Density	1.16 g/cm <sup>3</sup> @ 25°C	E <sub>10</sub>	63.8 mJ/cm <sup>2</sup>	[exposure that gives 0.254 mm (.010 inch) thickness]

Mechanical Properties		UV Postcure	
ASTM Method	Property Description	Metric	Imperial
D638M	Tensile Modulus	2,656 MPa	385 ksi
D638M	Tensile Strength at Break	42 MPa	6.1 ksi
D638M	Elongation at Break	6.4%	
D570-98	Water Absorption	0.35%	

Burnout Properties	
Method	Property Description
ICP	Antimony Content
TGA	Ash Content

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

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