PRELIMINARY DATASHEET
SLA

A ScanControl+™ Ready Material:
Optimized performance when used with the Neo®800+ printer.

Somos®
ShellCast™

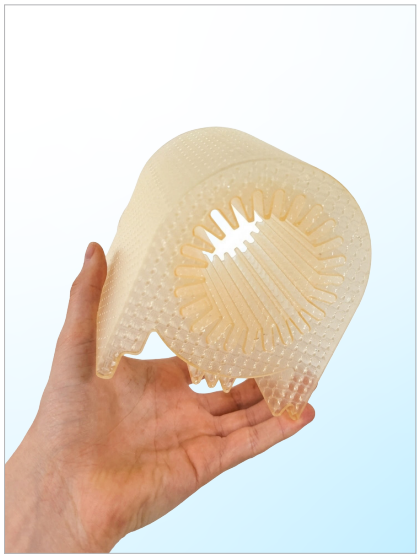
Antimony-free SLA resin for high-precision investment casting.

Accelerate investment casting workflows and bypass traditional tooling constraints with Somos® ShellCast™, an advanced SLA resin engineered to produce affordable, high-fidelity master patterns for metal castings. Its low viscosity enables easy drainage across complex geometries, and produces thin, hollow-wall structures with exceptional dimensional accuracy and smooth surface finishes.

Its translucent hue enables easy inspection of trapped resin within lattice structures, while the antimony- and phosphorus-free formulation leaves minimal ash residue during burnout, making it ideal for specialty alloy casting in the medical, industrial, aerospace, and defence sectors.

Key Benefits

- Antimony- and phosphorus-free formulation enables cleaner burnout, reducing casting defects and improving production yield
- High dimensional accuracy and superior surface quality minimize the need for secondary post-processing
- Faster print speeds when paired with the Neo800+ further reduce production time and increase throughput
- Low-viscosity resin enables easy drainage and efficient part cleaning for thin-wall, high-fidelity geometries
- Cost-effective resin for investment casting
- Translucent finish enables easy pattern inspection





Applications

- Turbine blades
- Engine components
- Pump impellers
- Orthopedic implants

LIQUID PROPERTIES	
Appearance	Yellowish transparent
Viscosity	140 ± 50 cps @ 30°C
Density	~1.10 g/cm3 @ 25°C

OPTICAL PROPERTIES		
EC	8.4 mJ/cm2	[critical exposure]
DP	4.56 mil (0.116 mm)	[slope of cure-depth vs ln(E) curve]
E10	75.03 mJ/cm2	[exposure that gives 0.254 mm (.010 inch) thickness]

MECHANICAL PROPERTIES		UV POSTCURE	
ASTM Method	Property Description	Metric	Imperial
D638M	Tensile Strength at Break	43 ± 5 MPa	6.3 ± 0.7 ksi
D638M	Yield Stress	42 ± 5 MPa	6.1 ± 0.7 ksi
D638M	Elongation at Break	4.2 ± 1%	
D638M	Elongation at Yield	TBD	
D638M	Tensile Modulus	2240 ± 200 MPa	325 ± 40 ksi
D790M	Flexural Strength	TBD	TBD
D790	Flexural Modulus	TBD	TBD
D256A	Izod Impact (Notched)	25 ± 5 J/m	0.47 ± 0.09 ft-lb/in
D570-98	Water Absorption	0.28%	

MECHANICAL PROPERTIES		UV POSTCURE	
ASTM Method	Property Description	Metric	Imperial
E831-05	C.T.E. -40 - 0°C (-40 - 32°F)	TBD	TBD
E831-05	C.T.E. 0 - 50°C (32 - 122°F)	TBD	TBD
E831-05	C.T.E. 50 - 100°C (122 - 212°F)	TBD	TBD
E831-05	C.T.E. 100 - 150°C (212 - 302°F)	TBD	TBD
D150-98	Dielectric Constant 60 Hz	TBD	
D150-98	Dielectric Constant 1kHz	TBD	
D150-98	Dielectric Constant 1MHz	TBD	
D149-97a	Dielectric Strength	TBD	TBD
D5023	Tg	42 ± 1 °C	108 ± 2 °F
D648	HDT @ 0.46 MPa (66 psi)	51 ± 2 °C	124 ± 4 °F
D648	HDT @ 1.81 MPa (264 psi)	TBD	TBD

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