SOMOS®
QUICKGEN 500

Somos® QuickGen 500 is a fast-printing, general purpose resin for digital light processing 3D printing.

- **Best option for prototyping using a flexible material**
- **Prints fast and accurately**

Digital light processing (DLP) 3D printing technology generally boasts faster print speeds and lower capital investment. Combined with Somos® QuickGen 500, companies looking to manufacture locally can more quickly and easily adopt 3D printing.

Somos® QuickGen 500 is a fast-printing DLP material with a print speed 2x faster than similar materials. It offers accurate printing for general and functional prototypes.

Somos® QuickGen 500 has unique flexibility; it is more flexible than other resins, but stiffer than elastomers, offering both flexibility and spring back. The material has substantial elongation and a lower modulus with no significant strain rate dependence on elongation at break. This results in consistent performance independent of how quickly force or strain are applied. Many flexible materials show greater influence from the rate of applied force.

An economical resin, Somos® QuickGen 500 can quickly produce high volumes due to its high printing speeds and fast post-processing.

Key Benefits

- Fast printing
- Economical
- Balance of flexibility and stiffness
- Accurate
- Near colorless

Applications

- General and functional prototypes
- Semi-flexible applications
- Applications with detailed features
- Fluid flow analysis

SOMOS® QUICKGEN 500

Preliminary Data

Liquid Properties		*Optical Properties*		
Appearance	Opaque	E_c	4.85 mJ/cm²	[critical exposure]
Viscosity	1375-1450 cp	D_p	0.160 mm	[slope of cue-depth vs In (E)curve]
Density	1.093 g/cc	E_{10}	22 mJ/cm²	[exposure that gives 0.254 mm(.010 inch) thickness]

385 nm DLP, 5 mW/cm² measured intensity

Layer Thickness (mm)	*Time to Cure (s)*	*Energy to Cure (mJ/cm^2)*
0.05	1.5	7.5
0.1	2.44	12.2
0.15	3.8	19
0.2	5.84	29.2

*Mechanical Properties**		*UV and Thermal Postcure*	
ASTM Method	Property Description	Metric	Imperial
D638M	Tensile Modulus	465 MPa	67.4 ksi
D638M	Tensile Strength	20.4 Mpa	3 ksi
D638M	Tensile Elongation at Yield	5%	
D638M	Tensile Elongation at Break	42%	
D638M	Tensile Yield Strength	12 Mpa	1.7 ksi
D790M	Flexural Modulus	408 Mpa	59.2 ksi
D790M	Flexural Yield Stress	15.9 Mpa	2.3 ksi
D790M	Flexural Elongation at Yield	7.7%	
D256	IZOD Impact, Notched	70 J/m	1.3 ft-lb/in
D624	Tear Strength	95 kN/m	542 lb/in
D570-98	Water Absorption	0.57/0.89%	
DMTA	E'(25°C, 37°C)	770/423 Mpa	112/61 ksi

*5mm/min

Thermal/Electrical Properties		*UV and Thermal Postcure*	
ASTM Method	Property Description	Metric	Imperial
DMTA	Glass Transition, Tan Delta	62.1°C	143.8°F

For more information and buying options, please visit www.dsm.com/additive-manufacturing/

DSM – Bright Science. Brighter Living.™

This is a general purpose material not intended for medical or dental applications. All materials offered by DSM Additive Manufacturing are supplied under a contract containing detailed product specifications, and the user shall be exclusively responsible for, and shall bear full responsibility for the consequences i) whether or not the product is suitable for use in the devices (or any other (authorized) use that customer may wish to make of the product), and (ii) whether the product specifications are sufficient and sufficiently well defined in order for the product to be fit and suitable for use by user. User undertakes to keep itself actively informed as to developments in the relevant fields of its applications.

All information supplied by or on behalf of DSM in relation to its products, whether in the nature of data, recommendations or otherwise, is supported by research and, in good faith, believed reliable, but DSM assumes no liability and makes no warranties of any kind, express or implied, including, but not limited to, those of title, merchantability, fitness for a particular purpose or non-infringement or any warranty arising from a course of dealing, usage, or trade practice whatsoever in respect of application, processing or use made of aforementioned information, or product. The user assumes all responsibility for the use of all information provided and shall verify quality and other properties or any consequences from the use of all such information. Somos® is a trademark of DSM.

DSM