



## Product Data Sheet

# Somos<sup>®</sup> Imagine 8000

### Description

DSM's Somos<sup>®</sup> Imagine 8000 is a low-viscosity liquid photopolymer that produces water-resistant, durable and accurate three-dimensional parts. Somos<sup>®</sup> Imagine 8000 has a white, opaque appearance with performance that mirrors production plastics like ABS and PBT.

### Applications

Somos<sup>®</sup> Imagine 8000 is ideal for many applications in the automotive, aerospace and consumer product industries. Somos<sup>®</sup> Imagine 8000 is successful in creating functional prototypes, humidity / water-resistant concept models, and durable low volume production parts.

#### TECHNICAL DATA - LIQUID PROPERTIES

Appearance	Opaque White
Viscosity	~340 cps @ 30°C
Density	~1.16 g/cm <sup>3</sup> @ 25°C

#### TECHNICAL DATA - OPTICAL PROPERTIES

E <sub>c</sub>	13.0 mJ/cm <sup>2</sup>	[critical exposure]
D <sub>p</sub>	6.25 mils	[slope of cure-depth vs. ln (E) curve]
E <sub>10</sub>	64 mJ/cm <sup>2</sup>	[exposure that gives 0.254 mm (.010 inch) thickness]

TECHNICAL DATA			
Mechanical Properties		Somos® Imagine 8000	
ASTM Method	Property Description	Metric	Imperial
D638M	Tensile Strength at Yield	47.2 - 47.6 MPa	6.8 - 6.9 ksi
D638M	Tensile Strength at Break	33.8 - 40.2 MPa	4.9 - 5.8 ksi
D638M	Elongation at Break	6 - 9%	6 - 9%
D638M	Elongation at Yield	3%	3%
D638M	Modulus of Elasticity	2,370 - 2,650 MPa	344 - 384 ksi
D638M	Poisson's Ratio	0.41	0.41
D790M	Flexural Strength	66.8 - 67.8 MPa	9.7 - 9.8 ksi
D790M	Flexural Modulus	2,178 - 2,222 MPa	315 - 322 ksi
D256A	Izod Impact (Notched)	23 - 29 J/cm	0.43 - 0.54 ft-lb/in
D3763	High Speed Puncture-Impact	4.6 J	3.36 ft-lb/in
D2240	Hardness (Shore D)	79	79
D570-98	Water Absorption	0.40%	0.40%

TECHNICAL DATA			
Thermal/Electrical Properties		Somos® Imagine 8000	
ASTM Method	Property Description	Metric	Imperial
E831-05	C.T.E. -40 - 0°C (-40 - 32°F)	63 µm/m°C	37 µin/in°F
E831-05	C.T.E. 0 - 50°C (32 - 122°F)	89 µm/m°C	52 µin/in°F
E831-05	C.T.E. 50 - 100°C (122 - 212°F)	170 µm/m°C	87 µin/in°F
E831-05	C.T.E. 100 - 150°C (212 - 302°F)	172 µm/m°C	100 µin/in°F
D150-98	Dielectric Constant 60 Hz	3.8	3.8
D150-98	Dielectric Constant 1 KHz	3.7	3.7
D150-98	Dielectric Constant 1 MHz	3.4	3.4
D149-97A	Dielectric Strength	17.9 kV/mm	457 V/mil
E1545-00	Tg	41 - 43°C	111°F
D648	HDT @ 0.46 MPa (66 psi)	46°C	115°F
D648	HDT @ 1.81 MPa (264 psi)	41°C	105°F

## DSM Functional Materials Somos® Materials Group

### in North America

1122 St. Charles Street  
Elgin, Illinois 60120  
USA  
Phone: +1.847.697.0400

### in Europe

Slachthuisweg 30  
3150 XN Hoek van Holland  
The Netherlands  
Phone: +31.174.315.391

### in China

476 Li Bing Road  
Zhangjiang Hi-Tech Park  
Pudong New Area  
Shanghai 201203, China  
Phone: +86.21.6141.8064

Visit us online at [www.dsm.com/somos](http://www.dsm.com/somos)

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