

## Somos 18420 ProtoGen O-XT White

General Purpose, Exact, Epoxy Resin for Stereolithography  
For Solid State (355 nm) Laser Systems  
A White Material that Mimics Engineering Plastics

### Description

DSM Somos® 18420 ProtoGen O-XT White is a liquid photopolymer that produces white, accurate parts ideal for general purpose applications. Based on oxetane chemistry, the material offers superior chemical resistance, a wide processing latitude and excellent tolerance to a broad temperature and humidity range during and after build.

### Application

Somos® 18420 Photopolymer is used in the solid imaging process to build three-dimensional parts.

Preliminary Product Data Sheet

DSM Somos®  
1122 St. Charles Street  
Elgin, IL 60120 USA  
Tel: 800.223.7191 (in USA)  
Tel: 847.697.0400 (outside USA)  
Fax: 847.468.7785

DSM Desotech by  
3150 AB Hoek van Holland  
The Netherlands  
Tel: +31 1743.15391  
Fax: +31 1743.15530

www.dsmsomos.com

Email:  
Americas@dsmsomos.info  
Europe@dsmsomos.info  
Asia@dsmsomos.info

### Physical Properties – Liquid

Appearance White  
Viscosity ~340 cps at 30°C

### Optical Properties at 355 nm

$E_c$  8.1 mJ/cm<sup>2</sup>  
[critical exposure]  
 $D_p$  0.14 mm (0.0055 inch)  
[slope of cure-depth vs. ln(E) curve]  
 $E_{10}$  50 mJ/cm<sup>2</sup>  
[exposure that gives 0.254 mm (0.010 inch) thickness]

# Preliminary Product Data Sheet

## Physical Properties (Metric)

The numbers reported below are only approximate values. The actual values may vary with build conditions.

ASTM Test	Description	Somos® 18420 UV	Accura 60*
D638M	Elongation at Break	6-10 %	5 - 13 %
	Young's Modulus	2,700 - 3,100 MPa	2,700 - 3,100 MPa
D790M	Flexural Modulus	2,600 MPa	2,700 - 3,000 MPa
D256A	Izod Impact - notched	0.15-0.17 J/cm	0.15-0.25 J/m
D648	Deflection Temperature With Thermal Postcure	68 °C 100 °C	53-55 °C

\* As reported on 3D Systems datasheet

N/A: Not Available

## Physical Properties (Imperial)

The numbers reported below are only approximate values. The actual values may vary with build conditions.

ASTM Test	Description	Somos® 18420 UV	Accura 60*
D638M	Elongation at Yield	6 - 10 %	5- 13 %
	Young's Modulus	400,000 -450,000 psi	390,000 - 450,000 psi
D790M	Flexural Modulus	374,000 psi	390,000 - 450,000 psi
D256A	Izod Impact - notched	0.3 ft-lb/in	0.3 ft-lb/in
D648	Deflection Temperature With Thermal Postcure	154 °F 212 °F	127-131 °F

\* As reported on 3D Systems datasheet

N/A: Not Available

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The ProtoFunctional® Materials Company