

Somos 18120 ProtoGen O-XT Clear

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

Description

DSM Somos® 18120 ProtoGen O-XT Clear is a liquid photopolymer that produces clear, 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® 18120 Photopolymer is used in the solid imaging process to build three-dimensional parts.

Preliminary Product Data Sheet

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Physical Properties – Liquid

Appearance Transparent, clear
 Viscosity ~300 cps at 30°C

Optical Properties at 355 nm

E_c 10.9 mJ/cm²
 [*critical exposure*]
 D_p 0.15 mm (0.0061 inch)
 [*slope of cure-depth vs. ln(E) curve*]
 E_{10} 50 mJ/cm²
 [*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® 18120 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	74 °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® 18120 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	165 °F 212 °F	127-131 °F

* As reported on 3D Systems datasheet

N/A: Not Available

05/06

The ProtoFunctional® Materials Company

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