

LET'S MANUFACTURE TOMORROW



**SOMOS®
WATERSHED BLACK**



SOMOS® WATERSHED BLACK

Somos® WaterShed Black provides a solution to build rigid, tough parts, while eliminating the need for painting. With similar properties and processing as Somos® WaterShed XC 11122, this multipurpose resin provides the same benefits in a black stereolithography material.

- **Black material based on Somos® WaterShed XC 11122**
- **Resin for stereolithography printing**

With Somos® WaterShed Black, there is a new stereolithography resin, black in color, on the market. With faster processing times and the elimination of the need for painting, Somos® WaterShed Black is a time and resource saver.

With its improved formulation, Somos® WaterShed Black has up to a 50% faster processing speed, offering minimal finishing and more consistent processing over time. WaterShed Black is a truer black color off the machine vs. others currently available. This material also has a smooth surface finish, as well as superior moisture and chemical resistance.

Key Benefits

- Ease-of-use and fast processing with minimal finishing, more consistent processing over time
- Truer black color off the machine
- Based on proven technology of Somos® WaterShed XC 11122
- Smooth surface finish
- Superior moisture and chemical resistance

Applications

- Durable, stiff, tough parts
- Automotive components
- Electronic housings
- Packaging
- Functional prototypes and end use parts

Liquid Properties		Optical Properties		
Appearance	Black	E _c	8.4 mJ/cm ²	[critical exposure]
Viscosity	~260 cps @ 30°C	D _p	4.15 mil	[slope of cue-depth vs ln (E)curve]
Density	~1.12 g/cm ³ @ 25°C	E ₁₀	93.4 mJ/cm ²	[exposure that gives 0.254 mm(.010 inch) thickness]
		D542	1.514	Index of Refraction (cured)

Mechanical Properties		UV Postcure	
ASTM Method	Property Description	Metric	Imperial
D638M	Tensile Strength at Break	50.4 MPa	7.3 ksi
D638M	Elongation at Break	15.5%	
D638M	Elongation at Yield	3%	
D638M	Tensile Modulus	2,770 MPa	402 ksi
D790M	Flexural Strength	68.7 MPa	10.0 ksi
D2240	Flexural Modulus	2,205 MPa	320 ksi
D256A	Izod Impact (Notched)	25 J/m	0.47 ft-lb/in
D570-98	Water Absorption	0.35%	

Thermal/Electrical Properties		UV Postcure	
ASTM Method	Property Description	Metric	Imperial
E831-05	C.T.E. -40 - 0°C (-40 - 32°F)	67 μm/m°C	37 μin/in°F
E831-05	C.T.E. 0 - 50°C (32 - 122°F)	93 μm/m°C	52 μin/in°F
E831-05	C.T.E. 50 - 100°C (122 - 212°F)	180 μm/m°C	100 μin/in°F
E831-05	C.T.E. 100 - 150°C (212 - 302°F)	187 μm/m°C	104 μin/in°F
D150-98	Dielectric Constant 60 Hz	4.0	
D150-98	Dielectric Constant 1 KHz	3.8	
D150-98	Dielectric Constant 1 MHz	3.5	
D149-97a	Dielectric Strength	15.9 kV/mm	404 V/mil
E1545-00	Tg	43°C	109°F
D648	HDT @ 0.46 MPa (66 psi)	50°C	122°F
D648	HDT @ 1.81 MPa (264 psi)	49°C	120°F

Information based on Somos® WaterShed XC 11122.

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

DSM – Bright Science. Brighter Living.™

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. Copyright © DSM 2019. All rights reserved. No part of the information may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of DSM. Doc 0033-01

