

## **SOMOS® WATERSHED XC 11122**

An easy to use, low viscosity, water-resistant stereolithography material for use in numerous applications

As one of the industry's most popular materials, Somos® WaterShed XC 11122 is the clear solution for numerous applications. Whether you're a designer looking for highly detailed parts with superior clarity and water resistance, or an engineer focusing on durability for functional testing, Somos® WaterShed XC 11122 mimicks the look and feel of clear thermoplastics, such as ABS and PBT.

Somos® WaterShed XC 11122 produces optically clear parts with a smooth finish and it's ease of use helps to shorten product development and testing. This versatility means Somos® WaterShed XC 11122 is the ideal material in markets such as automotive, aerospace and consumer electronics for applications including packaging, RTV patterns, durable concept models, wind tunnel testing and investment casting patterns.

## **Key Benefits**

- Easy to use and finish
- Superior moisture resistance
- Exceptional clarity

## **Applications**

- Consumer products
- Fluid/Air Flow Analysis
- Duct work
- Investment casting
- Lenses

Liquid Properties		Optical Properties			
Appearance	Optically clear, near colorless	E <sub>c</sub>	11.5 mJ/cm <sup>2</sup>	[critical exposure]	
Viscosity	~260 cps @ 30°C	Dp	6.50 mils	[slope of cue-depth vs In (E)curve]	
Density	~1.12 g/cm3 @ 25°C	E <sub>10</sub>	54 mJ/cm <sup>2</sup>	[exposure that gives 0.254 mm(.010 inch) thickness]	
		D542	1.514	Index if 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.E40 - 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	

hese values may vary and depend on individual machine processing and post-curing practices.

## 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

Somos<sup>®</sup> is a trademark of DSM. Copyright<sup>®</sup> DSM 2020. All rights reserved. No part of the information may be reproduced, distributed, or transmitted in any for or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of DSM. Doc 0048-01

