



The
Design to
Manufacturing Co.



MATERIAL **WATERSHED BLACK** OVERVIEW

For more information or advice:



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Somos® WaterShed® Black

Stereolithography

Multipurpose resin that prints 50% faster than alternatives, eliminates the need for painting.

Somos® WaterShed Black, with similar properties and processing as Somos® WaterShed XC 11122, has up to a 50% faster processing speed, offering minimal finishing and more consistent processing over time. Compared to alternatives currently on the market, Somos® WaterShed Black prints a more true black color off the machine. The material offers a smooth surface finish, as well as higher moisture and chemical resistance.



Key Benefits

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

Ideal 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 mils	[slope of cure-depth vs. ln (E) curve]
Density	~1.127 g/cm ³ @ 25°C	E ₁₀	93.4 mJ/cm ²	[exposure that gives 0.254 mm (.010 inch) thickness]

MECHANICAL PROPERTIES		UV POSTCURE	
ASTM	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 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	Property Description	Metric	Imperial
E831-05	C.T.E. 40°C – 0°C (-40°F – 32°F)	67 µm/m°C	37 µin/in°F
E831-05	C.T.E. 0°C – 50°C (32°F – 122°F)	93 µm/m°C	52 µin/in°F
E831-05	C.T.E. 50°C – 100°C (122°F – 212°F)	180 µm/m°C	100 µin/in°F
E831-05	C.T.E. 100°C – 150°C (212°F – 302°F)	187 µm/m°C	104 µin/in°F
D150-98	Dielectric Constant 60 Hz	4	
D150-98	Dielectric Constant 1KHz	3.8	
D150-98	Dielectric Constant 1MHz	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

Mechanical and Thermal/Electrical Properties based on Somos® WaterShed XC 11122.
The Liquid and Optical Properties are specific to WaterShed Black.

Find the Perfect Material for Your Application

From strength and flexibility to biocompatibility and color, our experts help you select materials that meet your part performance and production goals - every time.

TALK TO AN EXPERT

Visit <https://theD2Mco.com/contact-us>



100%
Tailored
Advice