

DSM Somos® BioClear

Category : Polymer , Rapid Prototyping Polymer

Material Notes:

Parts created with Somos® BioClear are designed for medical applications that are non-implant and have limited contact with the body such as device prototyping. They are shatter-resistant so they won't break during shipping, accidental dropping, or during a surgical procedure. The parameters for medical testing are limited. It remains the responsibility of the device manufacturer to determine the usage fit for each particular device. This product is ISO 10993-5, ISO 10993-10, USP Class VI certified.

Order this product through the following link:

http://www.lookpolymers.com/polymer_DSM-Somos-BioClear.php

Physical Properties	Metric	English	Comments
Density	1.12 g/cc	0.0405 lb/in³	
Water Absorption	0.35 %	0.35 %	UV Postcure; ASTM D570-98
Viscosity	260 cP @Temperature 30.0 °C	260 cP @Temperature 86.0 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	47.1 - 53.6 MPa	6830 - 7770 psi	UV Postcure; ASTM D638M
Elongation at Break	11 - 20 %	11 - 20 %	UV Postcure; ASTM D638M
Elongation at Yield	3.0 %	3.0 %	UV Postcure; ASTM D638M
Modulus of Elasticity	2.65 - 2.88 GPa	384 - 418 ksi	UV Postcure; ASTM D368M
Flexural Strength	63.1 - 74.2 MPa	9150 - 10800 psi	UV Postcure; ASTM D790M
Flexural Modulus	2.04 - 2.37 GPa	296 - 344 ksi	UV Postcure; ASTM D790M
Izod Impact, Notched	0.200 - 0.300 J/cm	0.375 - 0.562 ft-lb/in	UV Postcure; ASTM D256A
Graves Tear Strength	150 kN/m	856 pli	UV Postcure; ASTM D1004-09

Thermal Properties	Metric	English	Comments
CTE, linear	60.0 - 67.0 µm/m-°C	33.3 - 37.2 µin/in-°F	UV Postcure; ASTM E831-05
	@Temperature -40.0 - 0.000 °C	@Temperature -40.0 - 32.0 °F	
	90.0 - 96.0 µm/m-°C	50.0 - 53.3 µin/in-°F	UV Postcure; ASTM E831-05
	@Temperature 0.000 - 50.0 °C	@Temperature 32.0 - 122 °F	
	170 - 189 µm/m-°C	94.4 - 105 µin/in-°F	

Thermal Properties	Metric	English	Comments
	@ Temperature 50.0 - 100 °C	@ Temperature 122 - 212 °F	UV Postcure; ASTM E831-05
	185 - 189 µm/m-°C	103 - 105 µin/in-°F	
	@Temperature 100 - 150 °C	@Temperature 212 - 302 °F	UV Postcure; ASTM E831-05
Deflection Temperature at 0.46 MPa (66 psi)	45.9 - 54.5 °C	115 - 130 °F	UV Postcure; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	49.0 - 49.7 °C	120 - 121 °F	UV Postcure; ASTM D648
Glass Transition Temp, Tg	39.0 - 46.0 °C	102 - 115 °F	UV Postcure; ASTM E1545-00

Optical Properties	Metric	English	Comments
Refractive Index	1.512 - 1.515	1.512 - 1.515	UV Postcure; ASTM D542
Transmission, Visible	90 %	90 %	Clear, thickness not reported

Electrical Properties	Metric	English	Comments
Dielectric Constant	3.4 - 3.5	3.4 - 3.5	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	UV Postcure; ASTM D150-98
	3.7 - 3.9	3.7 - 3.9	
	@Frequency 1000 Hz	@Frequency 1000 Hz	UV Postcure; ASTM D150-98
	3.9 - 4.1	3.9 - 4.1	
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	UV Postcure; ASTM D150-98
Dielectric Strength	15.4 - 16.3 kV/mm	391 - 414 kV/in	UV Postcure; ASTM D149-97A

Descriptive Properties	Value	Comments
Appearance	Optically clear	
DP (mils)	6.5	Slope of cure-depth vs. ln (E) curve
E10 (mJ/cm2)	54	exposure that gives 0.254 mm (0.010 inch) thickness
Ec (mJ/cm2)	11.5	Critical Exposure

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China