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Somos Stereolithography Materials Selector Guide: Applications

Application		HeCd Laser 325 nm	All Systems with Solid State Lasers 355 nm
Functional Parts Thermoplastic-like modulus, durable and suitable for snap-fits	PE - like	<i>Somos 8110</i>	<i>Somos 8120</i>
	PP - like	<i>Somos 9110</i>	<i>Somos 9120, Somos 9420</i>
	ABS - like	<i>Somos WaterShed XC 11112</i>	<i>Somos WaterShed XC 11122, Somos 14120, Somos NeXt LV Grey, Somos ProtoGen 18120/18420/18920</i>
	High Temperature	<i>Somos ProtoTherm 12110</i>	<i>Somos ProtoGen 18120/18420/18920, Somos ProtoTherm 12120, Somos NanoForm 15120</i>
Master Patterns Highly accurate and durable	<i>Somos WaterShed XC 11112</i> <i>Somos ProtoTherm 12110</i>	<i>Somos WaterShed XC 11122, Somos WaterClear Ultra 10122, Somos 14120, Somos ProtoGen 18120/18920, Somos ProtoTherm 12120, Somos NanoForm 15120, Somos NeXt, Somos LV Grey</i>	
Clear Parts Automotive lens, light pipes	<i>Somos WaterShed XC 11112</i>	<i>Somos WaterClear Ultra 10122, Somos WaterShed XC 11122</i>	
Investment Casting Models Highly accurate, low ash, antimony-free	<i>Somos WaterShed XC 11112</i>	<i>Somos WaterShed XC 11122, Somos ProtoCast 19122</i>	
Wind Tunnel Models Very rigid, strong and accurate Aerospace, automotive	<i>Somos ProtoTherm 12110</i>	<i>Somos WaterShed XC 11122, Somos ProtoTherm 12120, Somos NanoForm 15120</i>	
Medical High resolution, high accuracy, dimensional stability	<i>Somos ProtoTherm 12110,</i> <i>Somos WaterShed 11112</i>	<i>Somos NanoForm 15120, Somos ProtoGen 18120/18420/18920, Somos ProtoTherm 12120, Somos WaterShed XC 11122, Somos BioClear</i>	
Injection Molds Rapid tooling		<i>Somos NanoForm 15120</i>	
MC² Metal-clad composite, plating		<i>Somos ProtoTherm 12120, Somos NanoForm 15120, Somos ProtoGen 18120/18420/18920</i>	



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Somos Stereolithography Material Selector Guide: Property Summary



Material	Benefits/Type	Appearance	Viscosity cps@30°C	Photospeed E ₁₀ mJ/cm ²	Tensile Modules MPa	Tensile Strength MPa	Elongation at Break %	Impact Notch Izod J/cm	HDT@.46MPa, °C, UV (+TCP)
Somos 8110/8120	Flexible, PE-like	Translucent	600/600	40/35	317/690	26.0/26.0	27.0/27.0	0.87/0.59	54/54
Somos 9110/9120	All-Purpose, PP-like	Translucent	230/450	55/65	1,590/1,350	31.0/31.0	18.0/21.0	0.55/0.51	50/57
Somos 9420	Robust, PP-like	White	475	95	700	18.5	28.0	0.46	49
Somos Prototherm 12110/12120	High Temp Tolerant, ABS-like	Clear, Red	410/550	75/63	3,430/3,520	57.6/70.2	5.0/4.0	0.12/0.12	53(155)/56(126)
Somos 14120	All-Purpose, ABS-like	White	240	64	2,460	45.7	7.9	0.24	53
Somos NanoForm 15120	Accurate Proto Composite	Gray	570	112	5,000	48.0	2.1	0.15	66(269)
Somos ProtoGen 18120	All-Purpose, Tunable, ABS-like	Translucent	300	57	2,680	53.3	8.0	0.20	57(95)
Somos ProtoGen 18420	All-Purpose, Tunable, ABS-like	White	350	67	2,250	43.0	12.0	0.21	55(95)
Somos ProtoGen 18920	All-Purpose, Tunable, ABS-like	Gray	350	76	2,210	47.2	16.0	0.23	59(97)
Somos ProtoCast 19122	Low ash, Antimony-free for Investment Casting	Clear, Peach	100	85	2,100	44.9	6.1	0.23	59
Somos WaterShed XC 11112/11122	Clear, Water-Resistant, ABS-like	Clear, Near Colorless	150/260	72/54	2,640/2,765	48.3/50.4	25.0/16.0	0.19/0.3	50/50
Somos WaterClear Ultra 10122	Optically Clear, Colorless	Clear, Colorless	165	46	2,880	55.5	8.0	0.25	47(60)
Somos NeXt LV Grey	Low Viscosity, Water Resistant, High Temp Tolerant	Opaque Grey	480	101	3,125	63.0	5.9	0.33	55
Somos BioClear	Clear, Water Resistant ABS-like, Medical grade	Clear, Colorless	260	54	2,765	50.4	16.0	0.3	50