

## Styrolution Styrolux 3G33 SBC

Category : Polymer , Thermoplastic , Styrene-Butadiene , Styrene-Butadiene Copolymer, SBC

### Material Notes:

Styrolux 3G33 is a thermoplastic styrene-butadiene block copolymer which is suitable for injection molding, extrusion and thermoforming. It offers an outstanding combination of crystal clarity and good toughness. Information provided by STYROLUTION, which is a joint venture between BASF and INEOS.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Styrolution-Styrolux-3G33-SBC.php](http://www.lookpolymers.com/polymer_Styrolution-Styrolux-3G33-SBC.php)

Physical Properties	Metric	English	Comments
Density	1.02 g/cc	0.0368 lb/in <sup>3</sup>	ISO 1183
Water Absorption	0.070 %	0.070 %	ISO 62
Moisture Absorption at Equilibrium	0.070 %	0.070 %	23 <sup>o</sup> C/50% R.H.; ISO 62
Linear Mold Shrinkage	0.0065 cm/cm	0.0065 in/in	ASTM Data; MD
Melt Flow	11 g/10 min	11 g/10 min	ASTM Test
	@Load 5.00 kg, Temperature 200 <sup>o</sup> C	@Load 11.0 lb, Temperature 392 <sup>o</sup> F	
	12 g/10 min	12 g/10 min	ISO 1133
	@Load 5.00 kg, Temperature 200 <sup>o</sup> C	@Load 11.0 lb, Temperature 392 <sup>o</sup> F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	68	68	ASTM Test
Tensile Strength, Yield	28.3 MPa	4100 psi	2 in/min; ASTM Test
	32.0 MPa	4640 psi	50mm/min; ISO 527
Elongation at Break	40 %	40 %	50mm/min, Nominal strain; ISO 527
	100 %	100 %	2 in/min; ASTM Test
	100 %	100 %	0.2 in/min; ASTM Test
Elongation at Yield	2.0 %	2.0 %	50mm/min; ISO 527
Tensile Modulus	1.60 GPa	232 ksi	1mm/min; ISO 527
	1.72 GPa	249 ksi	2 in/min; ASTM Test
Flexural Strength	31.0 MPa	4500 psi	ASTM Test

Mechanical Properties	45.0 MPa Metric	6530 psi English	ISO Data Comments
Flexural Modulus	1.48 GPa	215 ksi	ASTM Test
	1.75 GPa	254 ksi	ISO Data
Izod Impact, Notched	0.270 J/cm @Thickness 3.17 mm	0.506 ft-lb/in @Thickness 0.125 in	ASTM Test
Izod Impact, Notched (ISO)	3.50 kJ/m <sup>2</sup>	1.67 ft-lb/in <sup>2</sup>	ISO Test
Charpy Impact Unnotched	10.0 J/cm <sup>2</sup>	47.6 ft-lb/in <sup>2</sup>	ISO 179
	3.00 J/cm <sup>2</sup> @Temperature -30.0 °C	14.3 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 179
Charpy Impact, Notched	0.400 J/cm <sup>2</sup>	1.90 ft-lb/in <sup>2</sup>	ISO 179
Dart Drop, Total Energy	5.00 J	3.69 ft-lb	ASTM Test

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	75.0 Åµm/m-Å°C	41.7 Åµin/in-Å°F	ISO 11359
CTE, linear, Transverse to Flow	72.0 Åµm/m-Å°C	40.0 Åµin/in-Å°F	ASTM Test
Deflection Temperature at 0.46 MPa (66 psi)	77.0 Å°C	171 Å°F	ISO 75
	82.0 Å°C	180 Å°F	ASTM Test
Deflection Temperature at 1.8 MPa (264 psi)	63.0 Å°C	145 Å°F	ISO 75
	66.0 Å°C	151 Å°F	ASTM Test
Vicat Softening Point	56.0 Å°C	133 Å°F	(50 Å°C/h / 50N) - B/50; ISO 306
	91.0 Å°C	196 Å°F	Rate "B" Loading 1 (120 degC/h 10N); ASTM Test
Flammability, UL94	HB @Thickness 1.60 mm	HB @Thickness 0.0630 in	
	HB @Thickness 3.20 mm	HB @Thickness 0.126 in	

Optical Properties	Metric	English	Comments
Refractive Index	1.573	1.573	ASTM Test
	0.21 %	0.21 %	

Haze Optical Properties	Metric @ Thickness 3.20 mm	English @ Thickness 0.126 in	ASTM Test Comments
Transmission, Visible	92 %	92 %	

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00 \times 10^{13}$ ohm-cm	$\geq 1.00 \times 10^{13}$ ohm-cm	IEC 60093
Surface Resistance	$\geq 1.00 \times 10^{14}$ ohm	$\geq 1.00 \times 10^{14}$ ohm	IEC 60093
Dielectric Constant	2.5	2.5	ASTM Data
	@Frequency 1e+9 Hz	@Frequency 1e+9 Hz	
	2.5	2.5	ASTM Data
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	2.5	2.5	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	2.5	2.5	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	140 kV/mm	3560 kV/in	IEC 60243-1
Dissipation Factor	0.00030	0.00030	ASTM Data
	@Frequency 1e+9 Hz	@Frequency 1e+9 Hz	
	0.00080	0.00080	ASTM Data
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	190 - 230 Â°C	374 - 446 Â°F	Extrusion
	180 - 250 Â°C	356 - 482 Â°F	Injection Molding
	230 Â°C	446 Â°F	Injection molding
Mold Temperature	30.0 - 50.0 Â°C	86.0 - 122 Â°F	Injection Molding
Injection Velocity	50.0 mm/sec	1.97 in/sec	Injection molding

Descriptive Properties	Value	Comments
Color	Clear	

Descriptive Properties Commercial Status	Value Active America	Comments
FDA	Yes	
Form	Yes	
Impact Modified	Yes	
NSF Std. 51	No	
NSF Std. 61	No	
Primary Processing Technique	Injection Molding	
Processing	Film Extrusion	
	Injection Molding	
UL.UL-C	No	

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