

Styrolution Styrolux 656C SBC

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

Material Notes:

Styrolux 656C is a high flow thermoplastic injection molding styrene-butadiene block copolymer. It has crystal clarity, good toughness, good stiffness, and warpage resistance for general molding applications. It is also suitable for extrusion and thermoforming applications. 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-656C-SBC.php

Physical Properties	Metric	English	Comments
Density	1.02 g/cc	0.0368 lb/in ³	ISO 1183
Water Absorption	0.070 %	0.070 %	ISO 62
Moisture Absorption at Equilibrium	0.070 %	0.070 %	23 ^o C/50% R.H.; ISO 62
Linear Mold Shrinkage	0.0065 cm/cm	0.0065 in/in	ASTM Data; MD
Melt Flow	15 g/10 min	15 g/10 min	ASTM Test
	@Load 5.00 kg, Temperature 200 ^o C	@Load 11.0 lb, Temperature 392 ^o F	
	16 g/10 min	16 g/10 min	ISO 1133
	@Load 5.00 kg, Temperature 200 ^o C	@Load 11.0 lb, Temperature 392 ^o F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	72	72	ASTM Test
Tensile Strength, Yield	28.0 MPa	4060 psi	2 in/min; ASTM Test
	35.0 MPa	5080 psi	50mm/min; ISO 527
Elongation at Break	40 %	40 %	50mm/min, Nominal strain; ISO 527
	40 %	40 %	2 in/min; ASTM Test
	40 %	40 %	0.2 in/min; ASTM Test
Elongation at Yield	2.4 %	2.4 %	50mm/min; ISO 527
Tensile Modulus	1.68 GPa	244 ksi	2 in/min; ASTM Test
	1.80 GPa	261 ksi	1mm/min; ISO 527
Flexural Strength	33.0 MPa	4790 psi	ASTM Test

Mechanical Properties	48.0 MPa Metric	6960 psi English	ISO Data Comments
Flexural Modulus	1.50 GPa	218 ksi	ASTM Test
	1.90 GPa	276 ksi	ISO Data
Izod Impact, Notched (ISO)	3.50 kJ/m ²	1.67 ft-lb/in ²	ISO Test
Charpy Impact Unnotched	3.00 J/cm ²	14.3 ft-lb/in ²	ISO 179
	3.00 J/cm ²	14.3 ft-lb/in ²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.400 J/cm ²	1.90 ft-lb/in ²	ISO 179
	0.300 J/cm ²	1.43 ft-lb/in ²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Dart Drop, Total Energy	0.600 J	0.443 ft-lb	ASTM Test
Impact Test	0.600 J	0.443 ft-lb	Instrumented Dart Impact (Energy at Peak Force); ASTM Test
Tensile Creep Modulus, 1 hour	1550 MPa	225000 psi	ISO 899
Tensile Creep Modulus, 1000 hours	1050 MPa	152000 psi	ISO 899

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
	81.0 Å°C	178 Å°F	ASTM Test
Deflection Temperature at 1.8 MPa (264 psi)	67.0 Å°C	153 Å°F	ASTM Test
	67.0 Å°C	153 Å°F	ISO 75
Vicat Softening Point	65.0 Å°C	149 Å°F	(50 Å°C/h / 50N) - B/50; ISO 306
	90.0 Å°C	194 Å°F	Rate "B" Loading 1 (120 degC/h 10N); ASTM Test
Flammability, UL94	HB	HB	
	@Thickness 1.57 mm	@Thickness 0.0618 in	
	HB	HB	

Thermal Properties	@Thickness 3.20 mm Metric	@Thickness 0.126 in English	Comments
Optical Properties	Metric	English	Comments
Refractive Index	1.58	1.58	ASTM Test
Transmission, Visible	90 %	90 %	

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	
	0.00030	0.00030	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.00080	0.00080	ASTM Data
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.00080	0.00080	IEC 60250
	@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	180 - 250 Â°C	356 - 482 Â°F	Injection Molding

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

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