

Styrolution Styrolux 3G55 SBC

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

Material Notes:

Styrolux 3G55 is a thermoplastic styrene-butadiene block copolymer which is suitable for film and sheet extrusion, and thermoforming. It offers an outstanding combination of crystal clarity and excellent toughness. It was designed to provide greater GPPS acceptance than conventional grades. 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-3G55-SBC.php

Physical Properties	Metric	English	Comments
Density	1.01 g/cc	0.0365 lb/in ³	ISO 1183
Water Absorption	0.070 %	0.070 %	ISO 62
Moisture Absorption at Equilibrium	0.070 %	0.070 %	23°C/50% R.H.; ISO 62
Moisture Vapor Transmission	1.70 cc-mm/m ² -24hr-atm	4.32 cc-mil/100 in ² -24hr-atm	100% RH; ASTM Test
Oxygen Transmission Rate	500 cc/m ² /day	32.2 cc/100 in ² /day	0% RH; ASTM Test
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 °C	@Load 11.0 lb, Temperature 392 °F	
	16 g/10 min	16 g/10 min	ISO 1133
	@Load 5.00 kg, Temperature 200 °C	@Load 11.0 lb, Temperature 392 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	16.0 MPa	2320 psi	2 in/min; ASTM Test
	20.0 MPa	2900 psi	50mm/min; ISO 527
Elongation at Break	>= 50 %	>= 50 %	50mm/min, Nominal strain; ISO 527
	>= 300 %	>= 300 %	2 in/min; ASTM Test
	300 %	300 %	0.2 in/min; ASTM Test
Elongation at Yield	2.0 %	2.0 %	50mm/min; ISO 527
Tensile Modulus	0.900 GPa	131 ksi	1mm/min; ISO 527
	1.17 GPa	170 ksi	2 in/min; ASTM Test

Mechanical Properties	Metric	English	Comments
	18.0 MPa	2610 psi	ISO Data
Flexural Modulus	0.760 GPa	110 ksi	ASTM Test
	0.900 GPa	131 ksi	ISO Data
Secant Modulus, MD	0.835 GPa	121 ksi	ASTM Test
Secant Modulus, TD	0.685 GPa	99.4 ksi	ASTM Test
Izod Impact, Notched	NB @Thickness 3.17 mm	NB @Thickness 0.125 in	ASTM Test
Izod Impact, Notched (ISO)	5.00 kJ/mÂ²	2.38 ft-lb/inÂ²	ISO Test
Charpy Impact Unnotched	NB	NB	ISO 179
	8.70 J/cmÂ² @Temperature -30.0 Â°C	41.4 ft-lb/inÂ² @Temperature -22.0 Â°F	ISO 179
Charpy Impact, Notched	8.50 J/cmÂ²	40.5 ft-lb/inÂ²	ISO 179
	0.200 J/cmÂ² @Temperature -30.0 Â°C	0.952 ft-lb/inÂ² @Temperature -22.0 Â°F	ISO 179
Dart Drop, Total Energy	21.0 J	15.5 ft-lb	ASTM Test
Impact Test	10.0 J	7.38 ft-lb	Instrumented Dart Impact (Energy at Peak Force); ASTM Test
Elmendorf Tear Strength MD	830 g	830 g	ASTM Data
Elmendorf Tear Strength TD	339 g	339 g	ASTM Data
Film Tensile Strength at Break, MD	310 MPa	45000 psi	ASTM Data
Film Tensile Strength at Break, TD	350 MPa	50800 psi	ASTM Data

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	75.0 Âµm/m-Â°C	41.7 Âµin/in-Â°F	ISO 11359
CTE, linear, Transverse to Flow	72.0 Âµm/m-Â°C	40.0 Âµin/in-Â°F	ASTM Test
Deflection Temperature at 0.46 MPa (66 psi)	62.0 Â°C	144 Â°F	ISO 75
	67.0 Â°C	153 Â°F	ASTM Test
Deflection Temperature at 1.8 MPa			ASTM Test

(264 psi) Thermal Properties	46.0 Â°C Metric	115 Â°F English	Comments
	51.0 Â°C	124 Â°F	ISO 75
Vicat Softening Point	35.0 Â°C	95.0 Â°F	(50 Â°C/h / 50N) - B/50; ISO 306
	72.0 Â°C	162 Â°F	Rate "B" Loading 1 (120 degC/h 10N); ASTM Test
Flammability, UL94	HB	HB	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	
	@Thickness 3.20 mm	@Thickness 0.126 in	

Optical Properties	Metric	English	Comments
Refractive Index	1.57	1.57	ASTM Test
Haze	1.6 %	1.6 %	ASTM Test
	@Thickness 3.20 mm	@Thickness 0.126 in	
Transmission, Visible	90 %	90 %	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+13 ohm-cm	>= 1.00e+13 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 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	80.0 kV/mm	2030 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	

Electrical Properties	Metric @Frequency 100 Hz	English @Frequency 100 Hz	IEC 60250 Comments
	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	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	
Commercial Status	Active America	
FDA	Yes	
Form	Yes	
Impact Modified	Yes	
NSF Std. 51	No	
NSF Std. 61	No	
Primary Processing Technique	Extrusion	
Processing	Blow Molding	
	Film Extrusion	
	Injection Molding	
	Other Extrusion	
	Sheet Extrusion	

UL-UL-C Descriptive Properties	No Value	Comments
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