

Styrolution Styrolux[®] 684 D SBC

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

Material Notes:

Description: Styrolux[®] 684 D is a clear styrene-butadiene copolymer (SBC) used in injection molding for parts with enhanced toughness as well as in sheet and film extrusion and blow molding. Parts made of Styrolux[®] 684 D reveal excellent printability. Major applications include: food and non-food packagings, transparent containers and cups for cold beverages, thermoformed lids, thin film with high gas and water vapor permeability, toys and boxes. 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-684-D-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% RH; ISO 62
Melt Flow	11.11 g/10 min	11.11 g/10 min	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	68	68	ISO 868
Tensile Strength, Yield	26.0 MPa	3770 psi	ISO 527-1/-2
Elongation at Break	160 %	160 %	Nominal; ISO 527-1/-2
Elongation at Yield	2.3 %	2.3 %	ISO 527-1/-2
Tensile Modulus	1.50 GPa	218 ksi	ISO 527-1/-2
Flexural Strength	40.0 MPa	5800 psi	ISO 178
Flexural Modulus	1.70 GPa	247 ksi	ASTM D790
Izod Impact, Notched	0.230 J/cm	0.431 ft-lb/in	ASTM D256
Izod Impact, Notched (ISO)	3.00 kJ/m ²	1.43 ft-lb/in ²	ISO 180/A
	@Temperature -30.0 [°] C	@Temperature -22.0 [°] F	
Charpy Impact Unnotched	4.00 kJ/m ²	1.90 ft-lb/in ²	ISO 180/A
	@Temperature 23.0 [°] C	@Temperature 73.4 [°] F	
Charpy Impact Notched	<= NB	<= NB	ISO 179/1eU
Charpy Impact, Notched	0.400 J/cm ²	1.90 ft-lb/in ²	ISO 179/1eA

Mechanical Properties	Metric	English	Comments
Thermal Properties			
	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	75.0 Å°C	167 Å°F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	65.0 Å°C	149 Å°F	ISO 75-1/-2
Vicat Softening Point	59.0 Å°C	138 Å°F	VST/B/50; ISO 306
	83.0 Å°C	181 Å°F	VST/A/50; ISO 306
Flammability, UL94	HB	HB	IEC 60695-11-10
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	HB	HB	IEC 60695-11-10
	@Thickness 3.18 mm	@Thickness 0.125 in	

Optical Properties	Metric	English	Comments
Haze	1.5 %	1.5 %	DIN 5036-3
Transmission, Visible	90 %	90 %	transparent; thickness not quantified

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	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	2.5	2.5	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	140 kV/mm	3560 kV/in	K20/P50; IEC 60243-1

Processing Properties	Metric	English	Comments
Melt Temperature	190 - 230 Å°C	374 - 446 Å°F	Flat film extrusion
	180 - 250 Å°C	356 - 482 Å°F	Injection molding
Mold Temperature	30.0 - 50.0 Å°C	86.0 - 122 Å°F	Injection Molding

Descriptive Properties	Value	Comments
Color	Crystal Clear	

Descriptive Properties <i>Commercial Status</i>	Value <i>Europe</i>	Comments
Primary Processing Technique	Injection Molding, Extrusion, and Blow Molding	
Transparency	0.89	d=2mm, DIN 5036-3

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