Styrolux 684D

Styrene Butadiene Copolymer (SBC)

STYROLUTION
Driving Success. Together.

Technical Datasheet

DESCRIPTION

Styrolux® 684D 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® 684D reveal excellent printability.

FEATURES

- High clarity
- Improved toughness
- Good printability
- High permeability to gases and water vapor
- Regulatory compliant

APPLICATIONS

- Food packaging
- Container, cups and lids
- Toys
- Extruded sheet and thin film
- Medical devices

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm³/10 min	11
Mechanical Properties			
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m²	4
Izod Notched Impact Strength, -30 °C	ISO 180/A	kJ/m²	3
Charpy Notched Impact Strength, 23° C	ISO 179	kJ/m²	4
Charpy Unnotched, 23° C	ISO 179	kJ/m²	No Break
Tensile Stress at Yield, 23° C	ISO 527	MPa	26
Tensile Strain at Yield, 23° C	ISO 527	%	2.3
Tensile Modulus	ISO 527	MPa	1500
Tensile Creep Modulus (1000h)	ISO 899	MPa	790
Tensile Creep Modulus (1h)	ISO 899	MPa	1300
Nominal Strain at Break, 23 °C	ISO 527	%	160
Elongation at Break (MD)	ISO 527	%	160
Flexural Strength	ISO 178	MPa	40
Flexural Modulus	ISO 178	MPa	1700
Hardness, Shore D	ISO 868	-	68
Thermal Properties			

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Property, Test Condition	Standard	Unit	Values
Vicat Softening Temperature VST/B/50 (50°C/h, 50N)	ISO 306	°C	59
Vicat Softening Temperature, VST/A/50 (50°C/h, 10N)	ISO 306	°C	83
Heat Deflection Temperature A; (annealed, 1.8 MPa)	ISO 75	°C	65
Heat Deflection Temperature B; (annealed, 0.45 MPa)	ISO 75	°C	75
Coefficient of Linear Thermal Expansion	ISO 11359	10^(-6)/°C	60 - 90
Electrical Properties			
Dielectric Constant (100 Hz)	IEC 60250	-	2.5
Dissipation Factor (100 Hz)	IEC 60250	10^(-4)	3
Dissipation Factor (1 MHz)	IEC 60250	10^(-4)	8
Volume Resistivity	IEC 60093	Ohm*m	>1E13
Surface Resistivity	IEC 60093	Ohm	1E15
Comparative Tracking Index	IEC 60112	V	600
Optical Properties			
Refractive Index, Sodium D Line	ISO 489	-	1.575
Light Transmission at 550 nm	ASTM D 1003	%	89
Haze	ASTM D 1003	%	1.5
Other Properties			
Density	ISO 1183	kg/m³	1010
Water Absorption, Saturated at 23°C	ISO 62	%	0.07
Processing			
Linear Mold Shrinkage	ISO 294-4	%	0.3 - 1
Melt Temperature Range	ISO 294	°C	180 to 250
Mold Temperature Range	ISO 294	°C	30 to 50

Typical values for uncolored products

SUPPLY FORM

Styrolux is supplied in pellet form and should be kept in its original containers in cool, dry place. Avoid direct exposure to sunlight. Styrolux® can be stored in silos at temperatures well below 45 °C.

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PRODUCT SAFETY

During processing of Styrolux® small quantities of styrene monomer may be released into the atmosphere. At styrene vapor concentrations below 20 ppm no negative effects on health are expected. In our experience, the concentration of styrene does not exceed 1 ppm in well ventilated workplaces - that is where five to eight air changes per hour are made. For safety information please refer to our Material Safety Data Sheet for this product.

DISCLAIMER

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