

Styrolux 684D

Styrene Butadiene Copolymer (SBC)

TECHNICAL DATASHEET

DESCRIPTION

The product line Styrolux® comprises clear styrene butadiene copolymers. The grades have in general an intrinsic toughness, are easy to process and work as modifiers and compatibilizers not only in polystyrene but in many other polymers, e.g. polyolefins. For all Styrolux® grades food contact statements are available upon request. Styrolux® 684D is a general purpose grade and can be used in injection molding for parts with enhanced toughness, in sheet and film extrusion as well as blow molding. Parts made of 684D reveal excellent printability.

FEATURES

- Easy processing
- Well extrudable
- Good printability
- Sterilisable(ETO,NO2,Irradiation)
- Transparency

APPLICATIONS

- Food contact applications
- Medical devices
- Rigid packaging
- Toys, sports & leisure

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Flow Rate, 200 °C/5 kg	ASTM D 1238	g/10 min	10
Mechanical Properties			
Izod Notched Impact Strength, 23 °C (73 °F)	ASTM D 256	ft-lb/in	0.8
Instrumented Dart Impact (total energy)	ASTM D 3763	in-lbs	196
Instrumented Dart Impact (Peak force)	ASTM D 3763	in-lbs	98
Tensile Stress at Yield, 23 °C	ASTM D 638	psi	3800
Elongation, Failure	ASTM D 638	%	250
Tensile Modulus	ASTM D 638	psi x 10 ³	190
Tensile Modulus (MD)	ASTM D 882	psi	191000
Tensile Modulus (TD)	ASTM D 882	psi	171000
Elongation at Break (MD)	ASTM D 882		260
Elongation at Break (TD)	ASTM D 882	%	100
Flexural Strength, 23 °C	ASTM D 790		4500
Flexural Modulus, 23 °C	ASTM D 790	psi x 10 ³	170
Hardness, Shore D	ASTM D 2240	-	68

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Property, Test Condition	Standard	Unit	Values
Elemendorf Tear (MD)	ASTM D 1922	lbs	0.56
Elemendorf Tear (TD)	ASTM D 1922	lbs	0.52
Thermal Properties			
Vicat Softening Temperature, B/1 (120 °C/h, 10N)	ASTM D 1525	°F	186
DTUL @ 264 psi - Unannealed	ASTM D 648	°F	158
DTUL @ 66 psi - Unannealed	ASTM D 648	°F	170
Coefficient of Linear Thermal Expansion	ASTM D 696	10 ⁻⁴ /°F	0.72
Electrical Properties			
Dielectric Constant at 106 CPS (1000000 Hz, 0,0394 in)	ASTM D 150	-	2.5
Volume Resistivity	ASTM D 257	-	>10 ¹³
Surface Resistivity	ASTM D 257	-	>10 ¹⁴
Optical Properties			
Refractive Index, Sodium D Line	ASTM D 542	-	1.575
Light Transmission at 550 nm	ASTM D 1003	%	90
Haze	ASTM D 1003	%	1.5
Other Properties			
Density (ASTM)	ASTM D 792	g/cm ³	1.01
Water Absorption, Saturated at 23 °C	ASTM D 570	%	0.07
Oxygen Transmission Rate (23 °C/0% RH)	ASTM D 3985	cc/100in ² /day	8060
Water Vapor Transmission Rate (WVTR) (23 °C/0% to 85% RH gradient)	ASTM F1249-06	g/100in ² /day	44.9
Processing			
Linear Mold Shrinkage	ASTM D 955	in/in	0.0065

Typical values for uncolored products

Please note that all processing data stated are only indicative and may vary depending on the individual processing complexities.

Please consult our local sales or technical representatives for details.

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.

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

The above mentioned data are accurate to the best of our knowledge. They are based upon reputable labs and industry standard testing methods. These are only typical values and actual product specification may deviate at industrial range. Therefore, no data in this technical data sheet shall constitute a warranty or representation regarding product features, fitness of the product for a specific purpose or application or its processability. INEOS Styrolution disclaims all liability in connection therewith. The customer himself is required to verify whether or not the product is suitable for the further processing or application intended and whether or not the product complies with the relevant statutory requirements. Unless explicitly and individually otherwise agreed in writing, INEOS Styrolution's sole and exclusive liability with respect to its products is set forth in INEOS Styrolution's General Terms and Conditions for Sale.
