

# 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
<b>Rheological Properties</b>			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm <sup>3</sup> /10 min	11
<b>Mechanical Properties</b>			
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m <sup>2</sup>	2
Charpy Unnotched, 23 °C	ISO 179/1eU	kJ/m <sup>2</sup>	> 80
Tensile Modulus	ISO 527	MPa	1400
Tensile Stress at Yield, 23 °C	ISO 527	MPa	26
Tensile Strain at Yield, 23 °C	ISO 527	%	2.3
Tensile Stress at Break, 23 °C	ISO 527	MPa	> 21
Tensile Strain at Break, 23 °C	ISO 527	%	> 160
Nominal Strain at Break, 23 °C	ISO 527	%	160
Flexural Modulus, 23 °C	ISO 178	MPa	1300
Flexural Strength, 23 °C	ISO 178	MPa	40
Hardness, Shore D	ISO 868	-	63
<b>Thermal Properties</b>			
Vicat Softening Temperature, B/2 (120 °C/h, 50N)	ASTM D 1525	°C	50

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Property, Test Condition	Standard	Unit	Values
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	59
Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa)	ISO 75	°C	73
Coefficient of Linear Thermal Expansion	ISO 11359	10 <sup>-6</sup> /°C	60 - 90
<b>Optical Properties</b>			
Refractive Index, Sodium D Line	ISO 489	-	1.575
Haze	ASTM D 1003	%	< 2
Light Transmission at 550 nm	ASTM D 1003	%	89
<b>Other Properties</b>			
Density	ISO 1183	kg/m <sup>3</sup>	1010
Water Absorption, Saturated at 23 °C	ISO 62	%	0.07
<b>Processing</b>			
Linear Mold Shrinkage	ISO 294-4	%	0.3 - 1
Melt Temperature Range	ISO 294	°C	180 - 250
Mold Temperature Range	ISO 294	°C	30 - 50