INEOS STYROLUTION

ISCC International Sustainability & Carbon Certification

Styrolux ECO 684D BC100

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® ECO 684D BC100 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. Styrolux ECO 684D BC100 is an ISCC compliant product leading to a substitution of fossil source styrene and butadiene with ISCC certified bio-attributed styrene and bio-attributed butadiene. This product exhibits a neutral to even negative carbon footprint.

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
Sustainability Properties			
Carbon Footprint Reduction vs Fossil-Based (3rd party validated)	ISO 14044	%	120
Attributed Content of ISCC-certified Bio-Circular Sources	-	%	100
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm³/10 min	11
Mechanical Properties			
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m²	2
Charpy Unnotched, 23 °C	ISO 179/1eU	kJ/m²	> 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

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Property, Test Condition	Standard	Unit	Values
Flexural Strength, 23 °C	ISO 178	MPa	40
Hardness, Shore D	ISO 868	-	63
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	50
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^{-6}/°C	60 - 90
Optical Properties			
Refractive Index, Sodium D Line	ISO 489	-	1.58
Light Transmission at 550 nm	ASTM D 1003	%	89
Haze	ASTM D 1003	%	< 2
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 - 250
Mold Temperature Range	ISO 294	°C	30 - 50