

Styroxflex ECO 2G66 BC100

Styrene Butadiene Copolymer (SBC)

TECHNICAL DATASHEET

DESCRIPTION

The product line Styroxflex® comprises thermoplastic elastomers from clear styrene butadiene copolymers (S-TPE), which are more polar than comparable SBS or SEBS grades. The grades provide a very high puncture resistance to foils in multilayer applications and increase as additive the toughness of compounds. They are easy to process and work as modifiers and compatibilizers in many polymers, e.g. polyolefins. For all Styroxflex® grades food contact statements are available upon request. Styroxflex® ECO 2G66 BC100 is suitable for extrusion (blown and cast film) and injection molding and offers a combination of high resilience and toughness with good transparency and process stability. 2G66 is also offered for medical applications and is Gamma, X-ray & ETO sterilizable. Styroxflex ECO 2G66 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
- Puncture resistance
- Sterilizable (ETO, NO₂, Irradiation)
- Toughness

APPLICATIONS

- Food contact applications
- Medical devices
- Flexible packaging
- Flexible medical applications, e.g. tubes
- Impact-modified compounds

Property, Test Condition	Standard	Unit	Values
Sustainability Properties			
Carbon Footprint Reduction vs Fossil-Based (3rd party validated)	ISO 14044	%	126
Attributed Content of ISCC-certified Bio-Circular Sources	-	%	100
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm ³ /10 min	13
Mechanical Properties			
Charpy Notched Impact Strength, 23 °C	ISO 179/1eA	kJ/m ²	NB
Charpy Notched Impact Strength, -30 °C	ISO 179/1eA	kJ/m ²	2
Tensile Modulus	ISO 527	MPa	70
Tensile Stress at Yield, 23 °C	ISO 527	MPa	3
Tensile Strain at Yield, 23 °C	ISO 527	%	50
Tensile Stress at Break, 23 °C	ISO 527	MPa	9.00
Tensile Strain at Break, 23 °C	ISO 527	%	450.00
Nominal Strain at Break, 23 °C	ISO 527	%	> 500

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Property, Test Condition	Standard	Unit	Values
Flexural Modulus, 23 °C	ISO 178	MPa	60
Flexural Strength, 23 °C	ISO 178	MPa	2
Hardness, Shore D	ISO 868	-	30
Hardness, Shore A	ISO 868	-	86
Elemendorf Tear (MD)	-	g	660
Elemendorf Tear (TD)	-	g	816
Thermal Properties			
Vicat Softening Temperature, VST/A/50 (10N, 50 °C/h)	ISO 306	°C	39
Optical Properties			
Refractive Index, Sodium D Line	ISO 489	-	1.57
Haze	ASTM D 1003	%	10
Light Transmission at 550 nm	ASTM D 1003	%	80
Other Properties			
Density	ISO 1183	kg/m³	998
Water Absorption, Saturated at 23 °C	ISO 62	%	0.07
Processing			
Melt Temperature Range	ISO 294	°C	170 - 240
Mold Temperature Range	ISO 294	°C	30 - 50

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

Styroxflex® ECO is supplied in pellet form and should be kept in its original containers in cool, dry place. Avoid direct exposure to sunlight. The pellets may cluster if compressed or stored at elevated temperatures; however, granule clusters are easily broken up mechanically.

PRODUCT SAFETY

During processing of Styroxflex® ECO 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

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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.