INEOS STYROLUTION

ISCC International Sustainability & Carbon Certification

Styroflex ECO 2G66 BC60

Styrene Butadiene Copolymer (SBC)

TECHNICAL DATASHEET

DESCRIPTION

The product line Styroflex® 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 Styroflex® grades food contact statements are available upon request. Styroflex® ECO 2G66 BC60 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. Styroflex ECO 2G66 BC60 is an ISCC compliant product leading to a substitution of fossil source styrene with ISCC certified bio-attributed styrene.

FEATURES

- Easy processing
- Well extrudable
- Puncture resistance
- Sterilisable(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	%	77
Attributed Content of ISCC-certified Bio-Circular Sources (min.)	-	%	60
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm³/10 min	13
Mechanical Properties			
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m²	NB
Charpy Notched Impact Strength, -30 °C	ISO 179/1eA	kJ/m²	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