

Styreflex® ECO 2G66 BC100

SB

INEOS Styrolution

Styreflex® ECO 2G66 BC100 is a thermoplastic elastomer from clear styrene butadiene copolymers (S-TPE), which is more polar than comparable SBS or SEBS grades. The grade provides a very high puncture resistance to foils in multilayer applications and increases as additive the toughness of compounds. It is easy to process and works as modifier and compatibilizer in many polymers, e.g. polyolefins. For Styreflex® ECO 2G66 BC100 food contact statements are available upon request. Styreflex® 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. Styreflex® ECO 2G66 BC100 is also offered for medical applications and is Gamma, X-ray & ETO sterilizable. Styreflex® 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.

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	13	cm³/10min	ISO 1133
Temperature	200	°C	-
Load	5	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	70	MPa	ISO 527
Notched Impact Strength (Charpy), -30°C	2	kJ/m²	ISO 179/1eA
Flexural Modulus (23°C)	60	MPa	ISO 178
Flexural strength	2	MPa	ISO 178
Shore Hardness A (15s)	86	-	ISO 868

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Vicat softening temperature, 50°C/h 50N	39	°C	ISO 306

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	2.5	-	IEC 62631-2-1

Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	0.07	%	Sim. to ISO 62
Humidity absorption	0.07	%	Sim. to ISO 62
Density	998	kg/m³	ISO 1183

Film Properties	Value	Unit	Test Standard
ISO Data			
Elmendorf Tear Resistance, parallel	660	N	ISO 6383-2
Elmendorf Tear Resistance, normal	816	N	ISO 6383-2
Haze	10	-	ISO 14782

Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	890	kg/m³	-
Thermal Conductivity of Melt	0.19	W/(m K)	-
Spec. heat capacity of melt	2310	J/(kg K)	-
Ejection temperature	96	°C	-

Optical Properties	Value	Unit	Test Standard
ASTM Data			
Haze	10	%	ASTM D 1003
Light Transmittance	80	%	ASTM D 1003
Index of Refraction	1.57	-	ISO 489

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	50	°C	-
Pre-drying - Time	3 - 4	h	-
Melt temperature	170 - 240	°C	-

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Mold temperature	30 - 50	°C	-
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Processing Recommendation Extrusion	Value	Unit	Test Standard
Type of extrusion	blown	-	-
Melt temperature	170 - 190	°C	-
Type of extrusion	film	-	-
Melt temperature	170 - 240	°C	-

Characteristics

Processing

Injection Molding, Film Extrusion, Profile Extrusion, Transfer Molding, Blown Film Extrusion

Delivery form

Pellets

Special Characteristics

Impact modified, Transparent, Sterilizable, Ethylene Oxide (EtO) Sterilization, Gamma irradiation sterilization

Features

Blending Resin, Copolymer

Chemical Resistance

Radiation Resistance

Certifications

Contains renewable resources, Food approval, ISCC Plus

Applications

Medical, Packaging

Injection Molding

As a rule, the Styroflex® granules do not have to be pre-dried. However, in the event of unfavorable storage or transportation conditions involving severe temperature fluctuations, moisture can condense on the surface of the granules and this then has to be removed in a pre-drying step. The granules should be pre-dried in a dry-air dryer for 3 to 4 hours at a temperature of about 50 °C.

Film Extrusion

PROCESSING

Blown film, Melt temperature: 170 - 190 °C

Flat film, Melt temperature: 170 - 240 °C