

Styrolux® S
SB

INEOS Styrolution

Styrolux® S is a new developmental, clear styrene-butadiene copolymer (SBC) designed specifically for blending with Styrolux® T in order to enable high performance film extrusion and shrink film applications. As Styrolux® S is blended with Styrolux® T it increases the stiffness of the film and improves the storage stability of film reels (reduced natural shrinkage).

Processing/Physical Characteristics	Value	Unit	Test Standard
ASTM Data			
Melt Flow Index	10	g/10min	ASTM D 1238
Temperature	200	°C	-
Load	5	kg	-

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	11	cm³/10min	ISO 1133
Temperature	200	°C	-
Load	5	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2900	MPa	ISO 527
Yield stress	45	MPa	ISO 527
Yield strain	2	%	ISO 527
Nominal strain at break	2.5	%	ISO 527
Impact Strength (Charpy), +23°C	14	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	1	kJ/m²	ISO 179/1eA
Flexural Modulus (23°C)	3000	MPa	ISO 178
ASTM Data			
Tensile Modulus	3241	MPa	ASTM D 638
Tensile Strength at Yield	43	MPa	ASTM D 638
Elongation at Yield	2	%	ASTM D 638
Elongation at Break	2.5	%	ASTM D 638
Flexural Modulus	2620	MPa	ASTM D 790
Flexural Strength	68.3	MPa	ASTM D 790
Shore Hardness D (15s)	74	-	ASTM D 2240
Notched Impact Strength (Izod), 1/8 in	10.7	J/m	ASTM D 256
Impact Strength (Izod), 1/8 in	107	J/m	ASTM D 256

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	59	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	62	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	64	°C	ISO 306
ASTM Data			
Vicat Temperature	71.7	°C	ASTM D 1525

Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	0.07	%	Sim. to ISO 62
Density	1020	kg/m³	ISO 1183

Optical Properties	Value	Unit	Test Standard
ASTM Data			
Haze	1	%	ASTM D 1003
Light Transmittance	91	%	ASTM D 1003

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	50	°C	-
Pre-drying - Time	3 - 4	h	-
Melt temperature	180 - 250	°C	-
Mold temperature	30 - 40	°C	-

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Processing Recommendation Extrusion	Value	Unit	Test Standard
Type of extrusion	blown	-	-
Melt temperature	180	°C	-
Type of extrusion	film	-	-
Melt temperature	190 - 230	°C	-

Characteristics

Processing

Injection Molding, Film Extrusion

Special Characteristics

Transparent

Delivery form

Pellets

Features

Blending Resin, Copolymer

Injection Molding

As a rule, the Styrolux® 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.

PROCESSING

Melt temperature, range: 180 - 250 °C

Mold temperature, range: 30 - 40 °C

Film Extrusion

PROCESSING

Blown film, Melt temperature: 180 °C

Flat film, Melt temperature: 190 - 230 °C