

Styrolux® T
SB

INEOS Styrolution

Styrolux® T comprises of clear styrene butadiene copolymer. The grade has in general an intrinsic toughness, is easy to process and works as modifiers and compatibilizer not only in polystyrene but in many other polymers, e.g. polyolefins. For Styrolux® T food contact statements are available upon request. Styrolux® T is a very tough grade designed to be blended with Styrolux® S in shrink film applications and enables high performance in film extrusion.

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	12	cm³/10min	ISO 1133
Temperature	200	°C	-
Load	5	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	1200	MPa	ISO 527
Yield stress	25	MPa	ISO 527
Yield strain	3	%	ISO 527
Nominal strain at break	>50	%	ISO 527
Notched Impact Strength (Charpy), +23°C	2	kJ/m²	ISO 179/1eA
Flexural Modulus (23°C)	1000	MPa	ISO 178
ASTM Data			
Tensile Modulus	910.1	MPa	ASTM D 638
Tensile Strength at Yield	18.2	MPa	ASTM D 638
Elongation at Yield	3	%	ASTM D 638
Elongation at Break	260	%	ASTM D 638
Flexural Modulus	861.8	MPa	ASTM D 790
Flexural Strength	26.2	MPa	ASTM D 790
Shore Hardness D (15s)	60	-	ASTM D 2240
Notched Impact Strength (Izod), 1/8 in	26.7	J/m	ASTM D 256
Impact Strength (Izod), 1/8 in	854	J/m	ASTM D 256

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	50	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	56	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	46	°C	ISO 306
ASTM Data			
Vicat Temperature	66.7	°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	2	%	ASTM D 1003
Light Transmittance	90	%	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 - 50	°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, Other Extrusion

Features

Blending Resin, Low Gel, Copolymer

Delivery form

Pellets

Certifications

Food approval

Special Characteristics

Transparent

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 - 50°C

Film Extrusion

PROCESSING

Blown film, Melt temperature: 180°C

Flat film, Melt temperature: 190 - 230°C