INEOS STYROLUTION

Styrolux 4G60

Styrene Butadiene Copolymer (SBC)

TECHNICAL DATASHEET

DESCRIPTION

Styrolux 4G60 is a new clear styrene-butadiene copolymer (SBC) designed specifically for in-jection molding of parts with an excellent balance of transparency and ductility.

FEATURES

- High clarity
- Ductile and impact resistant

APPLICATIONS

- Medical devices
- Toys
- Cups and Lids

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm³/10 min	15
Mechanical Properties			
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m²	4
Tensile Stress at Yield, 23 °C	ISO 527	MPa	14
Tensile Strain at Yield, 23 °C	ISO 527	%	1,5
Tensile Modulus	ISO 527	MPa	900
Hardness, Shore D	ISO 868	-	42
Hardness, Shore A	ISO 868	-	97
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	45
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	50
Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa)	ISO 75	°C	64
Coefficient of Linear Thermal Expansion	ISO 11359	10^(-6)/°C	60-90
Electrical Properties			
Dissipation Factor (100 Hz)	IEC 60250	10^(-4)	3
Volume Resistivity	IEC 60093	Ohm*m	1013
Surface Resistivity	IEC 60093	Ohm	1015

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Property, Test Condition	Standard	Unit	Values
Comparative Tracking Index	IEC 60112	V	600
Optical Properties			
Refractive Index, Sodium D Line	ISO 489	-	1,57
Haze	ASTM D 1003	%	1,5
Other Properties			
Density	ISO 1183	kg/m³	1020
Water Absorption, Saturated at 23 °C	ISO 62	%	0,07
Processing			
Linear Mold Shrinkage	ISO 294-4	%	0,3-1,0
Melt Temperature Range	ISO 294	°C	180-250
Mold Temperature Range	ISO 294	°C	30-50

Typical values for uncolored products

SUPPLY FORM

Styrolux® is delivered in the form of cylindrical or spherical pellets. The bulk density of the pellets is from 0.55 to 0.65 g/cm³. In dry areas with normal temperature control, Styrolux pellets can be stored for relatively long periods of time without any change in mechanical properties. Avoid direct exposure to sunlight. Under poor storage conditions, Styrolux may absorb low amounts of moisture, but this can be removed easily by drying.

PRODUCT SAFETY

No adverse effects on the health of processing personnel have been observed where the products are correctly processed and the production areas are suitably ventilated. For styrene the maximum allowable workplace concentrations must be observed according to the pertaining national regulations. In Germany, the following limit values are valid TRGS 900 (Aug. 2004): styrene, MAK-value: 20 ml/m³. Experience has shown that when Styrolux is processed correctly with appropriate ventilation, the levels are far below the limits mentioned above. Inhalation of the vapors of degradation products which can arise on severe overheating of the materials or during purging out should be avoided. Further information can be found in the Styrolux safety data sheets.

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