

Styrolux 656C

Styrene Butadiene Copolymer (SBC)

TECHNICAL DATASHEET

DESCRIPTION

Styrolux® 656C is a clear styrene-butadiene copolymer (SBC) with enhanced flow properties. It is used almost exclusively for injection molding of rigid, tough parts requiring highest levels of clarity and surface gloss. Styrolux® 656C is sterilizable by gamma-rays and offers good hinge properties.

FEATURES

- Tough and stiff grade
- Enhanced flowability
- High clarity

APPLICATIONS

- Moulded containers and bottles
- Toys
- Displays
- Appliance housings
- Medical devices
- Garment hangers

| Property, Test Condition | Standard | Unit | Values |
|---------------------------------------|-------------|-------------------------|--------|
| Rheological Properties | | | |
| Melt Volume Rate, 200 °C/5 kg | ISO 1133 | cm ³ /10 min | 16 |
| Mechanical Properties | | | |
| Izod Notched Impact Strength, 23 °C | ISO 180/A | kJ/m ² | 3 |
| Izod Notched Impact Strength, -30 °C | ISO 180/A | kJ/m ² | 2 |
| Charpy Notched Impact Strength, 23° C | ISO 179/1eA | kJ/m ² | 2 |
| Charpy Unnotched, 23 °C | ISO 179/1eU | kJ/m ² | 25 |
| Tensile Stress at Yield, 23 °C | ISO 527 | MPa | 35 |
| Tensile Strain at Yield, 23 °C | ISO 527 | % | 2.4 |
| Nominal Strain at Break, 23 °C | ISO 527 | % | 20 |
| Tensile Modulus | ISO 527 | MPa | 1800 |
| Tensile Creep Modulus (1000h) | ISO 899 | MPa | 1050 |
| Tensile Creep Modulus (1h) | ISO 899 | MPa | 1550 |
| Flexural Strength, 23 °C | ISO 178 | MPa | 48 |
| Flexural Modulus, 23 °C | ISO 178 | MPa | 1900 |
| Flexural Stress at 5% Deflection | - | MPa | 48 |

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| Property, Test Condition | Standard | Unit | Values |
|---|-------------|----------------------|-----------|
| Hardness, Shore D | ISO 868 | - | 72 |
| Thermal Properties | | | |
| Vicat Softening Temperature VST/B/50 (50N, 50 °C/h) | ISO 306 | °C | 63 |
| Vicat Softening Temperature, VST/A/50 (10N, 50 °C/h) | ISO 306 | °C | 85 |
| Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa) | ISO 75 | °C | 67 |
| Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa) | ISO 75 | °C | 77 |
| Coefficient of Linear Thermal Expansion | ISO 11359 | 10 ⁻⁶ /°C | 60 - 90 |
| Electrical Properties | | | |
| Optical Properties | | | |
| Refractive Index, Sodium D Line | ISO 489 | - | 1.579 |
| Light Transmission at 550 nm | ASTM D 1003 | % | 90 |
| Haze | ASTM D 1003 | % | < 1.5 |
| Other Properties | | | |
| Density | ISO 1183 | kg/m ³ | 1020 |
| Water Absorption, Saturated at 23 °C | ISO 62 | % | 0.07 |
| Processing | | | |
| Linear Mold Shrinkage | ISO 294-4 | % | 0.3 - 1 |
| Mold Temperature Range | ISO 294 | °C | 30 - 50 |
| Melt Temperature Range | ISO 294 | °C | 180 - 250 |

Typical values for uncolored products

SUPPLY FORM

Styrolux is supplied in pellet form and should be kept in its original containers in cool, dry place. Avoid direct exposure to sunlight. Styrolux® can be stored in silos at temperatures well below 45 °C.

PRODUCT SAFETY

During processing of Styrolux® small quantities of styrene monomer may be released into the atmosphere. At styrene vapor concentrations below 20 ppm no negative effects on health are expected. In our experience, the concentration of styrene does not exceed 1 ppm in well

ventilated workplaces - that is where five to eight air changes per hour are made. For safety information please refer to our Material Safety Data Sheet for this product.

DISCLAIMER

The above mentioned data are accurate to the best of our knowledge. They are based upon reputable labs and industry standard testing methods. These are only typical values and actual product specification may deviate at industrial range. Therefore, no data in this technical data sheet shall constitute a warranty or representation regarding product features, fitness of the product for a specific purpose or application or its processability. INEOS Styrolution disclaims all liability in connection therewith. The customer himself is required to verify whether or not the product is suitable for the further processing or application intended and whether or not the product complies with the relevant statutory requirements. Unless explicitly and individually otherwise agreed in writing, INEOS Styrolution's sole and exclusive liability with respect to its products is set forth in INEOS Styrolution's General Terms and Conditions for Sale.
