

Styrolux 3G55

Styrene Butadiene Copolymer (SBC)

TECHNICAL DATASHEET

DESCRIPTION

The product line Styrolux® comprises clear styrene butadiene copolymers. The grades have in general an intrinsic toughness, are easy to process and work as modifiers and compatibilizers not only in polystyrene but in many other polymers, e.g. polyolefins. For all Styrolux® grades food contact statements are available upon request. Styrolux® 3G55 is mainly in sheet extrusion and thermoforming applications. It shows a high performance in blends with general-purpose polystyrene, providing parts with an excellent balance of transparency and toughness. Due to its tendency of blocking, 3G55 is mainly used in inline thermoforming. 3G55 is difficult to print and decorate since it contains a microcrystalline wax.

FEATURES

- Easy processing
- Well extrudable
- Very good miscibility with GPPS
- Transparency

APPLICATIONS

- Food contact applications
- Flexible packaging

| Property, Test Condition | Standard | Unit | Values |
|---------------------------------------|-------------|-------------------------|--------|
| Rheological Properties | | | |
| Melt Volume Rate, 200 °C/5 kg | ISO 1133 | cm ³ /10 min | 14 |
| Mechanical Properties | | | |
| Charpy Notched Impact Strength, 23° C | ISO 179/1eA | kJ/m ² | 80 |
| Charpy Unnotched, 23 °C | ISO 179/1eU | kJ/m ² | > 80 |
| Tensile Modulus | ISO 527 | MPa | 900 |
| Tensile Stress at Yield, 23 °C | ISO 527 | MPa | 16 |
| Tensile Strain at Yield, 23 °C | ISO 527 | % | 2 |
| Tensile Stress at Break, 23 °C | ISO 527 | MPa | 19 |
| Tensile Strain at Break, 23 °C | ISO 527 | % | > 300 |
| Nominal Strain at Break, 23 °C | ISO 527 | % | > 300 |
| Flexural Modulus, 23 °C | ISO 178 | MPa | 900 |
| Flexural Strength, 23 °C | ISO 178 | MPa | 18 |
| Hardness, Shore D | ISO 868 | - | 58 |
| Thermal Properties | | | |

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| Vicat Softening Temperature VST/B/50 (50N, 50 °C/h) | ISO 306 | °C | 35 |
| Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa) | ISO 75 | °C | 51 |
| Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa) | ISO 75 | °C | 62 |
| Coefficient of Linear Thermal Expansion | ISO 11359 | 10 ⁻⁶ /°C | 60 - 90 |
| Optical Properties | | | |
| Refractive Index, Sodium D Line | ISO 489 | - | 1.57 |
| Haze | ASTM D 1003 | % | 3.5 |
| Light Transmission at 550 nm | ASTM D 1003 | % | 89 |
| Other Properties | | | |
| Density | ISO 1183 | kg/m ³ | 1010 |
| Water Absorption, Saturated at 23 °C | ISO 62 | % | 0.07 |
| Processing | | | |
| Linear Mold Shrinkage | ISO 294-4 | % | 0.3 - 1 |
| Melt Temperature Range | ISO 294 | °C | 180 - 250 |
| Mold Temperature Range | ISO 294 | °C | 30 - 50 |