

Styrolux® 693D

SB

INEOS Styrolution

Styrolux® 693D comprises of clear styrene butadiene copolymer. The grade has in general an intrinsic toughness, is easy to process and works as modifier and compatibilizer not only in polystyrene but in many other polymers, e.g. polyolefins. For Styrolux® 693D food contact statements are available upon request. Styrolux® 693D is showing balanced properties in terms of toughness and clarity. It is mainly used for thermoformed articles, especially in blends with general-purpose polystyrene. 693D contains a microcrystalline wax in order to provide anti-blocking properties in processing, which on the other hand decreases the printability.

| 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 | 1300 | MPa | ISO 527 |
| Yield stress | 22 | MPa | ISO 527 |
| Yield strain | 2.2 | % | ISO 527 |
| Nominal strain at break | >50 | % | ISO 527 |
| Notched Impact Strength (Charpy), +23°C | 2.9 | kJ/m² | ISO 179/1eA |

| 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) | 72 | °C | ISO 75-1/-2 |
| Vicat softening temperature, 50°C/h 50N | 48 | °C | ISO 306 |

| Other Properties | Value | Unit | Test Standard |
|------------------|-------|-------|----------------|
| ISO Data | | | |
| Water Absorption | 0.07 | % | Sim. to ISO 62 |
| Density | 1010 | kg/m³ | ISO 1183 |

| Processing Recommendation Injection Molding | Value | Unit | Test Standard |
|---|-----------|------|---------------|
| Melt temperature | 180 - 250 | °C | - |
| Mold temperature | 20 - 40 | °C | - |

Characteristics

Processing

Injection Molding, Film Extrusion, Sheet Extrusion, Other Extrusion, Blow Molding

Delivery form

Pellets

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

Other Extrusion

PROCESSING

Pipes, Melt temperature: 230°C

Sheet Extrusion

PROCESSING

Sheets, Melt temperature: 190°C