

Description

POLYSTYRENE IMPACT 4440 is a high impact polystyrene for the injection moulding of parts demanding good dimensional stability at high temperatures, particularly boxes, frames, front and back covers for television sets. In addition, the flow properties of this grade make it particularly suitable for the moulding of large parts and for use with techniques such as gas injection.

Applications

Television front and back covers, office equipment.

Properties

| Rheological | Method | Unit | Value |
|--|-------------|-------------------|----------|
| Melt flow index (200°C-5kg) | ISO 1133 H | g/10mn | 10 |
| Thermal | | | |
| Vicat softening point 10N (T° increase = 50°C/h) | ISO 306A50 | °C | 96 |
| Vicat softening point 50N (T° increase = 50°C/h) | ISO 306B50 | °C | 88 |
| HDT unannealed under 1.8 MPa | ISO 75-2A | °C | 74 |
| HDT annealed under 1.8 MPa | ISO 75-2A | °C | 90 |
| Coefficient of linear thermal expansion | | mm/°C | 9.10 E-5 |
| Mechanical | | | |
| Notched Charpy impact strength | ISO 179/1eA | KJ/m ² | 10 |
| Notched Izod impact strength | ISO 180/1A | kJ/m ² | 10 |
| Tensile strength at yield | ISO 527-2 | MPa | 25 |
| Tensile strength at break | ISO 527-2 | MPa | 20 |
| Elongation at break | ISO 527-2 | % | 55 |
| Tensile modulus | ISO 527-2 | MPa | 2050 |
| Flexural modulus | ISO 178 | MPa | 2000 |
| Rockwell hardness | ISO 2039-2 | | R 76 |
| Electrical | | | |
| Dielectric strength | | kV/mm | 150 |
| Surface resistivity | ISO IEC 93 | Ohms | >10 E+13 |
| Miscellaneous | | | |
| Density | ISO 1183 | g/cm ³ | 1.04 |
| Moulding shrinkage | | % | 0.4-0.7 |
| Water absorption | ISO 62 | % | <0.1 |

General Information

- Standard properties: All tests carried out at 23°C unless otherwise stated. Mechanical properties are measured on injection moulded tests specimens.
- Bulk density: bulk density is approximately 0.6 g/cm³.
- Please refer to the Safety Data Sheet for further information.
- Please refer to the safety data sheet (SDS) for handling and storage information. It is advisable to convert the product within six months after delivery provided storage conditions are used as given in the SDS of our product. SDS may be obtained from the website: www.totalrefiningchemicals.com

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