

STYRON™ 470

High Impact Polystyrene Resin

Overview

STYRON™ 470 is a high-impact polystyrene resin with an excellent balance of toughness, stiffness, flow and heat resistance. It is suitable for both injection molding and extrusion applications.

Main Characteristics:

- Good practical toughness
- Easy processing

Complies with:

- U.S. FDA 21 CFR 177.1640
- Consult the regulations for complete details.

Applications:

- Audio enclosures
- Media enclosures
- Toys
- Food containers

| Physical | Nominal Value (English) | Nominal Value (SI) | Test Method |
|---|-------------------------|------------------------|-------------------------|
| Density | 1.04 g/cm ³ | 1.04 g/cm ³ | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (200°C/5.0 kg) | 3.0 g/10 min | 3.0 g/10 min | ASTM D1238 |
| Mechanical | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Tensile Strength ¹ | | | ASTM D638 |
| Yield, Injection Molded | 3770 psi | 26.0 MPa | |
| Break, Injection Molded | 3770 psi | 26.0 MPa | |
| Tensile Elongation ¹ (Break, Injection Molded) | 50 % | 50 % | ASTM D638 |
| Flexural Modulus (Injection Molded) | 313000 psi | 2160 MPa | ASTM D790 |
| Flexural Strength (Injection Molded) | 7110 psi | 49.0 MPa | ASTM D790 |
| Impact | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Notched Izod Impact | | | ASTM D256 |
| 73°F (23°C), Injection Molded | 2.1 ft-lb/in | 110 J/m | |
| Thermal | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Deflection Temperature Under Load | | | ASTM D648 |
| 264 psi (1.8 MPa), Unannealed | 162 °F | 72.0 °C | |
| 264 psi (1.8 MPa), Annealed | 196 °F | 91.0 °C | |
| Vicat Softening Temperature | 216 °F | 102 °C | ASTM D1525 ² |
| Flammability | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Flame Rating ³ (0.06 in (1.5 mm)) | HB | HB | UL 94 |

Additional Information

Mass balance versions (bio-based (BIO) or chemically recycled (CR)) of this product are chemically and physically indistinguishable to the standard fossil grade. This technical data sheet applies to all versions. Letters of sameness are available upon request.