

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
Molding Shrinkage - Flow	4.0E-3 to 7.0E-3 in/in	0.40 to 0.70 %	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus (Injection Molded)	305000 psi	2100 MPa	ASTM D638
Tensile Strength			ASTM D638
Yield, Injection Molded	3700 psi	25.5 MPa	
Ultimate, Injection Molded	3800 psi	26.2 MPa	
Tensile Elongation (Break, Injection Molded)	50 %	50 %	ASTM D638
Flexural Modulus (Injection Molded)	313000 psi	2160 MPa	ASTM D790
Flexural Strength			ASTM D790
Yield, Injection Molded	7100 psi	49.0 MPa	
Yield, Compression Molded	5800 psi	40.0 MPa	
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	165 °F	73.9 °C	
264 psi (1.8 MPa), Annealed	207 °F	97.2 °C	
Vicat Softening Temperature	216 °F	102 °C	ASTM D1525
CLTE - Flow	4.2E-5 in/in/°F	7.6E-5 cm/cm/°C	ASTM D696
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ¹ (0.06 in (1.5 mm))	HB	HB	UL 94

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

¹ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.



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