

STYRON™ 486M

High Impact Polystyrene Resin

Overview

STYRON™ 486M 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

Complied with:

- U.S. FDA 21 CFR 177.1640
- Europe REGULATION (EC)10/2011
- Consult the regulation for complete details.

Applications:

- Audio enclosures
- Small appliances
- 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			ASTM D638
Compression Molded	270000 psi	1860 MPa	
Injection Molded	305000 psi	2100 MPa	
Tensile Strength			ASTM D638
Yield, Compression Molded	3100 psi	21.4 MPa	
Yield, Injection Molded	3900 psi	26.9 MPa	
Ultimate, Compression Molded	2500 psi	17.2 MPa	
Ultimate, Injection Molded	3700 psi	25.5 MPa	
Tensile Elongation			ASTM D638
Break, Compression Molded	35 %	35 %	
Break, Injection Molded	40 %	40 %	
Flexural Modulus			ASTM D790
Compression Molded	283000 psi	1950 MPa	
Injection Molded	313000 psi	2160 MPa	
Flexural Strength			ASTM D790
Compression Molded	5600 psi	38.6 MPa	
Injection Molded	7300 psi	50.3 MPa	
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			ASTM D256
Compression Molded	1.6 ft-lb/in	86 J/m	
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
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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