

STYRON™ A-TECH™ 1300

Polystyrene Resin

Overview

STYRON A-TECH™ 1300 advanced technology polystyrene resin is a high impact polystyrene resin offering excellent toughness and strength with good processability.

Main Characteristics:

- Excellent toughness
- High strength
- Easy processing
- Gas-assist molding
- High heat

Applications:

- TV
- Printers
- Audio enclosures
- Small appliances

Complies with:

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

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)	4.5 g/10 min	4.5 g/10 min	ASTM D1238
Molding Shrinkage - Flow	4.0E-3 to 7.0E-3 in/in	0.40 to 0.70 %	ASTM D955
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			ASTM D638
Yield, Compression Molded	3500 psi	24.1 MPa	
Yield, Injection Molded	4000 psi	27.6 MPa	
Break, Compression Molded	2800 psi	19.3 MPa	
Break, Injection Molded	4000 psi	27.6 MPa	
Tensile Elongation			ASTM D638
Break, Compression Molded	45 %	45 %	
Break, Injection Molded	50 %	50 %	
Flexural Modulus			ASTM D790
Compression Molded	261000 psi	1800 MPa	
Injection Molded	291000 psi	2010 MPa	
Flexural Strength			ASTM D790
Compression Molded	6100 psi	42.1 MPa	
Injection Molded	7300 psi	50.3 MPa	
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			ASTM D256
73°F (23°C), Compression Molded	2.0 ft-lb/in	110 J/m	
73°F (23°C), Injection Molded	2.4 ft-lb/in	130 J/m	

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Unannealed	167 °F	75.0 °C	
264 psi (1.8 MPa), Annealed	210 °F	98.9 °C	
Vicat Softening Temperature	221 °F	105 °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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