

Technical Information



STYRON A-TECH™ 1110

Polystyrene Resin

Overview

STYRON A-TECH™ 1110 advanced technology polystyrene resin is a high-gloss, high-impact resin for injection molding applications.

Main Characteristics:

- Excellent toughness
- High gloss

Applications:

- Small appliances
- Toys
- Printers
- Remote controls

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)	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	3340 psi	23.0 MPa	
Break, Injection Molded	2760 psi	19.0 MPa	
Tensile Elongation ¹ (Break, Injection Molded)	50 %	50 %	ASTM D638
Flexural Modulus (Injection Molded)	310000 psi	2140 MPa	ASTM D790
Flexural Strength (Injection Molded)	6530 psi	45.0 MPa	ASTM D790
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			ASTM D256
73°F (23°C), Injection Molded	4.5 ft·lb/in	240 J/m	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Unannealed	163 °F	73.0 °C	
264 psi (1.8 MPa), Annealed	194 °F	90.0 °C	
Vicat Softening Temperature	215 °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
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (60°)	92	92	ASTM D523

Notes

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

¹ 0.20 in/min (5.0 mm/min)

² Rate B (120°C/h), Loading 1 (10 N)

³ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.

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