

STYRON A-TECH™ 1200 Polystyrene Resin

Overview

STYRON A-TECH™ 1200 is a newly developed, high-impact polystyrene (HIPS) resin based on patented technology. The technology platform for STYRON A-Tech makes it possible to eliminate the typical trade-offs among the key properties for HIPS including toughness, gloss, stiffness and processability.

Main Characteristics:

- Unique combination of toughness and stiffness
- Ease of processing
- Excellent thermoforming behaviour
- Good blendability with General Purpose Polystyrene (GPPS)
- Allows for down-gauging

Applications:

- Form Fill Seal (FFS)
- Pre-Forms (DFS)
- Vending cups

Complies with:

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

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.04 g/cm ³	1.04 g/cm ³	ISO 1183
Apparent (Bulk) Density	0.60 g/cm ³	0.60 g/cm ³	ISO 60
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	5.0 g/10 min	5.0 g/10 min	ISO 1133
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	254000 psi	1750 MPa	ISO 527-1/1
Tensile Stress			ISO 527-2/5
Yield	2760 psi	19.0 MPa	
Break	3190 psi	22.0 MPa	
Tensile Strain (Break)	65 %	65 %	ISO 527-2/5
Flexural Modulus	283000 psi	1950 MPa	ISO 178
Flexural Stress	5510 psi	38.0 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact Strength	6.2 ft-lb/in ²	13 kJ/m ²	ISO 180/1A
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ISO 75-2/A
264 psi (1.8 MPa), Unannealed	163 °F	73.0 °C	
Vicat Softening Temperature	212 °F	100 °C	ISO 306/A120
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ¹ (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.