

STYRON A-TECH™ 1210

High Impact Polystyrene Resin

Overview

STYRON A-TECH™ 1210 is a newly developed high impact polystyrene (HIPS) resin based on patented technology, offering a unique combination of processability, stiffness, toughness, low gloss and surface smoothness.

Main Characteristics:

- Low gloss and smooth sheet surface
- Ease of processing
- Excellent thermoforming behaviour
- Good blendability with GPPS

Applications:

- Form Fill Seal (FFS) dairy packaging
- Medical device packaging
- Signage sheet
- Sheet applications requiring matt and smooth surface

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	ASTM D792
73°F (23°C)	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	3.4 g/10 min	3.4 g/10 min	ASTM D1238
200°C/5.0 kg ¹	3.4 g/10 min	3.4 g/10 min	ISO 1133
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus			
-- ²	254000 psi	1750 MPa	ASTM D638
--	254000 psi	1750 MPa	ISO 527-2/1
Tensile Strength			
Yield ²	2830 psi	19.5 MPa	ASTM D638
Yield	2830 psi	19.5 MPa	ISO 527-2/5
Break ²	3190 psi	22.0 MPa	ASTM D638
Break	3190 psi	22.0 MPa	ISO 527-2/5
Tensile Elongation (Break)	65 %	65 %	ASTM D638 ISO 527-2
Flexural Modulus			
-- ³	283000 psi	1950 MPa	ASTM D790
--	283000 psi	1950 MPa	ISO 178
Flexural Strength			
-- ³	5510 psi	38.0 MPa	ASTM D790
--	5510 psi	38.0 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact Strength	6.7 ft-lb/in ²	14 kJ/m ²	ISO 180/4A



Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	208 °F	98.0 °C	ISO 306/A120 ASTM D1525 ⁴

Notes

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

¹ Procedure B

² 0.20 in/min (5.0 mm/min)

³ Method I (3 point load), 0.051 in/min (1.3 mm/min)

⁴ Rate B (120°C/h), Loading 1 (10 N)



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