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/cm³	1.04	g/cm³	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	%	
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

Thermal	Nominal Value (English)		Nominal Value (SI)		Test Method
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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