

STYRON™ 6500 Ignition Resistant Polystyrene Resin

Overview

STYRON™ 6500 is an ignition-resistant polystyrene resin with excellent balance of strength, heat resistance and flow properties that are tailor-made for consumer electronics applications. It is a non-deca ignition resistant polystyrene which is free from polybrominated diphenyl ether (PBDPE) and polybrominated biphenyl (PBB). It is designed for injection molding application.

Main Characteristics:

- Good flow
- Excellent heat resistance
- UL 94 V-0 @ 1.5 mm

Applications:

- LCD TV enclosures

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.16 g/cm ³	1.16 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	10 g/10 min	10 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	2500 psi	17.2 MPa	
Yield, Injection Molded	3000 psi	20.7 MPa	
Break, Compression Molded	2000 psi	13.8 MPa	
Break, Injection Molded	2800 psi	19.3 MPa	
Tensile Elongation			ASTM D638
Break, Compression Molded	30 %	30 %	
Break, Injection Molded	40 %	40 %	
Flexural Modulus			ASTM D790
Compression Molded	288000 psi	1990 MPa	
Injection Molded	344000 psi	2370 MPa	
Flexural Strength			ASTM D790
Compression Molded	4900 psi	33.8 MPa	
Injection Molded	5900 psi	40.7 MPa	
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			ASTM D256
73°F (23°C), Compression Molded	1.2 ft-lb/in	64 J/m	
73°F (23°C), Injection Molded	1.5 ft-lb/in	80 J/m	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	212 °F	100 °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))	V-0	V-0	UL 94