

Total PSC 1160/1160N Crystal Polystyrene

Category : Polymer , Thermoplastic , Polystyrene (PS) , Polystyrene, Transparent Grade

Material Notes:

1160 is a high resistance, high molecular weight crystal polystyrene mainly for the extrusion industry. Most notable for the production of bi-oriented polystyrene (BOPS). It is particularly useful in the production of thick sheet by direct gassing, where it gives expanded sheets with high mechanical properties. LACQRENE® 1160 can be used in dilution with LACQRENE® for the extrusion of sheet for hot-fill thermoforming applications. Applications: Formed trays, Shower screens, High heat resistant thermoformed products, Transparent cups. Information provided provided by Total Petrochemicals. Total Petrochemicals acquired former Fina and Atofina plastics product lines. This product was previously known as LACQRENE®

Order this product through the following link:

http://www.lookpolymers.com/polymer_Total-PSC-11601160N-Crystal-Polystyrene.php

Physical Properties	Metric	English	Comments
Density	1.05 g/cc	0.0379 lb/in ³	ISO 1183
Water Absorption	<= 0.10 %	<= 0.10 %	ISO 62
Linear Mold Shrinkage	0.0040 - 0.0070 cm/cm	0.0040 - 0.0070 in/in	
Melt Flow	2.4 g/10 min @Load 5.00 kg, Temperature 200 °C	2.4 g/10 min @Load 11.0 lb, Temperature 392 °F	ISO 1133H

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell L	70	70	ISO 2039-2
Tensile Strength at Break	48.0 MPa	6960 psi	ISO 527-2
Elongation at Break	3.0 %	3.0 %	ISO 527-2
Tensile Modulus	3.20 GPa	464 ksi	ISO 527-2
Flexural Modulus	2.90 GPa	421 ksi	ISO 178

Thermal Properties	Metric	English	Comments
CTE, linear	71.0 µm/m-°C	39.4 µin/in-°F	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Deflection Temperature at 0.46 MPa (66 psi)	97.0 °C	207 °F	Annealed; ISO 75-2A
Deflection Temperature at 1.8 MPa (264 psi)	83.0 °C	181 °F	Unannealed; ISO 75-2A
	101 °C	214 °F	50N (T° increase = 5°C/h); ISO

Vicat Softening Point Thermal Properties	Metric	English	306850 Comments
	105 °C	221 °F	10N (T° increase = 50°C/h); ISO 306A50

Optical Properties	Metric	English	Comments
Transmission, Visible	90 %	90 %	transparent; thickness not quantified

Electrical Properties	Metric	English	Comments
Surface Resistivity per Square	$\geq 1.00 \times 10^{14}$ ohm	$\geq 1.00 \times 10^{14}$ ohm	ISO IEC93
Dielectric Strength	135 kV/mm	3430 kV/in	

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