

Polimeri Europa Edistir ICE R 830D Polystyrene

Category : Polymer , Thermoplastic , Polystyrene (PS) , Polystyrene, Molded, Unreinforced

Material Notes:

Environmental stress cracking resistant (ESCR) HIPS. ICE PD R 830D combines high impact strength with an improved chemical resistance to oils, fats and chemical agents, such as detergents for both industrial and domestic use. Developd in particular for the fridge sector where hydrocarbons are used as blowing agents for PU insulating foams. Designation: Thermoplastics ISO 2897-PS-I,G,088-03-07-

12Applications: This grade is suitable for extrusion/thermoforming and injection moulding. Typical applications are inner liners and frames for refrigerators and packaging containers for fatty foods. ICE PD R 830D significantly improves the wall thickness distribution in thermoforming and allows to optimize the thickness of the original extruded sheet. This grade in its natural version complies by composition with the requirements set by the main Regulations for plastic materials intended for food contact (including the EEC Directive 90/128 and subsequent amendments). ICE PD R 830D is supplied in cylindrical pellets Information provided by Polimeri Europa

Order this product through the following link:

http://www.lookpolymers.com/polymer_Polimeri-Europa-Edistir-ICE-R-830D-Polystyrene.php

Physical Properties	Metric	English	Comments
Bulk Density	0.650 g/cc	0.0235 lb/in ³	ISO 60
Density	1.04 g/cc	0.0376 lb/in ³	ISO 1183
Water Absorption	<= 0.10 %	<= 0.10 %	24 hours - 23°C; ISO 62
Linear Mold Shrinkage	0.0040 - 0.0070 cm/cm	0.0040 - 0.0070 in/in	Internal Method
Melt Flow	3.0 g/10 min @Load 5.00 kg, Temperature 200 °C	3.0 g/10 min @Load 11.0 lb, Temperature 392 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell L	51	51	ISO 2039/2
Tensile Strength at Break	23.5 MPa	3410 psi	50 mm/min; ISO 527
Tensile Strength, Yield	16.0 MPa	2320 psi	50 mm/min; ISO 527
Elongation at Break	70 %	70 %	50 mm/min; ISO 527
Tensile Modulus	1.45 GPa	210 ksi	1 mm/min; ISO 527
Flexural Strength	35.0 MPa	5080 psi	2 mm/min; ISO 178
Izod Impact, Notched	1.30 J/cm @Thickness 3.20 mm, Temperature 23.0 °C	2.44 ft-lb/in @Thickness 0.126 in, Temperature 73.4 °F	ISO 180/4A
	8.00 kJ/m ²	3.81 ft-lb/in ²	

Impact Notched (ISO)	Metric	English	ISO 180/1A
Mechanical Properties	@Thickness 4.00 mm, Temperature -30.0 °C	@Thickness 0.157 in, Temperature -22.0 °F	
	10.0 kJ/m ²	4.76 ft-lb/in ²	
	@Thickness 4.00 mm, Temperature 23.0 °C	@Thickness 0.157 in, Temperature 73.4 °F	ISO 180/1A

Thermal Properties	Metric	English	Comments
CTE, linear	90.0 µm/m-°C @Temperature 20.0 °C	50.0 µin/in-°F @Temperature 68.0 °F	ASTM D 696
Thermal Conductivity	0.170 W/m-K	1.18 BTU-in/hr-ft ² -°F	ISO 8302
Deflection Temperature at 1.8 MPa (264 psi)	82.0 °C	180 °F	120°C/h; ASTM D 648
Vicat Softening Point	88.0 °C	190 °F	50 N - 50°C/h; ISO 306/B
	96.0 °C	205 °F	10 N - 50°C/h; ISO 306/A
Flammability, UL94	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	UL94
Glow Wire Test	650 °C @Thickness 1.60 mm	1200 °F @Thickness 0.0630 in	IEC 60695-2-1

Electrical Properties	Metric	English	Comments
Volume Resistivity	7.00e+15 ohm-cm	7.00e+15 ohm-cm	IEC 60093
Surface Resistance	1.50e+15 ohm	1.50e+15 ohm	IEC 60093
Dielectric Constant	2.5 @Frequency 50 Hz	2.5 @Frequency 50 Hz	IEC 60250
Dielectric Strength	65.0 kV/mm	1650 kV/in	IEC 60243
Dissipation Factor	0.00030 @Frequency 50 Hz	0.00030 @Frequency 50 Hz	IEC 60250
Comparative Tracking Index	500 V	500 V	Solution A; IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	210 - 240 °C	410 - 464 °F	Extrusion
	210 - 260 °C	410 - 500 °F	Injection Molding
Mold Temperature	20.0 - 60.0 °C	68.0 - 140 °F	Injection Molding

Processing Properties

Metric

English

Comments

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