

Edistir® ICE R 830D

High Impact Polystyrene

Versalis S.p.A.

Message:

Environmental stress cracking resistant (ESCR) HIPS.
ICE 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.
Developed in particular for the fridge sector where hydrocarbons or freons are used as blowing agents for PU insulating foams.
Designation: Thermoplastics ISO 2897-PS-I,G,O88-O3-O7-12
Applications
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 R 830D significantly improves the wall thickness distribution in thermoforming and allows to optimize the thickness of the original extruded sheet.

General Information			
UL YellowCard	E157138-101325089		
Features	High ESCR (Stress Cracking Resistance)		
	Impact resistance, high		
	Good chemical resistance		
	Detergent resistance		
	Oil resistance		
	Compliance of Food Exposure		
Uses	Lining		
	Low temperature application		
	Industrial application		
	Home appliance components		
	Insulating material		
	Foam		
	Food packaging		
	Food container		
Agency Ratings	Europe No 10/2011		
UL File Number	E83071		
Forms	Particle		
Processing Method	Extrusion		
	Thermoforming		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.04	g/cm ³	ISO 1183
Apparent Density	0.65	g/cm ³	ISO 60
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	3.0	g/10 min	ISO 1133

Molding Shrinkage	0.40 - 0.70	%	Internal method
Water Absorption (23°C, 24 hr)	< 0.10	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (L-Scale)	51		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1450	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield	16.0	MPa	ISO 527-2/50
Fracture	23.5	MPa	ISO 527-2/50
Tensile Strain (Break)	70	%	ISO 527-2/50
Flexural Stress ¹	35.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C, 3.20 mm	130	J/m	ISO 180/4A
-30°C	8.0	kJ/m ²	ISO 180/1A
23°C	10	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Annealed)	82.0	°C	ASTM D648
Vicat Softening Temperature			
--	96.0	°C	ISO 306/A50
--	88.0	°C	ISO 306/B50
CLTE - Flow	9.0E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.17	W/m/K	ISO 8302
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.5E+15	ohms	IEC 60093
Volume Resistivity	> 7.0E+15	ohms · cm	IEC 60093
Dielectric Strength	65	kV/mm	IEC 60243-1
Dielectric Constant (50 Hz)	2.50		IEC 60250
Dissipation Factor (50 Hz)	3.0E-4		IEC 60250
Comparative Tracking Index (Solution A)	500	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm, All Colors)	HB		UL 94
Glow Wire Ignition Temperature (1.60 mm)	650	°C	IEC 60695-2-13
Injection	Nominal Value	Unit	
Processing (Melt) Temp	210 - 260	°C	
Mold Temperature	20.0 - 60.0	°C	
Injection instructions			
Predrying normally not required			
Extrusion	Nominal Value	Unit	
Melt Temperature	210 - 240	°C	
NOTE			

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

