

ICE R 930 XP

Technical Data Sheet

Polystyrene

Edistir® ICE R 930 XP is an environmental stress cracking resistant high impact polystyrene (ESCR) which combines high impact strength with improved chemical resistance to oils, fats and chemical agents such as detergents for both industrial and domestic use.

Edistir® ICE R 930 XP is designed for fridge sector in which hydrocarbons or freons are used as blowing agents for PU insulating foams.

The improved mechanical performances guarantee an easy processing, allowing a sheet thickness reduction.

Applications

Edistir® ICE R 930 XP is suitable for:

- inner liners and frames for refrigerators
- packaging for fatty foods.

Typical processing data

Extrusion:

- melt temperature 210-240°C

Injection moulding:

- predrying normally not required
- melt temperature 210-260°C
- mould temperature 20-60°C

Certification

✓ UL 94

Edistir® ICE R 930XP, as supplied in the original packaging, by composition is compliant to some existing regulations on plastic materials intended for food contact.

Storage

- ⚠ Store away from atmospheric agents and direct sunlight, away from sources of heat and light.
- 🕒 The product, if stored correctly, keeps its characteristics for at least fifteen months.

General information

Edistir® ICE R 930XP is available in natural version.



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Property	Test Conditions	Test method	Units	Values
General				
Water absorption	24h - 23°C	ISO 62	%	< 0,1
Density	-	ISO 1183	g/cm ³	1,04
Bulk density	-	ISO 60	g/cm ³	0,65
Rheological				
Melt flow rate	200°C - 5kg	ISO 1133	g/10'	2,5
Mechanical				
Tensile strain at break	50 mm/min	ISO 527	%	70
Tensile stress at break	50 mm/min	ISO 527	MPa	23
Tensile stress at yield	50 mm/min	ISO 527	MPa	17
Flexural strength	2 mm/min	ISO 178	MPa	30
Rockwell hardness	L/M	ISO 2039/2	-	L 42
Tensile modulus	1 mm/min	ISO 527	MPa	1450
Izod impact strength, notched	-30°C - 4mm	ISO 180/1A	kJ/m ²	8
Izod impact strength, notched	+23°C - 4mm	ISO 180/1A	kJ/m ²	13
Thermal				
Coefficient of linear thermal expansion	-	ASTM D 696	10 ⁻⁵ /°C	9
Thermal conductivity	-	ISO 8302	W/(K.m)	0,17
Moulding shrinkage	-	ISO 294/4	%	0,4 ÷ 0,7
Deflection temperature under load (annealed)	1,82 MPa - 120°C/h	ISO 75 A	°C	75
Vicat softening temperature	10 N - 50°C/h	ISO 306/A	°C	98
Vicat softening temperature	50 N - 50°C/h	ISO 306/B	°C	89
Flammability				
Flame behaviour	1,1 mm	Internal Test	cl.	HB*
Glow wire test (GWT)	1,6 mm	IEC 60695-2-10	°C	650
Electrical				
Dielectric constant (relative permittivity)	50 Hz	IEC 60250	-	2,5
Dissipation factor	50 Hz	IEC 60250	-	0,0003
Surface resistivity	-	IEC 60093	10 ¹⁵ ohm	> 1,5
Volume resistivity	-	IEC 60093	10 ¹⁵ ohm-cm	> 7
Dielectric strength	-	IEC 60243	kV/mm	65

