Edistir®

versalis

R 850E

Technical Data Sheet

Polystyrene

Edistir® R 850E is a high impact polystyrene with high impact properties and good heat resistance.
It is specilly designed for sheet extrusion and thermoforming of deep drawn containers even when blended with a high percentage of PS, but it is also suitable for general injection moulding of tough medium-walled articles.

Designation: Thermoplastics ISO 2897-PS-I,G,093-03-10-18

Applications

Edistir® R 850E is suitable in a large variety of sectors such as:

- thermoformed food packaging such as disposable tumblers, flatware, yoghurt pots and lids
- sheets for flocking
- sheets and foils
- shoe heels.

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® R 850E, 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® R 850E 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/cm³	1,04
Bulk density	-	ISO 60	g/cm³	0,65
Rheological				
Melt flow rate	200°C - 5kg	ISO 1133	g/10'	4
Mechanical				
Tensile strain at break	50 mm/min	ISO 527	%	70
Tensile stress at break	50 mm/min	ISO 527	MPa	28
Tensile stress at yield	50 mm/min	ISO 527	MPa	21
Flexural strength	2 mm/min	ISO 178	MPa	38
Rockwell hardness	L/M	ISO 2039/2	-	L65
Tensile modulus	1 mm/min	ISO 527	MPa	1900
Izod impact strength, notched	-30°C - 4mm	ISO 180/1A	kJ/m²	6,5
Izod impact strength, notched	+23°C - 4mm	ISO 180/1A	kJ/m²	10
Izod impact strength, notched	+23°C - 3,2mm	ISO 180/4A	J/m	125
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	85
Vicat softening temperature	50 N - 50°C/h	ISO 306/B	°C	91
Vicat softening temperature	10 N - 50°C/h	ISO 306/A	°C	99
Flammability				
Flame behaviour	1,5 mm	UL 94	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
Comparative tracking index (CTI)	Sol. A	IEC 60112	-	500
Surface resistivity	-	IEC 60093	10^15ohm	>1,5
Volume resistivity	-	IEC 60093	10^15ohm·cm	>7
Dielectric strength	-	IEC 60243	kV/mm	65