Edistir®

versalis

N 3782

Technical Data Sheet

Polystyrene

Edistir® N 3782 is a general purpose polystyrene with good flow and high heat resistance.
Edistir® N 3782 is suggested for direct gassing of heavy gauge insulation boards (XPS), but it is also used in blend with HIPS in order to improve the balance between rigidity and heat resistance of extruded sheets for packaging.

Designation: Thermoplastic ISO 1622-PS,E,105-06.

Applications

Edistir® N 3782 is suitable for:

- insulation panels (XPS)
- extruded thin and thick sheets for packaging.

Typical processing data

Extrusion:

- melt temperature 210-240°C

Certification

✓ UL 94

Edistir® N 3782, 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.

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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	1,05
Bulk density	-	ISO 60	g/cm³	0,65
Rheological				
Melt flow rate	200°C - 5kg	ISO 1133	g/10'	7,5
Mechanical				
Tensile strain at break	5 mm/min	ISO 527	%	1,6
Tensile stress at break	5 mm/min	ISO 527	MPa	43
Flexural strength	2 mm/min	ISO 178	MPa	80
Rockwell hardness	L/M	ISO 2039/2	-	M80
Tensile modulus	1 mm/min	ISO 527	MPa	3250
Izod impact strength, notched	+23°C - 4mm	ISO 180/1A	kJ/m²	1,7
Izod impact strength, notched	-30°C - 4mm	ISO 180/1A	kJ/m²	1,5
Thermal				
Coefficient of linear thermal expansion	-	ASTM D 696	10^-5/°C	7
Thermal conductivity	-	ISO 8302	W/(K·m)	0,17
Moulding shrinkage	-	ISO 294/4	%	0,3 - 0,6
Deflection temperature under load (annealed)	1,82 MPa - 120°C/h	ISO 75 A	°C	95
Vicat softening temperature	50 N - 50°C/h	ISO 306/B	°C	101
Vicat softening temperature	10 N - 50°C/h	ISO 306/A	°C	106
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	-	0,0002
Comparative tracking index (CTI)	Sol. A	IEC 60112	-	400
Surface resistivity	-	IEC 60093	10^15ohm	>1,5
Volume resistivity	-	IEC 60093	10^15ohm·cm	>7
Dielectric strength	-	IEC 60243	kV/mm	70