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Technical Data Sheet

EDISTIR ® N 2982

Polystyrene

General purpose polystyrene with very high flow and high heat resistance.

Special grade for direct gassing extrusion of heavy gauge insulating boards (XPS) foamed by blowing agents alternative to CFC and HCFC.
Low viscosity process-aid and modifier for compounding.

Designation: Thermoplastics ISO 1622-PS,E,105-20

Applications

XPS insulation panels with improved environmental compatibility.
Carrier for masterbatch.
Modifier for thermoplastic elastomers and rubbers (shoe soles, cable extrusion-coating).

Typical processing data

Extrusion: melt temperature 190-220°C

General information

N 2982 is certified UL94 HB "all colors" at 1.5 mm (UL file E83071).

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 Commission Regulation (EU) No 10/2011 and subsequent amendments).

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Properties	Test conditions	Test methods	Units	Values
General				
Density		ISO 1183	g/cm³	1.05
Bulk density		ISO 60	g/cm³	0.65
Water absorption	24 h - 23°C	ISO 62	%	<0.1
Rheological				
Melt flow rate	200°C - 5 kg	ISO 1133	g/10 min	25
Mechanical				
Tensile stress at yield	5 mm/min	ISO 527	MPa	-
Tensile stress at break	5 mm/min	ISO 527	MPa	30
Tensile strain at break	5 mm/min	ISO 527	%	1
Tensile modulus	1 mm/min	ISO 527	MPa	3150
Flexural strength	2 mm/min	ISO 178	MPa	40
Izod impact strength, notched	+23°C - thickness 3.2 mm	ISO 180/4A	J/m	-
	+23°C - thickness 4 mm	ISO 180/1A	kJ/m²	-
	-30°C - thickness 4 mm	ISO 180/1A	kJ/m²	-
Rockwell hardness	L/M scale	ISO 2039/2	-	-
Thermal				
Vicat softening temperature	10 N - 50°C/h	ISO 306/A	°C	106
	50 N - 50°C/h	ISO 306/B	°C	101
Deflection temperature under load (annealed)	1.8 MPa - 120°C/h	ASTM D 648	°C	89
Coefficient of linear thermal expansion		ASTM D 696	10^{-5}/°C	7
Thermal conductivity		ISO 8302	W/(K· m)	0.17
Moulding shrinkage		internal method	%	-
Flammability				
Flame behaviour	thickness 1.5 mm	UL 94	class	HB
Glow wire test (GWT)	thickness mm	IEC 60695-2-1	°C	-
Electrical				
Surface resistivity		IEC 60093	10^{15} ohm	-
Volume resistivity		IEC 60093	10^{15} ohm·cm	-
Comparative tracking index (CTI)	solution A	IEC 60112	-	-
Dielectric strength		IEC 60243	kV/mm	-
Dielectric constant (relative permittivity)	50 Hz	IEC 60250	-	-
Dissipation factor	50 Hz	IEC 60250	-	-

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Please consult the relevant safety data sheet for more detailed information.