



versalis

Technical Data Sheet

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EDISTIR[®]

N 2380

Polystyrene

High molecular weight general purpose polystyrene combining high heat resistance and good mechanical strength.

Suitable for direct gassing extrusion, for biaxially oriented films and sheets, for glass clear sheets and panels.

Also used in injection moulding of medium-thickness wall transparent parts.

Designation: Thermoplastics ISO 1622-PS,G,105-03

Applications

Uses range from foamed packaging trays, clear panels for shower cabins, insulation boards (XPS), OPS for labels and packaging to moulded fridge clear components, Petri dishes, technical parts.

Typical processing data

- | | |
|---------------------|-----------------------------------|
| Extrusion: | • melt temperature 210-240°C |
| Injection moulding: | • predrying normally not required |
| | • melt temperature 220-270°C |
| | • mould temperature 20-60°C |

General information

N 2380 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).

Properties	Test conditions	Test methods	Units	Values
General				
Density		ISO 1183	g/cm ³	1.05
Bulk density		ISO 60	g/cm ³	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	2
Mechanical				
Tensile stress at yield	5 mm/min	ISO 527	MPa	-
Tensile stress at break	5 mm/min	ISO 527	MPa	49
Tensile strain at break	5 mm/min	ISO 527	%	2.5
Tensile modulus	1 mm/min	ISO 527	MPa	3350
Flexural strength	2 mm/min	ISO 178	MPa	91
Izod impact strength, notched	+23°C - thickness 3.2 mm	ISO 180/4A	J/m	-
	+23°C - thickness 4 mm	ISO 180/1A	kJ/m ²	1.9
	-30°C - thickness 4 mm	ISO 180/1A	kJ/m ²	1.7
Rockwell hardness	L/M scale	ISO 2039/2	-	M80
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	95
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	%	0.3 - 0.6
Flammability				
Flame behaviour	thickness 1.5 mm	UL 94	class	HB
Glow wire test (GWT)	thickness 1.6 mm	IEC 60695-2-1	°C	650
Electrical				
Surface resistivity		IEC 60093	10 ¹⁵ ohm	>1.5
Volume resistivity		IEC 60093	10 ¹⁵ ohm·cm	>7
Comparative tracking index (CTI)	solution A	IEC 60112	-	425
Dielectric strength		IEC 60243	kV/mm	70
Dielectric constant (relative permittivity)	50 Hz	IEC 60250	-	2.5
Dissipation factor	50 Hz	IEC 60250	-	0,0002