

General purpose polystyrene with good flow and high heat resistance. N 3782 belongs to the third generation of Edistir® GPPS.

The third generation of versalis GPPS is characterised by a brighter, neutral appearance in line with more sophisticated market needs.

Suggested for direct gassing extrusion of heavy gauge insulating boards (XPS) and in blends with high concentrations of clear SBS for improving clarity and stiffness of the sheets.

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

Applications

Designed for insulation panels (XPS), clear sheets and clear thermoformed packaging.

Typical processing data

Extrusion:

- melt temperature 210-240°C

General information

This product in the natural version complies by composition with the requirements of the main Regulations for plastic materials intended to come into contact with food, including Regulation (EU) No 10/2011 and following amendments.



Property	Test Conditions	Test method	Units	Values
General				
Water absorption	24h - 23°C	ISO 62	%	<0,1
Density	-	ISO 1183	g/cm ³	1,05
Bulk density	-	ISO 60	g/cm ³	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/m ²	1,7
Izod impact strength, notched	-30°C - 4mm	ISO 180/1A	kJ/m ²	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	ASTM D 648	°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 60695-2-1	°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 ¹⁵ ohm	>1,5
Volume resistivity	-	IEC 60093	10 ¹⁵ ohm.cm	>7
Dielectric strength	-	IEC 60243	kV/mm	70

