



versalis

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Technical Data Sheet

**Edistir® N 3380**

Polystyrene

High molecular weight general purpose polystyrene combining high heat resistance and good mechanical strength. N 3380 belongs to Edistir® GPPS third generation.

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.

Thanks to N 3380, injected items will be more brilliant and neutral coloured in line with more sophisticated market needs.

The new colour will be not appreciable in covered applications.

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

## Applications

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

## Typical processing data

Extrusion:

melt temperature 210-240°C

Injection moulding:

predrying normally not required

melt temperature 220-270°C

suggested temperature around 240°C

mould temperature 20-60°C

## General information

N 3380 is certified UL94 HB "all colors" at 1.5 mm (internal test).

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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Propriety	Test Conditions	Test methods	Units	Values
<b>General</b>				
Water absorption	24h - 23°C	ISO 62	%	<0,1
Density	-	ISO 1183	g/cm <sup>3</sup>	1,05
Bulk density	-	ISO 60	g/cm <sup>3</sup>	0,65
<b>Rheological</b>				
Melt flow rate	200°C - 5kg	ISO 1133	g/10'	2
<b>Mechanical</b>				
Tensile strain at break	5 mm/min	ISO 527	%	2,5
Tensile stress at break	5 mm/min	ISO 527	MPa	49
Flexural strength	2 mm/min	ISO 178	MPa	91
Rockwell hardness	L/M	ISO 2039/2	-	M80
Tensile modulus	1 mm/min	ISO 527	MPa	3350
Izod impact strength, notched	+23°C - 4mm	ISO 180/1A	kJ/m <sup>2</sup>	1,9
Izod impact strength, notched	-30°C - 4mm	ISO 180/1A	kJ/m <sup>2</sup>	1,7
<b>Thermal</b>				
Coefficient of linear thermal expansion	-	ASTM D 696	10 <sup>-5</sup> /°C	7
Thermal conductivity	-	ISO 8302	W/(K·m)	0,17
Moulding shrinkage	-	ISO 294/4	%	03 - 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
<b>Flammability</b>				
Flame behaviour	1,5 mm	UL 94	cl.	HB
Glow wire test (GWT)	1,6 mm	IEC 60695-2-1	°C	650
<b>Electrical</b>				
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	-	425
Surface resistivity	-	IEC 60093	10 <sup>15</sup> ohm	>1,5
Volume resistivity	-	IEC 60093	10 <sup>15</sup> ohm	>7
Dielectric strength	-	IEC 60243	kV/mm	70

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

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