



versalis

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Technical Data Sheet

Edistir® N 3840

Polystyrene

General purpose polystyrene combining easy flow and medium heat. N 3840 belongs to Edistir® GPPS third generation.

Edistir® N 3840 is suggested in extrusion for glossy capping of HIPS sheets and for blending with HIPS or clear SBS for stiffer thermoformable sheets.

This grade exhibits excellent processability in injection moulding and it is recommended for complex and thin-wall parts and fast moulding cycles.

Thanks to N 3840, injected items will be more brilliant and neutral coloured in line with more sophisticated market needs.

Designation: Thermoplastics ISO 1622-PS,G,085-12.

Applications

Thermoformed disposable packaging and glossy sheets for industrial and fridge applications.

Injection of moulded beverage cups, containers for foods and cosmetics, toys, housewares, medical articles (Petri dishes).

Typical processing data

Extrusion:

melt temperature 210-240°C

Injection moulding:

predrying normally not required

melt temperature 200-250°C

suggested temperature around 220°C

mould temperature 10-50°C

General information

N 3840 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
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'	10
Mechanical				
Tensile strain at break	50 mm/min	ISO 527	%	1,8
Tensile stress at break	5 mm/min	ISO 527	MPa	39
Flexural strength	2 mm/min	ISO 178	MPa	69
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	84
Vicat softening temperature	50 N - 50°C/h	ISO 306/B	°C	88
Vicat softening temperature	10 N - 50°C/h	ISO 306/A	°C	92
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	-	375
Surface resistivity	-	IEC 60093	10 ¹⁵ ohm	>1,5
Volume resistivity	-	IEC 60093	10 ¹⁵ ohm	>7
Dielectric strength	-	IEC 60243	kV/mm	70

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

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