

## R 321P

### Polystyrene

### Technical Data Sheet

Edistir® R 321P is a high impact polystyrene combining easy flow and high stiffness.  
Edistir® R 321P is suitable for injection moulded items with low thickness and high stiffness.

Designation: Thermoplastics ISO 2897-PS-I,M,083-12-04-30

### Applications

Edistir® R 321P is suitable in a large variety of sectors such as:

- toys
- stationery
- small containers for packaging
- refrigerator components
- household articles
- disposable razors
- technical items.

### Typical processing data

Injection moulding:

- predrying normally not required
- melt temperature 200-250°C
- mould temperature 20-60°C

### Certification

✓ UL 94   ✓ IEC62323

Edistir® R 321P, as supplied in the original packaging, by composition is compliant to some existing regulations on plastic materials intended for food contact.

### Storage

- ⚠ Store away from atmospheric agents and direct sunlight, away from sources of heat and light.
- 🕒 The product, if stored correctly, keeps its characteristics for at least fifteen months.

### General information

Edistir® R 321P is available in different shades:

- natural
- white version - Versalis code 31630



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Property	Test Conditions	Test method	Units	Values
<b>General</b>				
Water absorption	24h - 23°C	ISO 62	%	< 0,1
Density	-	ISO 1183	g/cm <sup>3</sup>	1,04
Bulk density	-	ISO 60	g/cm <sup>3</sup>	0,65
<b>Rheological</b>				
Melt flow rate	200°C - 5kg	ISO 1133	g/10'	15
<b>Mechanical</b>				
Tensile strain at break	50 mm/min	ISO 527	%	40
Tensile stress at break	50 mm/min	ISO 527	MPa	20
Tensile stress at yield	50 mm/min	ISO 527	MPa	26
Flexural strength	2 mm/min	ISO 178	MPa	45
Rockwell hardness	L/M	ISO 2039/2	-	L83
Tensile modulus	1 mm/min	ISO 527	MPa	2400
Izod impact strength, notched	-30°C - 4mm	ISO 180/1A	kJ/m <sup>2</sup>	3,5
Izod impact strength, notched	+23°C - 4mm	ISO 180/1A	kJ/m <sup>2</sup>	5
<b>Thermal</b>				
Coefficient of linear thermal expansion	-	ASTM D 696	10 <sup>-5</sup> /°C	9
Thermal conductivity	-	ISO 8302	W/(K.m)	0,17
Moulding shrinkage	-	ISO 294/4	%	0,4 - 0,7
Deflection temperature under load (annealed)	1,82 MPa - 120°C/h	ISO 75 A	°C	80
Vicat softening temperature	50 N - 50°C/h	ISO 306/B	°C	85
Vicat softening temperature	10 N - 50°C/h	ISO 306/A	°C	94
<b>Flammability</b>				
Flame behaviour	1,5 mm	UL 94	cl.	HB
Glow wire test (GWT)	1,6 mm	IEC 60695-2-10	°C	650
<b>Electrical</b>				
Dielectric constant (relative permittivity)	50 Hz	IEC 60250	-	2,5
Dissipation factor	50 Hz	IEC 60250	-	0,0003
Comparative tracking index (CTI)	Sol. A	IEC 60112	-	375
Surface resistivity	-	IEC 60093	10 <sup>15</sup> ohm	> 1,5
Volume resistivity	-	IEC 60093	10 <sup>15</sup> ohm-cm	> 7
Dielectric strength	-	IEC 60243	kV/mm	65

