

Edistir® R 321P

Medium Impact Polystyrene

Versalis S.p.A.

Message:

Medium impact polystyrene combining easy flow and high stiffness.
For injection moulding of parts with low thickness and high rigidity.
Designation: Thermoplastics ISO 2897-PS-I,M,O83-12-04-30
Applications
Typical uses are toys, stationery, small containers for packaging, refrigerator components, point of sales, household wares, disposable razors, technical items.

General Information			
UL YellowCard	E157138-100607766		
Features	Rigidity, high		
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	Good liquidity		
	Compliance of Food Exposure		
	Medium impact resistance		
Uses	Packaging		
	Low temperature application		
	Electrical/Electronic Applications		
	Household goods		
	Container		
	Toys		
	Stationery		
	Consumer goods application field		
Agency Ratings	Europe No 10/2011		
UL File Number	E83071		
Forms	Particle		
Processing Method	Injection molding		
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1)		
	Secant Modulus vs. Strain (ISO 11403-1)		
	Shear Modulus vs. Temperature (ISO 11403-1)		
	Specific Volume vs Temperature (ISO 11403-2)		
	Viscosity vs. Shear Rate (ISO 11403-2)		
Physical	Nominal Value	Unit	Test Method
Density	1.04	g/cm ³	ISO 1183
Apparent Density	0.65	g/cm ³	ISO 60
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	15	g/10 min	ISO 1133

Molding Shrinkage	0.40 - 0.70	%	Internal method
Water Absorption (23°C, 24 hr)	< 0.10	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (L-Scale)	83		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2400	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield	24.0	MPa	ISO 527-2/50
Fracture	19.0	MPa	ISO 527-2/50
Tensile Strain (Break)	40	%	ISO 527-2/50
Flexural Stress ¹	45.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C, 3.20 mm	68	J/m	ISO 180/4A
-30°C	3.5	kJ/m ²	ISO 180/1A
23°C	5.0	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Annealed)	80.0	°C	ASTM D648
Vicat Softening Temperature			
--	94.0	°C	ISO 306/A50
--	85.0	°C	ISO 306/B50
CLTE - Flow	9.0E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.17	W/m/K	ISO 8302
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.5E+15	ohms	IEC 60093
Volume Resistivity	> 7.0E+15	ohms·cm	IEC 60093
Dielectric Strength	65	kV/mm	IEC 60243-1
Dielectric Constant (50 Hz)	2.50		IEC 60250
Dissipation Factor (50 Hz)	3.0E-4		IEC 60250
Comparative Tracking Index (Solution A)	375	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm, All Colors)	HB		UL 94
Glow Wire Ignition Temperature (1.60 mm)	650	°C	IEC 60695-2-13
Additional Information	Nominal Value		
Designation	Thermoplastics ISO 2897-PS-I,M,083-12-04-30		
Injection	Nominal Value	Unit	
Processing (Melt) Temp	200 - 250	°C	
Mold Temperature	20.0 - 60.0	°C	
Injection instructions			
Predrying normally not required			
NOTE			

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

