

Edistir® R 540E

High Impact Polystyrene

Versalis S.p.A.

Message:

HIPS with high stiffness, matt surface finish and good heat resistance.
Suitable for general extrusion of thick sheets and profiles. Also used for injection mouldings.
Designation: Thermoplastics ISO 2897-PS-I,G,O93-O3-O7-18
Applications
To be used in industrial panels for appliances and buildings. Injection moulding of shoe heels.

General Information			
UL YellowCard		E157138-100607767	
Features		Rigidity, high	
		Heat resistance, medium	
		Compliance of Food Exposure	
Uses		Industrial application	
		Sheet	
		Footwear	
		Profile	
		Reinforced panel	
Agency Ratings		Europe No 10/2011	
UL File Number		E83071	
Appearance		Rough surface polishing	
Forms		Particle	
Processing Method		Extrusion	
		Sheet extrusion molding	
		Profile extrusion molding	
		Injection molding	
Multi-Point Data		Isothermal Stress vs. Strain (ISO 11403-1)	
		Secant Modulus vs. Strain (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)	4.0	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)	70		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2000	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield	24.0	MPa	ISO 527-2/50
Fracture	29.0	MPa	ISO 527-2/50
Tensile Strain (Break)	60	%	ISO 527-2/50
Flexural Stress ¹	43.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C, 3.20 mm	100	J/m	ISO 180/4A
-30°C	6.0	kJ/m ²	ISO 180/1A
23°C	8.0	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Annealed)	86.0	°C	ASTM D648
Vicat Softening Temperature			
--	100	°C	ISO 306/A50
--	92.0	°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)	500	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,G,093-03-07-18		
Injection	Nominal Value	Unit	
Processing (Melt) Temp	210 - 260	°C	
Mold Temperature	20.0 - 60.0	°C	
Injection instructions			
Predrying normally not required			
Extrusion	Nominal Value	Unit	
Melt Temperature	210 - 240	°C	

NOTE

1. 2.0 mm/min

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