

Edistir® SR 550

High Impact Polystyrene

Versalis S.p.A.

Message:

High impact, easy flow polystyrene with good elasticity at low temperatures.

Suitable for injection moulding of large or complex parts with low thickness and high impact strength.

Designation: Thermoplastics ISO 2897-PS-I,M,O83-12-07-18

Applications

Toys, housewares, technical items.

General Information	
UL YellowCard	E157138-238214
Features	High elasticity
	Impact resistance, high
	Good liquidity
	Compliance of Food Exposure
Uses	Thin wall parts
	Electrical/Electronic Applications
	Household goods
	Toys
Agency Ratings	Europe No 10/2011
UL File Number	E83071
Appearance	Natural color
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 Heat vs. Temperature (ISO 11403-2)
	Specific Volume vs Temperature (ISO 11403-2)
	Viscosity vs. Shear Rate (ISO 11403-2)

Physical	Nominal Value	Unit	Test Method
Density	1.04	g/cm³	ISO 1183
Apparent Density	0.65	g/cm³	ISO 60
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	11	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)	60		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1700	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield	18.0	MPa	ISO 527-2/50
Fracture	17.0	MPa	ISO 527-2/50
Tensile Strain (Break)	55	%	ISO 527-2/50
Flexural Stress ¹	32.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C, 3.20 mm	110	J/m	ISO 180/4A
-30°C ²	6.5	kJ/m ²	ISO 180/1A
23°C ³	9.0	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Annealed)	81.0	°C	ASTM D648
Vicat Softening Temperature			
--	90.0	°C	ISO 306/A50
--	82.0	°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,M,083-12-07-18		
Injection	Nominal Value	Unit	
Processing (Melt) Temp	200 - 250	°C	
Mold Temperature	20.0 - 60.0	°C	
Injection instructions			
Predrying normally not required			
NOTE			
1.	2.0 mm/min		
2.	4mm		
3.	4mm		

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