Edistir® R 850E

High Impact Polystyrene

Versalis S.p.A.

Message:

Super high impact polystyrene with good heat resistance.
Designed for sheet extrusion and thermoforming of deep drawn containers even diluted with high percentage of GP.
Suitable for general injection moulding of tough medium-walled articles.
Designation: Thermoplastics ISO 2897-PS-I,G,O93-O3-10-18
Applications
Typical uses are thermoformed food packaging as disposable tumblers, flatwares, yoghurt cups, lids. Injection moulding of technical items, shoe heels, reels.

General Information	
UL YellowCard	E157138-238210
Features	Impact resistance, high Heat resistance, high Good toughness Compliance of Food Exposure Disposable
Uses	Cup Cover Sheet Container Food packaging Footwear
Agency Ratings	Europe No 10/2011
UL File Number	E83071
Forms	Particle
Processing Method	Film extrusion Blow molding Extrusion Sheet extrusion molding Thermoforming Profile extrusion molding 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)	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)	65		ISO 2039-2
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	1750	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield	21.0	MPa	ISO 527-2/50
Fracture	24.0	MPa	ISO 527-2/50
Tensile Strain (Break)	60	%	ISO 527-2/50
Flexural Stress [1]	38.0	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact			
23°C, 3.20 mm	130	J/m	ISO 180/4A
-30°C	6.5	kJ/m²	ISO 180/1A
23°C	10	kJ/m²	ISO 180/1A
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Annealed)	85.0	°C	ASTM D648
Vicat Softening Temperature			
--	99.0	°C	ISO 306/A50
--	91.0	°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,093-03-10-18	
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	

Recommended distributors for this material

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