

Edistir® RT 441M

High Impact Polystyrene

Versalis S.p.A.

Message:

High impact polystyrene combining high toughness and high stiffness with good flowability for easy processing.

Designed for injection moulding of technical parts, housings and covers.

Especially recommended for gas assisted technology.

RT 441M is certified BS1415/94 acc. IEC65-20-2 at 2.5 mm.

Designation: Thermoplastics ISO 2897-PS-I,M,O88-O6-07-18

Applications

Business machine covers, electrical appliances, electroventilator housings, consumer electronics, front frames, cabinet and back cover for TV sets.

General Information			
UL YellowCard	E157138-238211		
Features	Ultra high toughness		
	Rigidity, high		
	Impact resistance, high		
	Workability, good		
	Good liquidity		
	Compliance of Food Exposure		
Uses	Protective cover		
	Electrical/Electronic Applications		
	Electrical appliances		
	TV housing		
	Business equipment		
	Shell		
Agency Ratings	Europe No 10/2011		
UL File Number	E83071		
Forms	Particle		
Processing Method	Injection molding		
Multi-Point Data	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)	7.5	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)	75		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method

Tensile Modulus	2000	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield	22.0	MPa	ISO 527-2/50
Fracture	24.0	MPa	ISO 527-2/50
Tensile Strain (Break)	60	%	ISO 527-2/50
Flexural Stress ¹	45.0	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	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)	84.0	°C	ASTM D648
Vicat Softening Temperature			
--	97.0	°C	ISO 306/A50
--	89.0	°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)	3.1E-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,088-06-07-18		
Injection	Nominal Value	Unit	
Processing (Melt) Temp	210 - 260	°C	
Mold Temperature	20.0 - 60.0	°C	
Injection instructions			
Predrying normally not required			
NOTE			
1.	2.0 mm/min		

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