

Ultrason® E 1010

Polyethersulfone

BASF Corporation

Message:

Ultrason E 1010 is an unreinforced, low viscosity injection molding PESU grade. It flows readily and offers outstanding heat resistance and dimensional stability.

Applications

Typical applications include automotive applications such as fuse encapsulation, connectors, heating system and headlight components and household applications such as microwave dishes and other applications requiring high heat resistance.

General Information			
UL YellowCard	E41871-100482335		
Features	Good Dimensional Stability		
	Good Flow		
	High Heat Resistance		
	Low Viscosity		
Uses	Automotive Applications		
	Automotive Electronics		
	Connectors		
	Household Goods		
Agency Ratings	EC 1907/2006 (REACH)		
RoHS Compliance	RoHS Compliant		
Forms	Pellets		
Processing Method	Injection Molding		
Multi-Point Data	Creep Modulus vs. Time (ISO 11403-1)		
	Isochronous Stress vs. Strain (ISO 11403-1)		
	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	1.37	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (360°C/10.0 kg)	150	cm³/10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	0.82	%	
Flow	0.79	%	
Water Absorption			ISO 62
Saturation, 23°C	2.2	%	

Equilibrium, 23°C, 50% RH	0.80	%	
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	154	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	2650	MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	85.0	MPa	ISO 527-2
Tensile Strain (Yield, 23°C)	6.8	%	ISO 527-2
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179
-30°C	7.0	kJ/m ²	
23°C	6.5	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179
-30°C	No Break		
23°C	No Break		
Notched Izod Impact Strength			ISO 180
-30°C	7.0	kJ/m ²	
23°C	6.5	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	203	°C	ISO 75-2/A
CLTE - Flow	5.2E-5	cm/cm/°C	
RTI Elec			UL 746
1.60 mm	180	°C	
3.00 mm	180	°C	
RTI Imp			UL 746
1.60 mm	180	°C	
3.00 mm	180	°C	
RTI Str			UL 746
1.60 mm	190	°C	
3.00 mm	190	°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+13	ohms · cm	IEC 60093
Electric Strength	37	kV/mm	IEC 60243-1
Dielectric Constant			IEC 60250
100 Hz	3.90		
1 MHz	3.80		
Dissipation Factor			IEC 60250
100 Hz	1.7E-3		
1 MHz	0.014		
Comparative Tracking Index	125	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method

Flame Rating		UL 94
1.60 mm	V-1	
3.00 mm	V-0	
Injection	Nominal Value	Unit
Drying Temperature	130 to 150	°C
Drying Time	4.0	hr
Suggested Max Moisture	0.020	%
Processing (Melt) Temp	340 to 390	°C
Mold Temperature	140 to 180	°C
Injection Pressure	3.50 to 12.5	MPa
Injection Rate	Fast	

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