

Ultrason® E 2010 G4

Polyethersulfone

BASF Corporation

Message:

Ultrason E 2010 G4 is a 20% glass reinforced, medium viscosity injection molding PESU grade with high rigidity and strength.

Applications

Typical applications include circuit breaker parts, lamp holders, heat shields, impellers, and printer cartridges.

General Information			
UL YellowCard	E41871-100525366		
Filler / Reinforcement	Glass Fiber,20% Filler by Weight		
Features	High Rigidity		
	High Strength		
	Medium Viscosity		
Uses	Electrical Parts		
	Printer Parts		
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)		
	Shear Modulus vs. Temperature (ISO 11403-1)		
	Specific Volume vs Temperature (ISO 11403-2)		
	Viscosity vs. Shear Rate (ISO 11403-2)		
Physical	Nominal Value	Unit	Test Method
Density	1.50	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (360°C/10.0 kg)	29.0	cm³/10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	0.61	%	
Flow	0.36	%	
Water Absorption			ISO 62
Saturation, 23°C	1.6	%	
Equilibrium, 23°C, 50% RH	0.60	%	
Hardness	Nominal Value	Unit	Test Method

Ball Indentation Hardness	205	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	6900	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	130	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	3.2	%	ISO 527-2
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179
-30°C	8.0	kJ/m ²	
23°C	8.0	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179
-30°C	65	kJ/m ²	
23°C	60	kJ/m ²	
Notched Izod Impact Strength			ISO 180
-30°C	8.0	kJ/m ²	
23°C	8.0	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	222	°C	ISO 75-2/A
CLTE - Flow	2.0E-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	4.20		
1 MHz	4.20		
Dissipation Factor			IEC 60250
100 Hz	2.0E-3		
1 MHz	0.010		
Comparative Tracking Index	125	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.60 mm	V-0		

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	350 to 390	°C
Mold Temperature	150 to 190	°C
Injection Pressure	3.50 to 12.5	MPa
Injection Rate	Fast	

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