

Ultrason® E 3010

Polyethersulfone

BASF Corporation

Message:

Ultrason E 3010 is an unfilled, higher viscosity injection molding and extrusion PESU grade, tougher and with improved chemical resistance.

General Information			
UL YellowCard	E41871-100482336		
Features	Good Chemical Resistance		
	Good Toughness		
	High Viscosity		
Agency Ratings	EC 1907/2006 (REACH)		
RoHS Compliance	RoHS Compliant		
Forms	Pellets		
Processing Method	Extrusion		
	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	1.37	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (360°C/10.0 kg)	35.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	0.90	%	
Flow	0.85	%	
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)	6.9	%	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	No Break		
23°C	No Break		
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)	207	°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	34	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-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	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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