

# Ultrason® E 2010

## Polyether Sulfone

### BASF Corporation

**Product Description**  
Ultrason E 2010 is an unreinforced, medium viscosity standard injection molding PES grade. It flows readily and offers outstanding heat resistance and dimensional stability. It conforms to FDA requirements of 21 CFR 177.2440.

General			
Material Status	• Commercial: Active		
Availability	• Europe	• North America	
Additive	• Heat Stabilizer	• Impact Modifier	
Features	• Flame Retardant • General Purpose • Good Dimensional Stability • Good Flow	• Heat Stabilized • High Heat Resistance • High Rigidity • Impact Modified	• Medium Viscosity • Platable
Uses	• Automotive Applications • Automotive Electronics	• Electrical Parts • Film	
Agency Ratings	• FDA 21 CFR 177.2440 • NSF 14	• NSF 51 • NSF 61	
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent	• Colors Available	• Natural Color
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 11403-2) • Specific Volume vs. Temperature (ISO 11403-2)	• Viscosity vs. Shear Rate (ISO 11403-2)

Physical	Nominal Value	Unit	Test Method
Specific Gravity	--	1.37 g/cm <sup>3</sup>	ASTM D792
	--	1370 kg/m <sup>3</sup>	ISO 1183 <sup>2</sup>
Melt volume-flow rate (360°C/10.0 kg)	77.0 cm <sup>3</sup> /10min		ISO 1133 <sup>2</sup>
Molding Shrinkage			
Flow: 3.18 mm	0.70 %		ASTM D955
Across Flow	0.79 %		ISO 294-4
Flow	0.85 %		ISO 294-4
Water Absorption			
Saturation	2.1 %		ASTM D570 ISO 62 <sup>2</sup>
Equilibrium, 50% RH	0.70 %		ASTM D570
Equilibrium	0.70 %		ISO 62 <sup>2</sup>
Mechanical	Nominal Value	Unit	Test Method
Tensile modulus	2700	MPa	ISO 527-2 <sup>2</sup>
Tensile Strength			
Yield, 23°C	90.0	MPa	ASTM D638
Yield	90.0	MPa	ISO 527-2 <sup>2</sup>
Tensile Elongation			
Yield, 23°C	6.7 %		ASTM D638
Yield	6.7 %		ISO 527-2 <sup>2</sup>
Break, 23°C	40 %		ASTM D638
Nominal strain at break	40 %		ISO 527-2 <sup>2</sup>
Tensile Creep Modulus			ISO 899-1 <sup>2</sup>
1 hr	2800	MPa	
1000 hr	2700	MPa	
Flexural Modulus			
23°C	2600	MPa	ASTM D790
23°C	2860	MPa	ISO 178
Flexural Strength (23°C)	131	MPa	ISO 178

Dongguan Yi-Ming Plastic Chemical Co., Ltd.

如需要更多物性资料请查阅 [www.kedisujiao.com](http://www.kedisujiao.com)

备注：以上原料物性数据由厂家发布,我公司仅提供参考！数据如有变动，请联系原料生产厂家获知。我公司不承担任何法律责任！

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Impact	Nominal Value	Unit	Test Method
Charpy notched impact strength			ISO 179/1eA <sup>2</sup>
-30°C	7.00	kJ/m <sup>2</sup>	
23°C	7.00	kJ/m <sup>2</sup>	
Charpy Unnotched Impact Strength			ISO 179
-30°C	No Break		
23°C	No Break		
Notched Izod Impact (23°C)	59.0	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed	208	°C	ASTM D648
1.8 MPa, Unannealed	195	°C	ASTM D648
1.8 MPa	195	°C	ISO 75-2 <sup>2</sup>
CLTE - Flow	0.000055	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity <sup>3</sup>	1.0E+14	ohms	ASTM D257 IEC 60093 <sup>2</sup>
Volume Resistivity			
1.50 mm	> 1.0E+13	ohm·cm	ASTM D257
--	> 1.0E+11	ohm·m	IEC 60093 <sup>2</sup>
Relative Permittivity			IEC 60250 <sup>2</sup>
100 Hz	3.90		
1 MHz	3.80		
Dissipation Factor			IEC 60250 <sup>2</sup>
100 Hz	17		
1 MHz	140		
Comparative tracking index	100		IEC 60112 <sup>2</sup>
Electric strength	35	kV/mm	IEC 60243-1 <sup>2</sup>
Flammability	Nominal Value	Unit	Test Method
Flame Rating - UL (1.50 mm)	V-0		UL 94
UL 746	Nominal Value	Unit	Test Method
RTI Str (1.50 mm)	190	°C	UL 746
RTI Imp (1.50 mm)	180	°C	UL 746
RTI Elec (1.50 mm)	180	°C	UL 746
Injection	Nominal Value	Unit	
Drying Temperature	130 to 150	°C	
Drying Time	2.0 to 4.0	hr	
Suggested Max Moisture	0.020	%	
Processing (Melt) Temp	330 to 390	°C	
Mold Temperature	120 to 160	°C	
Injection Pressure	3.50 to 12.5	MPa	
Injection Rate	Fast		

**Notes**

- <sup>1</sup> Typical properties: these are not to be construed as specifications.  
<sup>2</sup> Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.  
<sup>3</sup> 1.5 mm