



Ultrason® E 2010

BASF Corporation - Polyethersulfone

Monday, November 10, 2014

General Information

Product Description

Ultrason E 2010 is an unreinforced, medium viscosity standard injection molding PESU grade. Ultrason E 2010 Natural 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

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Features	• Good Dimensional Stability • Good Flow	• High Heat Resistance • Medium Viscosity	
Uses	• Automotive Applications • Automotive Electronics	• Connectors • Household Goods	
Agency Ratings	• EC 1907/2006 (REACH)		
RoHS Compliance	• RoHS Compliant		
Automotive Specifications	• FORD WSB-M4D592-A	• FORD WSK-M4D592-A Color: Natural	• FORD WSK-M4D592-A Color: 10018 Black
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.37	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (360°C/10.0 kg)	4.27	in ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	0.86	%	
Flow	0.82	%	
Water Absorption (Saturation, 73°F)	2.2	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.80	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	384000	psi	ISO 527-2
Tensile Stress (Yield, 73°F)	12300	psi	ISO 527-2
Tensile Strain (Yield, 73°F)	6.9	%	ISO 527-2
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179
-22°F	3.6	ft-lb/in ²	
73°F	3.3	ft-lb/in ²	
Charpy Unnotched Impact Strength			ISO 179
-22°F	No Break		
73°F	No Break		
Notched Izod Impact Strength			ISO 180
-22°F	3.6	ft-lb/in ²	
73°F	3.3	ft-lb/in ²	



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Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	22300	psi	ISO 2039-1
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (264 psi, Unannealed)	401	°F	ISO 75-2/A
CLTE - Flow	2.9E-5	in/in/°F	
RTI Elec			UL 746
0.0630 in	356	°F	
0.118 in	356	°F	
RTI Imp			UL 746
0.0630 in	356	°F	
0.118 in	356	°F	
RTI Str			UL 746
0.0630 in	374	°F	
0.118 in	374	°F	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohm	IEC 60093
Volume Resistivity	> 1.0E+13	ohm·cm	IEC 60093
Electric Strength	940	V/mil	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
0.0630 in	V-0		
0.118 in	V-0		

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	266 to 302	°F
Drying Time	4.0	hr
Suggested Max Moisture	0.020	%
Processing (Melt) Temp	644 to 734	°F
Mold Temperature	284 to 356	°F
Injection Pressure	508 to 1810	psi
Injection Rate	Fast	

Notes

¹ Typical properties: these are not to be construed as specifications.