

Ultrason® E 2010 MR SW 10111

Polyethersulfone

BASF Corporation

Message:

Unreinforced, medium viscosity standard injection moulding grade, demolding optimized.

General Information			
Features	Medium Viscosity		
Agency Ratings	EC 1907/2006 (REACH)		
RoHS Compliance	RoHS Compliant		
Forms	Pellets		
Processing Method	Blow Molding		
	Extrusion		
	Injection Molding		
Resin ID (ISO 1043)	PESU		
Physical	Nominal Value	Unit	Test Method
Density	1.37	g/cm ³	ISO 1183
Apparent Density	0.70 to 0.80	g/cm ³	
Melt Volume-Flow Rate (MVR) (360°C/10.0 kg)	70.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	0.86	%	
Flow	0.82	%	
Water Absorption			ISO 62
Saturation, 23°C	2.2	%	
Equilibrium, 23°C, 50% RH	0.80	%	
Viscosity Number ¹	56.0	cm ³ /g	ISO 307
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 358/30)	154	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2650	MPa	ISO 527-2
Tensile Stress (Yield)	85.0	MPa	ISO 527-2/50
Tensile Strain (Yield)	6.9	%	ISO 527-2/50
Tensile Creep Modulus ² (1000 hr)	2700	MPa	ISO 899-1
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	7.0	kJ/m ²	
23°C	6.5	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU

-30°C	No Break		
23°C	No Break		
Notched Izod Impact Strength			ISO 180/A
-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)	205	°C	ISO 75-2/A
Glass Transition Temperature ³	225	°C	ISO 11357-2
CLTE - Flow			
23 to 80°C	5.2E-5	cm/cm/°C	ISO 11359-2
180°C	5.9E-5	cm/cm/°C	DIN 53752
Maximum Service Temperature - short cycle operation	220	°C	
Screw Speed	< 300	mm/sec	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 1.0E+15	ohms · cm	IEC 60093
Electric Strength	37	kV/mm	IEC 60243-1
Relative Permittivity			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			IEC 60112
Solution A	100	V	
Solution B	100	V	
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	140	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	80.0	°C	
Rear Temperature	340	°C	
Middle Temperature	350	°C	
Front Temperature	360	°C	
Nozzle Temperature	360	°C	
Processing (Melt) Temp	340 to 390	°C	
Mold Temperature	140 to 180	°C	
NOTE			

1.	in 0,01 g/ml Phenol/1,2, ortho-Dichlorbenzol, 1:1
2.	strain <= 0,5%, 23°C
3.	10°C/min

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