

Ultrason® E KR 4113

Polyethersulfone

BASF Corporation

Message:

Compound based on PES with 30 % filler. The filler system, a mixture of carbon fibres, graphite and PTFE powder, considerably improves Ultrason tribological properties. In addition, this product has a very small expansion coefficient and low tendency to swell in hot oils.

General Information			
Filler / Reinforcement	Carbon\Graphite\PTFE,30% Filler by Weight		
Agency Ratings	EC 1907/2006 (REACH)		
RoHS Compliance	RoHS Compliant		
Forms	Pellets		
Processing Method	Extrusion		
	Injection Molding		
Resin ID (ISO 1043)	PESU+ PTFE-(CF+CD)		
Physical	Nominal Value	Unit	Test Method
Density	1.48	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)	10.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	0.46	%	
Flow	0.31	%	
Water Absorption			ISO 62
Saturation, 23°C	1.5	%	
Equilibrium, 23°C, 50% RH	0.50	%	
Viscosity Number ¹	56.0	cm ³ /g	ISO 307
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 961/30)	180	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	11000	MPa	ISO 527-2
Tensile Stress (Break)	115	MPa	ISO 527-2
Tensile Strain (Break)	1.5	%	ISO 527-2
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	5.0	kJ/m ²	
23°C	6.5	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	20	kJ/m ²	
23°C	24	kJ/m ²	

Notched Izod Impact Strength			ISO 180/A
-30°C	5.5	kJ/m ²	
23°C	6.5	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	223	°C	ISO 75-2/A
Glass Transition Temperature ²	225	°C	ISO 11357-2
CLTE - Flow			
23 to 80°C	1.1E-5	cm/cm/°C	ISO 11359-2
180°C	1.3E-5	cm/cm/°C	DIN 53752
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	4.0E+3	ohms	IEC 60093
Volume Resistivity	9.0E+5	ohms·cm	IEC 60093
Electric Strength	8.0	kV/mm	IEC 60243-1
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	350	°C	
Middle Temperature	360	°C	
Front Temperature	370	°C	
Nozzle Temperature	370	°C	
Processing (Melt) Temp	350 to 390	°C	
Mold Temperature	150 to 190	°C	
Screw Speed	< 300	mm/sec	
NOTE			
1.	in 0,01 g/ml Phenol/1,2, ortho-Dichlorbenzol, 1:1		
2.	10°C/min		

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