

Bakelite® EP 8412

Epoxy; Epoxide

Hexion Inc.

Message:

Product Description

Epoxy moulding compound, inorganically filled, glass fibre reinforced, heat resistant, dimensionally stable, good electric and mechanical properties, very good chemical resistance, low viscosity, UL listed (RTI 155°C)

Application Areas

Encapsulation of electric parts, e.g. electromagnetic coil

General Information			
Filler / Reinforcement	Glass Fiber		
	Inorganic		
Features	Arc Resistant		
	Good Chemical Resistance		
	Good Dimensional Stability		
	Good Electrical Properties		
	Low Shrinkage		
	Low Viscosity		
	Medium Heat Resistance		
Uses	Electrical/Electronic Applications		
Processing Method	Compression Molding		
	Encapsulating		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.89	g/cm ³	ISO 1183
Apparent Density	0.85	g/cm ³	ISO 60
Molding Shrinkage			ISO 2577
-- 1	0.25	%	
-- 2	0.30	%	
Water Absorption - 24h/23C	6.0	mg	ISO 62
Post Shrinkage			ISO 2577
-- 3	0.020	%	
-- 4	0.010	%	
Compression Molding Molding Pressure	> 10.0	MPa	
Compression Molding Temperature	160 to 190	°C	
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 961/30)	400	MPa	ISO 2039-1

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	13000	MPa	ISO 527-2/1
Tensile Stress	55.0	MPa	ISO 527-2/5
Flexural Modulus	15500	MPa	ISO 178
Flexural Stress ⁵	125	MPa	ISO 178
Compressive Stress	250	MPa	ISO 604
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	4.0	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	8.5	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (8.0 MPa, Unannealed)	120	°C	ISO 75-2/C
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+12	ohms	IEC 60093
Volume Resistivity	1.0E+13	ohms·cm	IEC 60093
Electric Strength ⁶ (1.00 mm)	29	kV/mm	IEC 60243-1
Relative Permittivity (100 Hz)	5.50		IEC 60250
Dissipation Factor (100 Hz)	0.020		IEC 60250
Comparative Tracking Index (Solution A)	250	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm, Black)	HB		UL 94
Injection	Nominal Value	Unit	
Rear Temperature	60.0 to 75.0	°C	
Nozzle Temperature	70.0 to 100	°C	
Processing (Melt) Temp	90.0 to 100	°C	
Mold Temperature	170 to 190	°C	
Injection Pressure	> 10.0	MPa	
Back Pressure	0.500 to 2.00	MPa	
NOTE			
1.	Compression		
2.	Injection		
3.	Injection		
4.	Compression		
5.	2.0 mm/min		
6.	short term, electrode layout P25mm/P25mm in transformer oil equivalent to IEC 60296		

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