

FARBOSET® 5000

Epoxy; Epoxide

Cosmic Plastics, Inc.

Message:

Cosmic FARBOSET 5000 Black is a mineral and glass filled epoxy molding compound featuring fast cure rates, low abrasion and excellent hot strength. It is designed for the encapsulation of coils, transformers, switches and other electrical components requiring good hot rigidity in molding. It's low abrasion characteristics makes 5000 especially suited for the encapsulation of solenoid valves.

General Information			
Filler / Reinforcement	Glass Fiber		
	Mineral		
Features	Fast Cure		
	Good Abrasion Resistance		
	High Rigidity		
Uses	Electrical/Electronic Applications		
Appearance	Black		
Forms	Granules		
Processing Method	Encapsulating		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.88	g/cm ³	
Apparent Density ¹	1.00	g/cm ³	
Spiral Flow	66.0	cm	
Molding Shrinkage - Flow	0.60	%	
Water Absorption (23°C, 24 hr)	0.040	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	75		ASTM D2240
Mechanical	Nominal Value	Unit	
Tensile Strength	65.5	MPa	
Flexural Modulus	13400	MPa	
Flexural Strength	114	MPa	
Compressive Strength	283	MPa	
Impact	Nominal Value	Unit	
Notched Izod Impact	16	J/m	
Thermal	Nominal Value	Unit	
Glass Transition Temperature	150	°C	
CLTE - Flow			
-- ²	2.7E-5	cm/cm/°C	
-- ³	7.9E-5	cm/cm/°C	
Thermal Conductivity	0.67	W/m/K	

Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+16	ohms	
Volume Resistivity	> 5.0E+16	ohms·cm	
Dielectric Strength ⁴ (3.18 mm)	> 16	kV/mm	
Dielectric Constant (1 kHz)	4.50		
Dissipation Factor (1 kHz)	7.0E-3		
Arc Resistance	180	sec	
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.59 mm)	HB		UL 94
Thermoset	Nominal Value	Unit	
Shelf Life ⁵			
5°C	52	wk	
25°C	1.0	wk	
35°C	0.29	wk	
Additional Information	Nominal Value	Unit	
Loss Factor - 1 kHz	0.0320		
Uncured Properties	Nominal Value	Unit	
Curing Time (150°C)	0.017 to 0.050	hr	
Gel Time ⁶	0.50	min	
Injection	Nominal Value	Unit	
Processing (Melt) Temp	150 to 180	°C	
Injection Pressure	0.345 to 6.89	MPa	
NOTE			
1.	Powder		
2.	Alpha 1		
3.	Alpha 2		
4.	Method A (Short-Time)		
5.	Defined as not more than 40% loss of spiral flow based on original values.		
6.	150°C/1000 psi		

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