



**Cosmic Plastics Inc**  
HELPING MOLD THE FUTURE



Registered To ISO 9001:2008  
Ref. No. 10000711

## TECHNICAL DATA SHEET

**FARBOSET® 5000**

**DESCRIPTION** Cosmic FARBOSET 5000 is a mineral and glass-filled, novolac epoxy molding compound featuring fast cure rates, excellent hot strength, and low abrasion, making it especially suited for encapsulation of solenoid coils.

**APPLICATIONS** It is designed to encapsulate coils, transformers, switches and other electrical components requiring good hot rigidity in molding.

### MATERIAL INFORMATION & PROPERTIES

MOLDING INFORMATION	SPECIFICATIONS	DATA
Bulk Density (powder)	gm/cc	1.0
Molding Pressure	kg/cm <sup>2</sup> psi	3.5 – 70 50 – 1,000
Molding Temperature	°C °F	150 – 180 302 – 356
Mold Shrinkage	in/in	0.006
Cure Time	minutes @ 150 °C (302 °F)	1 - 3
Ram Follower Gel Time	seconds @ 150 °C (302 °F) / 1000 psi	30
Molded Density	gm/cc	1.88
Spiral Flow, (EMMI 1-66A)	cm (in)	66 (26)

MOISTURE PROPERTIES	SPECIFICATIONS	DATA
Water Absorption, %	24 hrs @ 23 °C (73 °F)	0.04

MECHANICAL PROPERTIES	SPECIFICATIONS	DATA
Flexural Strength	psi kg/cm <sup>2</sup>	16,500 1,160
Flexural Modulus	psi x 10 <sup>6</sup>	1.95
Compressive Strength	psi kg/cm <sup>2</sup>	41,000 2,500
Tensile Strength	psi kg/cm <sup>2</sup>	9,500 670
Impact Strength, Izod notched	kg-m/cm ft-lb/inch	0.017 0.30
Hardness	Shore D	75

CERTIFICATIONS	SPECIFICATION	DATA
Flammability	UL-94, 1/16 inch	HB

ELECTRICAL PROPERTIES	SPECIFICATIONS	DATA
Arc Resistance	seconds	180
Dissipation Factor	1 KHz	0.007
Dielectric Constant	1 KHz	4.5
Dielectric Strength, (short time, 125 mil)	volts/mil	>400
Loss Factor	1 KHz	0.032
Volume Resistivity	ohm-cm, x 10 <sup>16</sup>	>5.0
Surface Resistivity	ohm-cm, x 10 <sup>16</sup>	>1.0

THERMAL PROPERTIES	SPECIFICATIONS	DATA
Glass Transition Temperature (Tg)	°C (°F)	150 (302)
Linear Thermal Expansion, Alpha 1	cm/cm/°C, x 10 <sup>-6</sup>	27
Linear Thermal Expansion, Alpha 2	cm/cm/°C, x 10 <sup>-6</sup>	79
Thermal Conductivity	cal/cm-sec-°C, x10 <sup>-4</sup>	16
Heat Distortion Temperature	°C (18.6 kg/cm <sup>2</sup> ) °F (264 psi)	NA NA
Hot Plate Cure Time	@ 150 °C (302 °F), seconds	NA

STORAGE INFORMATION	SPECIFICATIONS	DATA
Recommended Storage Temperature	°C (°F)	4 (40)
Storage Life (Not more than 40% loss of spiral flow based on original values.)	5 °C (40 °F), months 25 °C (77 °F), weeks 35 °C (95 °F), days	12 1 2

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Technical Data Sheets are offered for Reference Only, and are not to be considered as specifications. All tests were performed at room temperature (22 °C) unless otherwise stated, under carefully controlled conditions using transfer molded specimens. Since actual performance is determined by the molding techniques applied, as well as part size and shape, it is recommended that customers conduct their own tests to determine product suitability for their specific application. **Cosmic Plastics, Inc. makes no warranties of merchantability, or any expressed or implied guarantee or representation of fitness or suitability for any application.**