



**Cosmic Plastics Inc**  
HELPING MOLD THE FUTURE



Registered To ISO 9001:2008  
Ref. No. 10000711

## TECHNICAL DATA SHEET

**E484 Epoxy**

**DESCRIPTION** Cosmic E484 is a mineral-filled, glass reinforced, electrical grade epoxy molding compound which is supplied in a granular form.  
**FEATURES** It has excellent mechanical strength and electrical properties, especially at high temperatures. It has passed NASA out-gassing tests.  
**APPLICATIONS** Used in electrical hardware applications such as underwater connectors and other insulation applications.

### MATERIAL INFORMATION & PROPERTIES

MOLDING INFORMATION	SPECIFICATION	DATA
Specific Gravity		1.80
Bulk Factor		2.0 – 5.0
Molding Pressure	Kg/cm <sup>2</sup> psi	35 - 562 500 – 8,000
Molding Temperature	°C °F	150 – 180 302 - 356
Mold Shrinkage	in / in	.002 - .004

MOISTURE PROPERTIES	SPECIFICATION	DATA
Water Absorption, %	48 hrs @ 50 °C	0.25

MECHANICAL PROPERTIES	SPECIFICATION	DATA
Impact Strength	Izod notched, ft-lb/inch	0.60
Flexural Strength	psi	19,000
Flexural Modulus	psi x 10 <sup>6</sup>	2.6
Compressive Strength	psi	30,000
Tensile Strength	psi	14,000
Barcol Hardness		65 - 75

ELECTRICAL PROPERTIES	SPECIFICATION	DATA
Arc Resistance	seconds	186
Dielectric Strength, (Kv step-by-step)	volts/mil (Wet)	350
Dielectric Breakdown	Kv step-by-step (Wet)	60
Dielectric Constant	1 KHz / 1 MHz (Wet)	5.4 / 4.7
Dissipation Factor	1 KHz / 1 MHz (Wet)	.011 / .008
Surface Resistance	Ohm - cm	1 x 10 <sup>15</sup>
Volume Resistance	Ohm - cm	10 <sup>10</sup> plus

THERMAL PROPERTIES	SPECIFICATION	DATA
Heat Deflection Temp.	°C	260
Glass Transition Temp.	°C	165
Thermal Conductivity	cal/sec/cm <sup>2</sup> /°C/cm	10 x 10 <sup>-4</sup>
Linear Thermal Expansion, Alpha 1	in/in/°C, x 10 <sup>-6</sup>	29
Linear Thermal Expansion, Alpha 2	in/in/°C, x 10 <sup>-6</sup>	92

CERTIFICATIONS	SPECIFICATION	DATA
ASTM D-5948-05; (MIL-M-14)	Type	GEI-5
Flammability	UL-94, 1/16 inch	V-0

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.**

Approved: SC, 2/24/17

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