Cosmic Plastics Inc
HELPING MOLD THE FUTURE

Registered To ISO 9001:2008
Ref. No. 10000711

TECHNICAL DATA SHEET

E4940P Epoxy

DESCRIPTION Cosmic E4940P is a mineral filled, glass reinforced epoxy molding compound which is supplied in a granular form.

FEATURES It has excellent dimensional stability, improved thermal cycling and exceptional moisture resistance. Standard spiral flow range is 25-35" (EMMI) at 150 ^{0}C and 1000 psi. It has a hot plate gel time of 22-30 seconds at 160 ^{0}C, and 18-26 seconds at 182 ^{0}C. It has a shelf life of eight months when stored at 5 ^{0}C.

APPLICATIONS It is designed for use in high-volume encapsulation of resistor networks and fiber-optic connectors requiring high quality, reliability and good moldability.

MATERIAL INFORMATION & PROPERTIES

MOLDING INFORMATION	SPECIFICATION	DATA
Specific Gravity		1.85
Bulk Factor		2 - 5
Molding Pressure	psi	500 – 8,000
Molding Temperature	^{o}C	150 - 180
Mold Shrinkage	in / in	.002 - .004

MOISTURE PROPERTIES	SPECIFICATION	DATA
Water Absorption, %	48 hrs @ 50 ^{o}C	0.25

MECHANICAL PROPERTIES	SPECIFICATION	DATA
Impact Strength	Izod notched, ft-lb/inch	0.50
Flexural Strength	psi	15,000
Flexural Modulus	psi x 10^6	2.0
Compressive Strength	psi	28,000
Tensile Strength	psi	12,000
Barcol Hardness		65

ELECTRICAL PROPERTIES	SPECIFICATION	DATA
Arc Resistance	seconds	180
Dielectric Strength, (Kv step-by-step)	volts/mil (Wet)	350
Dielectric Breakdown	Kv step-by-step (Wet)	56
Dielectric Constant	1 KHz / 1 MHz (Wet)	3.9 / 4.3
Dissipation Factor	1 KHz / 1 MHz (Wet)	.012 / .011
Surface Resistance	Ohm - cm	1 x 10^{15}
Volume Resistance	Ohm - cm	1 x 10^{15}

THERMAL PROPERTIES	SPECIFICATION	DATA
Heat Deflection Temperature	^{o}C	260
Glass Transition Temperature	^{o}C	175
Thermal Conductivity	cal/sec/cm^2/^{0}C/cm	16 x 10^{-4}
Coefficient of Linear Expansion	Alpha 1 in/in ^{0}C	25 x 10^{-6}
	Alpha 2 in/in ^{0}C	70 x 10^{-6}

Approved: SC, 3/2/17