

**Product
Bulletin**

E40-401

An excellent choice for electronic circuitry and components that must be protected from moisture vapor transmission and thermal shock resistance.

GENERAL DESCRIPTION

E40-401 is a low viscosity resin system especially designed for the potting and encapsulation of miniaturized electronic components.

E40-401 is available in a variety of colors including black, red, white, orange, blue, green, tan, brown, and yellow.

Excellent physical, thermal and electrical properties are exhibited in the cured resin.

E40-401 is 100% reactive containing no diluents, plasticizers or other electrical contaminants. E40-401 forms a tough hermetic seal with maximum chemical and moisture resistance.

The high degree of cross-linking inherent in E40-401 make it an excellent choice for electronic circuitry and components that must be protected from moisture vapor transmission and thermal shock resistance.

A choice of catalyst is provided in order to meet a wide variety of electrical and electronic encapsulation applications.

Catalyst 15 is designed for those applications requiring a room temperature curing system with excellent electrical insulation properties with a service temperature of up to 130°C.

Catalyst 110 is designed for applications requiring the optimum in electrical, physical, and thermal properties with a service temperature up to 180°C.

APPLICATION

Catalyst 15 – Room Temp. Cure: Mix 8 parts catalyst 15 to 100 parts resin, by weight. Allow to cure at room temperature, overnight or for 30 minutes @ 150°F.

Catalyst 110 – Heat Cure: Mix 12 parts catalyst 110 to 100 parts resin, by weight. Allow to cure 2 to 3 hours @ 100 to 110°C. Casting larger than ½ lb. Should be cured 8 hours @ 80°C or 24 hours @ room temperature plus 1 hour @ 100°C.

SPECIFICATIONS
HANDLING CHARACTERISTICS

Catalyst Number: Catalyst 401

Mix Ratio, Catalyst to Resin, by Weight: 8-10:100

Workable Pot Life, 100 g @ 25°C: 60 min.

Mixed Viscosity @ 25°C cps: 16,000

Recommended Cure: overnight @ room temp.

Color: wide variety

PHYSICAL CHARACTERISTICS

Shrinkage Linear, in / in: 0.006

Hardness, Shore D: 75

Specific Gravity, 25°C / 25°C: 1.35

Tensile Strength, psi: 9,200

Compressive Strength, psi: 18,000

THERMAL CHARACTERISTICS

Thermal Conductivity, btu / hr / ft² / °F / in: 3.2

Thermal Expansion Coefficient,

(cm / cm / °C · 10⁻⁵): 2.6

Heat Distortion, °C: 104

Operating Temperature Range, °C: -60 to +130

ELECTRICAL CHARACTERISTICS

Dielectric Strength, volts / mil: 450

Dielectric Constant, 60 Hz: 4.3

Dissipation Factor, 60 Hz: 0.016

Volume Resistivity, ohm · cm: 3 x 10¹⁶

STORAGE AND HANDLING

Since catalysts absorb moisture, they should always be tightly covered. E40-401 has a shelf life of one year. Freezing or tropical temperatures have no ill effect on the resin except for minor settling. Containers should be thoroughly mixed before use.