

**Product  
Bulletin**

# E40-409

Combines ease in handling, excellent electrical properties with choice room temp. and heat cure catalysts. Work horse system for all purpose potting and encapsulating.

**GENERAL DESCRIPTION**

E40-409 is a very low viscosity, general-purpose, epoxy, casting, potting, and encapsulating resin system. This unique resin system has been formulated to combine ease in handling with insulation properties.

E40-409 is characterized by low shrinkage, high tensile and compressive strength as well as high operating temperature service from -50 to 180°C. In addition, E40-409 exhibits outstanding thermal shock and impact resistance properties.

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

Catalyst 409A is designed for applications requiring a room temperature curing system with excellent physical and electrical properties with a service temperature up to 140°C.

Catalyst 409B is designed for applications requiring the optimum in electrical, physical, and thermal properties with a service temperature up to 180°C.

**APPLICATION (with Catalyst 409A)**

1. By weight, thoroughly mix 6-7% Catalyst 409A to E40-409 resin.
2. Due to the very low viscosity, vacuum de-aeration is not normally required.
3. Pour and allow to cure 8-12 hours at room temperature.

**SPECIFICATIONS**
HANDLING CHARACTERISTICS

Catalyst Number: Catalyst 409A or 409B

Workable Pot Life, 100 g @ 25°C –

Catalyst 409A: 30 min.

Catalyst 409B: 4 hrs.

Mixed Viscosity @ 25°C cps: 6,000

Color: Black

PHYSICAL CHARACTERISTICS

Shrinkage Linear, in / in: 0.0018

Hardness, Shore D: 88

Specific Gravity, 25°C / 25°C: 1.5

Tensile Strength, psi: 7,500

Compressive Strength, psi: 16,000

THERMAL CHARACTERISTICS

Thermal Conductivity, btu / hr / ft<sup>2</sup> / °F / in: 4.5

Thermal Expansion Coefficient,

(cm / cm / °C · 10<sup>-5</sup>): 2.85

Heat Distortion, °C: 95

Operating Temperature Range, °C: -60 to +180

ELECTRICAL CHARACTERISTICS

Dielectric Strength, volts / mil: 460

Dielectric Constant, 60 Hz: 4.6

Dissipation Factor, 60 Hz: 0.02

Volume Resistivity, ohm · cm: 3.5 x 10<sup>14</sup>

**APPLICATION (with Catalyst 409B)**

1. By weight, thoroughly mix 8% Catalyst 409B to E40-409 resin.
2. Due to the very low viscosity, vacuum de-aeration is not normally required.
3. Pour and cure 2-3 hours at 210°F to 220°F. Casting larger than ½ lb. (227 g) should be cured 8 hours at 150°F or 24 hours at room temperature plus 1 hour at 210°F.