

Product
Bulletin**E40-406**

A rigid epoxy encapsulant designed for ease in handling and exhibits excellent physical, thermal and electrical insulation properties.

GENERAL DESCRIPTION

E40-406 is a general-purpose rigid epoxy encapsulant designed for ease in handling and exhibits excellent physical, thermal and electrical insulation properties.

E40-406 provides low shrinkage, good thermal dissipation, high tensile and compressive strength, as well as excellent thermal shock and impact resistance properties.

E40-406 is recommended for the encapsulation and impregnation of coils, chokes, resistors, solenoids, transformers, rectifiers, electronic assemblies, etc. A choice of catalysts is provided to meet a wide variety of electrical and electronic encapsulation applications.

Catalyst 406A is designed for applications requiring a fast room temperature curing system.

Catalyst 406B is a slower room temperature curing system than Catalyst 406A. It has a longer working pot life and can be used for units requiring up to 400 g in mass.

Catalyst 406C is a heat curing catalyst designed for applications requiring the optimum in electrical, physical, and thermal properties with a service operating temperature up to 200°C.

APPLICATION (room temperature curing)

1. By weight mix 7 parts Catalyst 406 A to 100 parts resin, or 5 parts Catalyst 406B to 100 parts resin.
2. Due to the very low viscosity, vacuum de-aeration is not normally required.
3. Pour and allow to cure 6-8 hours at room temperature.

SPECIFICATIONSHANDLING CHARACTERISTICS

Catalyst Number: Catalyst 406A, 406B, 406C
Workable Pot Life, 100 g @ 25°C: 30 min.
Mixed Viscosity @ 25°C cps: 6,000
Recommended Cure: 6-8 hrs. @ room temp.
Color: Black

PHYSICAL CHARACTERISTICS

Shrinkage Linear, in / in: 0.006
Hardness, Shore D: 80
Specific Gravity, 25°C / 25°C: 1.6
Tensile Strength, psi: 7,000
Compressive Strength, psi: 16,000

THERMAL CHARACTERISTICS

Thermal Conductivity, btu / hr / ft² / °F / in: 3.0
Thermal Expansion Coefficient,
(cm / cm / °C · 10⁻⁵): 2.6
Heat Distortion, °C: 80
Operating Temperature Range, °C: -55 to +130

ELECTRICAL CHARACTERISTICS

Dielectric Strength, volts / mil: 460
Dielectric Constant, 60 Hz: 4.1
Dissipation Factor, 60 Hz: 0.016
Volume Resistivity, ohm · cm: 2.7 x 10¹⁵

APPLICATION (heat curing)

1. By weight, mix 17 parts Catalyst 406C to 100 parts resin.
2. Due to the very low viscosity, vacuum de-aeration is not normally required.
3. Heat cure 2-3 hours at 110 to 120°C.