

# COOLTHERM® EP-6008 BLK EPOXY RESIN

## Technical Data Sheet

CoolTherm® EP-6008 BLK (BLack) resin is a filled epoxy resin formulated for use with CoolTherm or Thermoset® hardeners to create a general purpose potting and encapsulation compound. This two-component compound flows easily around intricate and densely packaged circuitry.

### Features and Benefits

**Good Insulation:** protects components from moisture and vibrations.

**Low Viscosity:** self-leveling liquid maintains low viscosity for ease of component encapsulation.

**Low Stress:** exhibits low shrinkage and stress on components as it cures.

**Broad Temperature Range:** can be used on parts and devices that experience operating temperatures from -55°C to +155°C.

### Application

**Mixing:** Thoroughly stir CoolTherm EP-6008 BLK resin within its shipping container to ensure uniform dispersion. Use of power mixing equipment is recommended. Transfer amount of resin needed to a clean container and add proper amount of hardener by weight.

Thoroughly mix epoxy system. Be careful not to whip excessive air into the epoxy. If necessary, remove entrapped air by evacuating material prior to pouring.

**Applying:** Apply epoxy system using automatic meter/mix/dispense equipment.

**Curing:** Cure time will vary depending on hardener used. Refer to cure schedules indicated on next page. Time-at-temperature profiles refer to the time the material should be allowed to cure once it reaches the target temperature. Allowance should be made for material mass, oven ramp rates, parts with large thermal mass and other circumstances that may delay material reaching the target temperature.

### Typical Properties\*

Appearance	Black Liquid
Viscosity, cP @ 25°C	8000
Specific Gravity	1.55

\*Data is typical and not to be used for specification purposes.

### Typical Properties\* of Resin Mixed with Hardener

	CoolTherm EP-6010 Hardener	CoolTherm EP-6252 Hardener	Thermoset Hardener No. 67
Mix Ratio by Weight, Resin to Hardener	100:7	100:15	100:10
Working Life, hours @ 25°C	1	2	4-6
Cure Time, hours			
@ 25°C	12	12	–
@ 65°C	2	2	–
@ 100°C	–	–	3

\*Data is typical and not to be used for specification purposes.

## Typical Cured Properties\*\*

Thermal Conductivity, W/m-K Hot Disc Transient Method, ISO 22007-2	0.3
Coefficient of Thermal Expansion, ppm/°C	40
Hardness Shore D	85
Tensile Strength, MPa (psi) @ 25°C	49.6 (7200)
Elongation at Break, %	1.8
Moisture Absorption, % 10 days @ 25°C	0.35
Linear Shrinkage, in/in	0.004
Volume Resistivity, ohm-cm @ 25°C	>10 <sup>14</sup>
Dielectric Strength, kV/mm (V/mil) ASTM D 149	17.7 (450)
Dielectric Constant @ 25°C ASTM D 150	4.0
Dissipation Factor @ 25°C ASTM D 150	0.02

\*\*Data is typical and not to be used for specification purposes. Cured properties are the same regardless of the hardener used.

## Shelf Life/Storage

Shelf life is one year when stored at 25°C in original, unopened container.

## Cautionary Information

Before using this or any Parker Lord product, refer to the Safety Data Sheet (SDS) and label for safe use and handling instructions.

*For industrial/commercial use only.* Must be applied by trained personnel only. Not to be used in household applications. Not for consumer use.

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