

# FAQ

## Frequently Asked Questions

### Circuitworks® Epoxy Overcoat, CW2500

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#### 1. What is an Epoxy Overcoat?

Circuitworks® Epoxy Overcoat is a permanent green coating formulated to protect circuit traces before being exposed to reflow conditions. It is a two component, 100% solids epoxy that is engineered specifically for high temperature resistance, used for electronic circuit and component protection. When properly cured the insulator forms a chemically inert coating that seals out moisture and environmental contaminants, minimizes thermal shock and prevents corrosion, oxidation, and abrasion. The Epoxy Overcoat easily withstands brief exposure to high temperatures found in normal wave and reflow applications.

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#### 2. What is the difference between Circuitworks® Overcoat Pen (CW3300G) and Circuitworks® Epoxy Overcoat?

Circuitworks® Overcoat Pen is a one component, acrylic-based system with fair heat resistance and satisfactory chemical resistance. When subject to reflow conditions this material will quickly degrade. However it does have excellent electrical insulation and good abrasion resistance. Circuitworks® Overcoat Pen is primarily designed for protecting and electrically insulating circuit board traces and components, with an easy to use one component system.

Circuitworks® Epoxy Overcoat is a two component system with outstanding high temperature and chemical resistance. Abrasion resistance is also excellent for this epoxy system. It's the best choice for repairing the permanent solder mask/solder resist when the boards will be subject to reflow conditions. It also has outstanding dielectric properties as permanent coating for use on bare metal.

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#### 3. What is the mixing ratio?

The mixing ration is the volume of part A needed to mix with part B. This can be critical with some epoxy systems, and can be difficult to get the exact quantities in the right ratios as 0.96:1.32 is not unusual. This epoxy system was developed to provide easy mixing ratios, with a very forgiving cure system. The mixing ratio for the Epoxy Overcoat is 1:1, but this ratio is not critical to obtain the best electrical and protective capabilities.

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#### 4. What are the features and benefits of the Circuitworks® Epoxy Overcoat?

##### Features:

- High temperature resistance
- Provides a hard, durable protective coating
- Excellent dielectric properties
- Solvent resistant
- Service temperature -55°F/-48°C to 600°F/315°C
- Meets IPC-7721.2.4.1 requirements

##### Benefits:

- Ideal for pre-reflow solder resist repair
- Prevents corrosion, oxidation, degradation and thermal shock
- Electrically insulative coating helps prevent electrical discharge
- Will not be removed by solvent cleaners
- Can be used in many environments
- Perfect as solder resist board repair

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#### 5. How is the Circuitworks® Epoxy Overcoat packaged?

The Epoxy Overcoat is packaged in two (one part A and one part B) easy to use syringes that hold approximately six (6) grams of material. One syringe contains the epoxy, while the other contains the hardener. This allows you to use as little or as much material as you need.

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### 6. What type of customers would use the Circuitworks® Epoxy Overcoat?

Customers involved in the manufacture and the rework/repair of printed circuit boards would use the Circuitworks® Epoxy Overcoat. This would include those involved in:

- Circuit board manufacturing
- Data communications
- Aerospace industry
- Instrumentation and control manufacturing
- General maintenance repair

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### 7. Can the Circuitworks® Epoxy Overcoat be used as an encapsulant?

Circuitworks® Epoxy Overcoat's physical properties are very similar to epoxy encapsulants; it will work to encapsulate leads, traces and small areas that need insulation and protection. However, the small quantity contained in each syringe does not make it an ideal candidate for encapsulation.

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### 8. Can the Circuitworks® Epoxy Overcoat be used as a conformal coating?

Conformal coatings are applied in thin layers onto printed circuit boards to provide environmental and mechanical protection to components and circuitry. Even though the Circuitworks® Epoxy Overcoat can provide protection, the higher viscosity and small quantity contained in each syringe does not make an ideal candidate for performing as a conformal coating.

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### 9. What's the shelf life of the Epoxy Overcoat?

The shelf life is twelve (12) months from the manufacturing date.

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### 10. How do I get a sample?

Contact your ITW Chemtronics® Sales Manager or contact ITW Chemtronics® customer service.

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#### For more information, contact:

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