

Conformal Coating Protects Your Computers in the Harshest Conditions

Prevent short circuits, corrosion, dendritic growth and electromigration

Embedded single board computers are often needed for harsh environments. Industrial, military and airborne applications often expose boards to corrosive conditions including humidity, salt spray, fungus and other contaminants. Conformal coating, a protective material applied over electronic circuitry, can prevent short circuits, corrosion, dendritic growth and electromigration of metals between conductors.

Conformal coating from Ampro is applied by spraying, dipping or flow coating the circuit board assembly. This coating is typically three mils (0.003") thick. Ampro generally uses HumiSeal IB31 Acrylic coating, although epoxy, urethane, paraxylene and silicone based coatings are also available upon request. Acrylic coatings are fast drying and offer high moisture resistance, excellent flexibility and superior dielectric properties. The coating is also easy to repair, making them extremely useful in a wide variety of high performance situations. HumiSeal IB31 contains a UV safety tracer for ease of inspection under a blacklight.

Enhanced Reliability for Over 20 Years.

Ampro's conformal coating process has provided enhanced reliability and corrosion protection for over 20 years.

7-Step Conformal Coating Process

- 1 Preparation.**
Separable parts are removed and cleaned.
- 2 Surface Treatment.**
Low frequency plasma gas is used to etch the solder mask and improve adhesion.
- 3 Masking.**
All interface mating surfaces, mounting holes, fans and heatsinks are masked based on Ampro's detailed specifications.
- 4 Spray Coating.**
Using state-of-the-art spray guns and booths, boards and thickness coupons are coated.
- 5 Curing.**
Boards are cured per manufacturers' specifications. Some cures are thermal, with temperatures not to exceed 150°F (65°C).
- 6 Inspection.**
Coating thickness is verified on the coupons and board coverage is verified using a blacklight.
- 7 Test.**
Previously removed parts are re-installed and the boards are fully tested.