MODINE
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GulfCoat™ conformal circuit board coating

Spray applied circuit board protection against pests and outdoor environments.

Circuit Shield™ is a micro thin, acrylic coating that, when applied correctly, will provide a protective layer that will reduce and minimize the harmful effects of corrosion and mitigate the problems caused by pests such as geckos, ants, snakes and mice.

Circuit Shield™ is new from GulfCoat™, the leader in corrosion protection for critical HVAC equipment. Circuit Shield™ was invented to help protect service equipment circuit boards from early default due to corrosion, and exposure in corrosive environments, like salty ocean air.

Additionally, geckos and other outdoor pests like the warmth provided on circuit boards. When these pests nest or crawl on the board, they cause it to short circuit, typically killing the pest and causing expensive damage to the unit. Circuit Shield™ coating is harmless to geckos and other pests, but provides the needed barrier to reduce damage to the circuit board.

GulfCoat™ Circuit Shield™ corrosion resistant coatings are specifically designed for the protection of circuit boards that are used in outdoor environments. Protect expensive HVAC equipment, elevator control panels, telecommunications and more. GulfCoat™ Circuit Shield™ coatings are formulated to improve adhesion, moisture resistance, UV protection and corrosion resistance. The product can be applied on-site or added during manufacturing.

SPECIFICATIONS

When properly applied by directions, Circuit Shield™ spray coating process should ensure a uniform dry film thickness of 25-50 µm (1.0 -2.0 mils) and meet 5B rating for crosshatch adhesion per ASTM D3359. Corrosion durability shall be confirmed through testing to no less than 2,500 hours salt spray resistance per DIN 53167 (ASTM B117) using aluminum test coupons. Dielectric Withstanding Voltage test shall pass at 1500 volts/mil thickness.

CIRCUIT SHIELD™ APPLICATIONS

- HVAC/R Printed Circuit Boards (PCB)
- Elevator Control Panels
- Telephone Communication Boxes
- Outdoor Timers and Switches
- Traffic Lighting and Rail Crossing Control Panels
- Automotive, Heavy-Duty Truck & Off-Highway Equipment

CIRCUIT SHIELD™ FEATURES

- Excellent moisture resistance
- Mold & mildew resistance
- Superior adhesion
- Supports dielectric properties
- UV resistant qualities

Protect Printed Circuit Boards From Corrosion!

GULFCOAT™ CIRCUIT SHIELD™ CONFORMAL SPRAY COATING

TECHNICAL PROPERTIES

PROPERTY	TEST METHOD	PERFORMANCE
Salt Spray	DIN 53167/ASTM B117	Exceeds 2500 hours
Water Immersion	ASTM D870	1000 hours minimum
Pencil Hardness	ASTM D3363	HB-F
Cross Hatch Adhesion	ASTM D3359	5B
Humidity	ASTM D2247	500 hours minimum
UV Resistance	ASTM D4587	1000 hours minimum
Mandrel Bend (Flexibility)	ASTM D522M	Pass
Dielectric Withstanding Voltage	IPC-CC-830C	Pass
Moisture & Insulation Resistance	IPC-CC-830C	Pass
Thermal Shock	IPC-CC-830C	Pass

CORROSION RESISTANCE

Corrosion and pests can reduce performance and ruin Printed Circuit Boards. A proper conformal coating for this equipment will enhance its ability to remain efficient throughout its life cycle.

DIRECTIONS:

Surface must be free of grease, rust and wax. Prior to coating, follow these steps:

1. Use an approved cleaner for PCBs
2. Allow circuit board to thoroughly dry
3. Mask off or protect areas from overspray.
4. Allow can to warm to room temperature.
5. Shake until mixing ball rattles, then continue to shake for two minutes.
6. Move can with light to medium strokes. Let coating become tacky between coats.
7. After use, invert can and spray to clear valve.
8. For detailed application instructions, go online: ModineGulfCoat.com/pcbprotection

WHAT IS A CONFORMAL COATING?

- A thin polymeric film which conforms to printed circuit board characteristics
- Nonconductive, protective dielectric layer applied to printed circuit boards
- Conformal coatings are known to protect against extreme or harsh environments
- Protects against moisture, dust and chemicals
- Features chemical resistance
- Adheres well to printed circuit board and components that populate the board

TO ORDER, CONTACT US OR GO ONLINE

COATINGS@MODINE.COM or call **+1-813-689-4630**

Available at MODINEGULFCOAT.COM/SHOP
At Parts Houses where RectorSeal® products & supplies are sold;
And at Amazon.com & Home Depot Supply.

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