



A CSW Industrials Company

PRODUCT DATA SHEET

GULFCOAT™ CIRCUIT SHIELD™

Conformal Circuit Board Coating

Description

GulfCoat Circuit Shield protects service equipment circuit boards from early failure due to corrosion, and exposure in corrosive environments, like salty ocean air. 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.

Directions

Surface must be free of grease, rust and wax.

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. Coat surface using “dusting” strokes. Dry film thickness should be 25-50 μm (1.0-2.0 mils). Let coating become tacky between applications.
7. After use, invert can and spray to clear valve.

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



Characteristics | Features

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

Packaging

Code	Size	Qty. per Case	Lbs. per Case	Cubic Feet per Case
72000	12 oz. Aerosol Can	6 cans	7	0.22

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Sunlight/Rain

Avoid working in direct sunlight or working on surfaces that have been sitting in direct sunlight. Likewise, avoid working on rainy days.

Nozzle test:

After shaking the can as required and before any spray application, trigger a short test spray to make sure the nozzle is clear and coating is coming out properly, and uniformly (no blobs).

Spray Technique:

Use good spray technique, which involves releasing the nozzle at each end of each stroke, so there is no paint buildup at the end of each stroke when you pause and change direction. Overlap each stroke by 50% to ensure uniform coverage. Hold the can 6-8" away from the surface. Don't start the first stroke in the middle of the circuit board, always start spraying from one edge and always keep the spray can moving at a consistent speed and distance spraying to an opposite edge.

DIRECTIONS: 3-Step Application Method – 3 total coats

- 1st While depressing the spray nozzle, move the can and apply coating to the entire board with overlapping strokes left and right keeping spray pattern vertical.
- 2nd Move can and apply coating to the entire board with overlapping strokes vertically up & down keeping spray pattern horizontal. Allow coating to become tacky, (2-5 mins depending on the environment).
- 3rd Move can and apply coating to the entire board with overlapping strokes left & right keeping spray pattern vertical. After use, invert can and spray to clear valve.

Drying:

Your drying times will be affected by temperature and humidity. Low temperature will slow drying times. High humidity will also slow drying times. As soon as the coated circuit board is dry to the touch, it can be placed back into service.

Specifications

When properly applied per instructions, Circuit Shield™ spray coating process should ensure a uniform dry film thickness of 10-36 µm (0.4-1.4 mils) and meets 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.

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 & Insultion Resistance	IPC-CC-830C	Pass
Thermal Shock	IPC-CC-830C	Pass

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Precautionary Statements

Refer to Safety Data Sheet (SDS).

KEEP OUT OF REACH OF CHILDREN

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300

For additional Technical Information Call Toll Free 1-800-231-3345

Limited Warranty

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Manufactured by

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