

419D Aerosol



Acrylic Conformal Coating

419D is a 1-part acrylic conformal coating that cures to a durable, flexible and smooth finish. It is easy to apply and can be handled in 10 minutes. It may be removed with appropriate strippers, or soldered through for repair or rework.

419D creates a robust moisture barrier that protects printed circuit boards in humid environments. It protects effectively against moisture, corrosion, fungus, dirt, dust, thermal shock, short circuits, high voltage arcing, and static discharge.

Features & Benefits

Certified UL 94 V-0 (File# E203094)

Certified IPC-CC-830B

Xylene and toluene free

Fluoresces under UV-A light

Cure Instructions

Allow to dry at room temperature for 24 hours, or after letting sit for 10 minutes, cure the coating in an oven at one of these time/temperature options:

Temperature	65 °C	80 °C	100 °C	120 °C
Time	30 min	20 min	10 min	5 min



Available Packaging

Part #	Packaging	Net Vol.	Net Wt.
419D-340G	Aerosol	410 mL	340 g

Storage and Handling

Store between -5 and 27 °C in a in a dry area, away from sunlight (see SDS).

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Liquid Properties

Binder System	Acrylic	—
Dry Time to Handle	10 min (1 coat) 20 min (2 coats)	—
Minimum Recoat Time	3 min	—
Recommended Film Thickness	25–75 µm	—
Density	0.9 g/mL	ASTM D1475
Viscosity @ 25 °C	40 cP	Brookfield Engineering labs Inc. IPCTM-65- Method 2.4.24.4
Percent Solids	13%	—
Theoretical Coverage @ Recommended Thickness	5 700 cm ²	Calculated
Calculated VOC	794 g/L	—
Shelf Life	5 y	—

Cured Properties

UL	94 V-0	—
IPC-CC-830	B revision	—
Color	Clear, amber	—
Solderability	Excellent	—
Chemical Resistance	Poor	—
Resistivity	4.6 x 10 ¹⁴ Ω·cm	ASTM D257
Breakdown Voltage	>1 500 V	ASTM D149
Dielectric Strength @	1 000 V/mil	
Dielectric Constant @ 1 MHz	2.9	ASTM D150
Dissipation Factor @ 1 MHz	0.004	
Insulation Resistance	1 x 10 ¹³ Ω·cm	IPC-TM-650 2.5.7.1
Moisture Insulation Resistance	1 x 10 ¹² Ω·cm	IPC-TM-650 2.6.3.4
Glass Transition Temperature (T _g)	27 °C	ASTM E1545
Coefficient of Thermal Expansion (CTE)	72 ppm/°C (Prior T _g)	ASTM E831
Service Temperature Range	-65–125 °C	—

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Application Instructions

Read the product SDS before using this product (downloadable at www.mgchemicals.com).

Recommended Preparation

Clean the substrate with MG #824 99.9% Isopropyl Alcohol, so the surface is free of oils, dust, and other residues.

Recommended Thinner

When thinning is required, use MG #4352 Thinner 2.

Spray

1. Shake the can vigorously.
2. Spray a test pattern to ensure good flow quality.
3. Tilt the board at 45° and spray a thin, even coat from a distance of 20–25 cm (8–10 in). Use spray-and-release strokes with an even motion to avoid paint buildup in one spot. Start and end each stroke off the surface.
4. Wait 3 min before applying another coat, to avoid trapping solvent.
5. Rotate the board 90° and spray again to ensure good coverage.
6. Apply additional coats until desired thickness is achieved (go to step 3).
7. Let dry 3 min at room temperature before applying heat cure.
8. After use, clear the nozzle by inverting the can and briefly spraying until clear propellant comes out.

Disclaimer: This information is believed to be accurate. It is intended for professional end-users who have the skills required to evaluate and use the data properly. M.G. Chemicals Ltd. does not guarantee the accuracy of the data and assumes no liability in connection with damages incurred while using it.