

Overcoat Pen

419D-P pen applies an acrylic coating that cures to a durable, flexible and smooth finish. It functions as both a solder resist and a conformal coating. 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-P is used to repair scratches and chips in permanent solder masks, to touch up areas missed during conformal coating applications, or to repair conformal coating after replacing isolated components. It can also be used to protect conductive pen traces.



Features and Benefits

- Protects PCBs from solder drips
- Prevents shorting and arcing
- Protects electronics from moisture, corrosion, fungus, dirt, and static discharges
- Comes in a variety of colors—blue, black, clear, green, and white
- No hazardous air pollutants—free of toluene, xylene and MEK

Available Packaging

Cat. No.	Packaging	Net Vol.	Net Wt.
419D-P-BK	Black pen	5 mL	4.63 g
419D-P-BL	Blue pen	5 mL	4.63 g
419D-P-CL	Clear pen	5 mL	4.63 g
419D-P-GR	Green pen	5 mL	4.63 g
419D-P-WH	White pen	5 mL	4.63 g

Contact Information

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Cured Properties Without Colorants

Resistivity	$4.6 \times 10^{14} \Omega \cdot \text{cm}$
Dielectric Strength	1 000 V/mil
Dielectric Withstand Voltage	>1 500 V
Insulation Resistance	$1 \times 10^{13} \Omega$
Moisture Insulation Resistance	$1 \times 10^{12} \Omega$
Dielectric Constant @ 1 MHz	2.85
Dissipation Factor @ 1 MHz	0.004
Glass Transition Temperature (T_g)	27 °C
CTE prior T_g	72 ppm/°C
Service Temperature Range	-65–125 °C

Usage Parameters

Dry Time To Handle	10 min
Minimum Recoat Time	3 min
Recommended Film Thickness	25–75 μm
Theoretical Coverage @ 25 μm	$\leq 570 \text{ cm}^2/\text{pen}$

Uncured Properties Without Colorants

Viscosity @ 25 °C	100 cP
Density	0.92 g/mL
Percent Solids	30 %
Shelf Life	5 y
Calculated VOC	654 g/L

419D-P



Safety Data Sheet

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

Recommended Preparation

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

Application Instructions

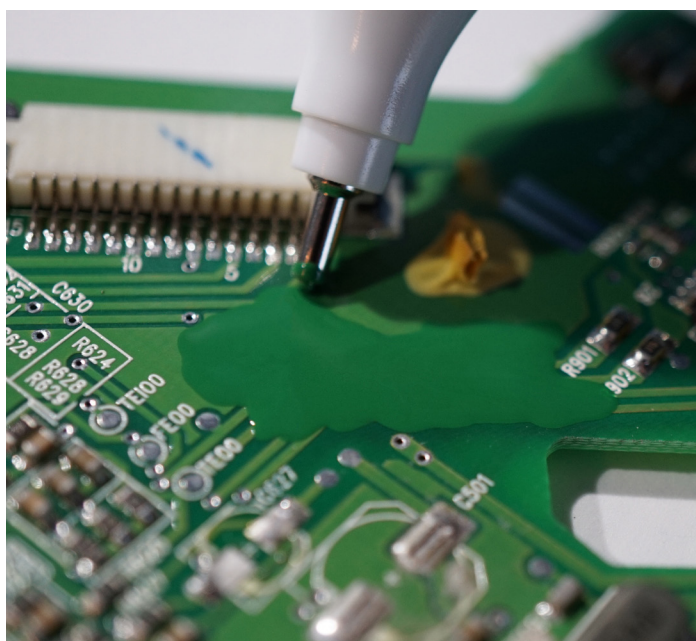
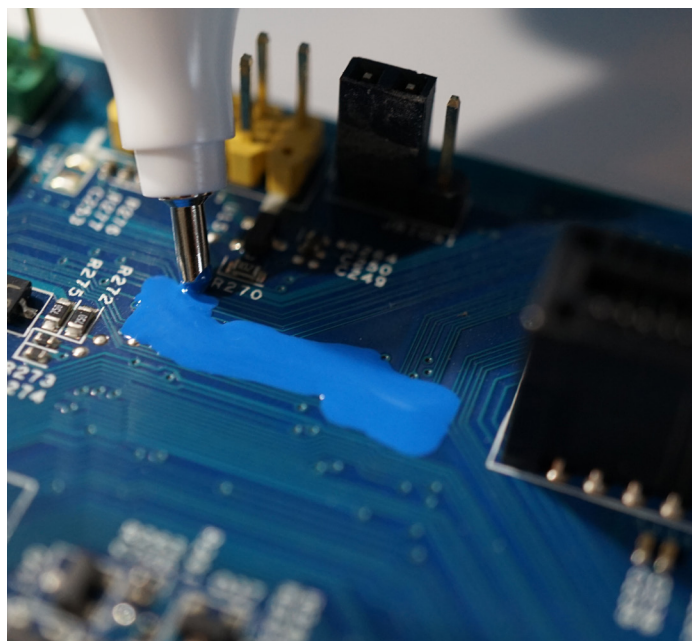
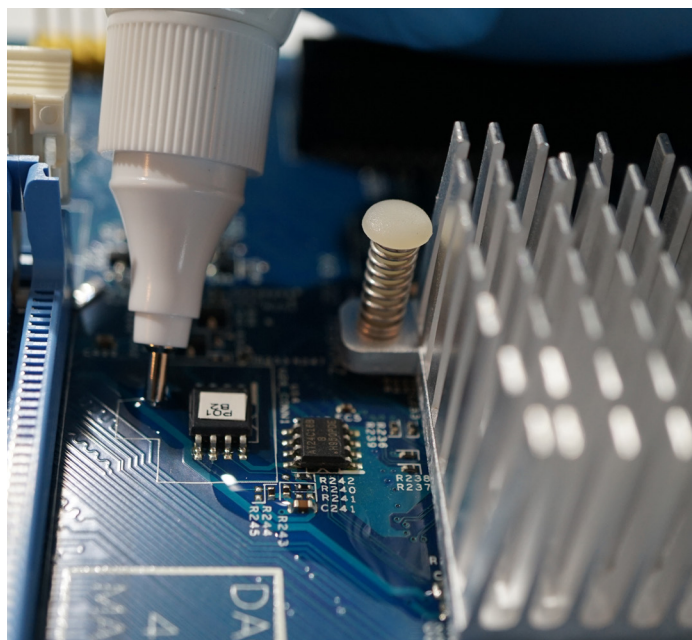
1. Shake pen vigorously until ball moves freely inside.
2. Hold pen at an angle and depress tip against surface.
3. Draw pen across surface while gently squeezing barrel.
4. Let dry 10 min before handling or heat cure.
5. Replace cap and store tip-up after use.

Cure Instructions

Allow to dry at room temperature for 24 hours, or after letting sit for 10 min, cure the coating in an oven for 1 h @ 65 °C.

Storage and Handling

Store between -5 and 40 °C in a dry area, away from sunlight (see SDS).



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.

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