

RoHS
Compliant



Description

This 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. This 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—black, clear, green, and white
- No hazardous air pollutants—free of toluene, xylene and MEK

Cured Properties Without Colorants

Resistivity	: $4.6 \times 10^{14} \Omega \cdot \text{cm}$
Dielectric Strength	: 1000 V/mil
Dielectric Withstand Voltage	: >1500 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°C to 125°C

Usage Parameters

Dry Time To Handle	: 10 min
Minimum Recoat Time	: 3 min
Recommended Film Thickness	: 25–75µm
Theoretical Coverage @ 25 µm	: ≤570 cm ² /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

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.

Dip Coat

Use a Ford or Zahn cup to monitor the viscosity of the coating, as the solvent will evaporate over time.

1. Hang the PCB on a dipping arm.
2. Slowly lower the PCB into a tank and leave immersed in the coating for 2 min to allow penetration.
3. Slowly withdraw the PCB from the tank at a rate of approximately 6" per minute.
4. Let dry for 4 hours before applying additional coats or 40 minutes before heat cure.

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.

Part Number Table

Description	Part Number
Overcoat Pen, Black, 5mL	MP014032

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