# 4223F Aerosol

## Premium Polyurethane Conformal Coating

4223F is a 1-part, heat curing, UL 746E certified, thermoset polyurethane conformal coating. It cures to a durable, flexible, scratch resistant, and smooth finish. It is easy to apply and can be handled in 15 minutes. It cures in only 2 hours at 100 °C (212 °F). It may be removed with appropriate strippers, or soldered through for repair or rework.

4223F protects printed circuit boards in chemically challenging environments. It provides strong protection against aggressive chemicals, corrosion, moisture, fungus, dirt, dust, thermal shock, abrasion, short circuit, high-voltage arcing, and static discharge.


## Features and Benefits

- Certified UL 746E (File# E203094)
- Certified IPC-CC-830B
- Excellent corrosion resistance—salt spray and hydrogen sulfide tested
- Xylene and isocyanate free
- Fluoresces under UV-A light

## Available Packaging

| Cat. No. | Packaging | Net Vol. | Net Wt. |
|---|---|---|---|
| 4223F-312G | Aerosol | 430 mL | 312 g |

## Contact Information

MG Chemicals, 1210 Corporate Drive
Burlington, Ontario, Canada L7L 5R6

Email: support@mgchemicals.com

Phone: North America: +(1)800-340-0772
International: +(1) 905-331-1396
Europe: +(44)1663 362888

## Cured Properties

| | | |
|---|---|---|
| Resistivity | 3.5 x $10^{13}$ | Ω·cm |
| Dielectric Strength | 1 000 | V/mil |
| Dielectric Withstand Voltage | >1 500 | V |
| Insulation Resistance | 1 x $10^{13}$ | Ω |
| Moisture Insulation Resistance | 1 x $10^{12}$ | Ω |
| Dielectric Constant @ 1 MHz | 2.86 | |
| Dissipation Factor @ 1 MHz | 0.009 | |
| Glass Transition Temperature ($T_g$) | 57 | °C |
| CTE Prior $T_g$ | 130 | ppm/°C |
| CTE After $T_g$ | 190 | ppm/°C |
| Service Temperature Range | -65–125 | °C |

## Usage Parameters

| | | |
|---|---|---|
| Dry Time To Handle (1 coat) | 15 | min |
| (2 coats) | 25 | min |
| Minimum Recoat Time | 5 | min |
| Recommended Film Thickness | 25–75 | µm |
| Theoretical Coverage @ 25 µm | 9 400 | $cm^2$ |

## Uncured Properties

| | | |
|---|---|---|
| Viscosity @ 25 ˚C | 10 | cP |
| Density | 0.80 | g/mL |
| Percent Solids | 20 | % |
| Shelf Life | 3 | y |
| Calculated VOC | 645 | g/L |

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

## 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 5 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 15 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.

## Cure Instructions

The product will not cure at room temperature. After letting sit for 15 minutes, cure the coating in an oven at one of these time/temperature options:

| | | |
|---|---|---|
| **Temperature** | 80 °C | 100 °C |
| **Time** | 16 hours | 2 hours |

## Storage and Handling

Store between -5 and 40 ˚C in a 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.