

UR Urethane Conformal Coating Product# 2104

Product Description

Techspray® offers a variety of coating formulas to match field and engineering requirements. Specifications generally depend on the type of protection needed. E.g. thermal, moisture, and static resistance.

Coatings contain Opti/Scan to allow quality control inspection of coverage and evenness of the coating on a PCB. A coated board can be passed under a standard, low-cost UV (short-wave black) light, and the coated areas glow. The brighter the glow, the thicker the coating.

Features / Benefits

- Thermal resistance - to 248°F (120°C)
- Dielectric strength - 380 volts/mil
- Moisture resistant
- Chemically resistant
- Abrasion resistant
- UL94 V-0 – nonflammable final coat
- IPC-CC-830B & MIL-I-46058C qualified
- UV indicator for black light QC inspection

Specifications

- MIL-I-46058C Type UR
- IPC-CC-830B

Usage Instructions

For industrial use only. Read MSDS carefully prior to use. Before applying Fine-L-Kote™ conformal coatings, clean circuit boards to remove contamination and allow to dry. Cleaning may be performed with Techspray G3, E-LINETM and Precision-V defluxers.

Spray Application: Apply top to bottom, allowing coating to flow evenly around components. Rotate PCB 90° and repeat application. Rotate and apply coating two additional times, then allow board to cure. If additional thickness is desired, apply additional coatings. When using liquid spray with automatic dispensing equipment, adjustments may be required in application rate and viscosity.

Dip Application: Using automatic equipment or hand immersion technique, slowly immerse PCB into the coating and remove slowly. Use an average rate of approximately 1 foot per minute. After allowing the board to cure, process may be repeated to achieve desired thickness.

Brush Application: Evenly apply coating to areas desired at thickness required. Allow time for curing before reapplying to achieve a thick coating. Use WonderMASK to protect components during conformal coating process. After application, cured Fine-L-Kote™ may be removed using Techspray Conformal Coating Removal Pen (2510-N or 2510-P).



Typical Product Data and Physical Properties

Physical state:	Liquid
Flash point:	Closed cup: 81°F (27.2°C)
Flammable limits:	Lower 1% Upper 7%
Color:	Colorless
Odor:	Aromatic
Boiling/condensation point:	300.2°F (149°C)
Relative density:	0.93
Volatility:	86% (w/w)
Shelf life:	1 year

Chemical Composition

Chemical Name	CAS#
n-Propyl acetate	109-60-4
Urethane prepolymer	1330-20-7
Xylenes (o-,m-,p-isomers)	100-41-4
Ethylbenzene	109-99-9
Tetrahydrofuran	811-97-2
1,1,1,2-Tetrafluoroethane (aerosol only)	

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Performance & Application Data

Cure type	Thermal/air
Tack-free time (min)	15
Accelerated cure time/temp	2 Step: 20 Min. @ 49 °C, 30 Min. @ 82 °C
Ambient cure time	24 hrs
Viscosity (bulk)	10-20 cps
Operating temperature range	-30 ° to - 121 °C
Dielectric strength	380 V/Mil
Insulation resistance (ohms)	1.78×10^{16}
Coverage (1 mil dry film)	1 gal. liquid = 880 ft ² (81.8M ²)

Packaging and Availability

2104-12S	12 Ounce Liquid
2104-G	1 Gallon Liquid
2104-5G	5 Gallon Liquid

Environmental Policy

Techspray® is committed to developing products to ensure a safer and cleaner environment. We will continue to meet and sustain the regulations of all federal, state and local government agencies.

Resources

Techspray® products are supported by a global sales, technical and customer services resources.

For additional technical information on this product or other Techspray® products in the United States, call the technical sales department at 800-858-4043, email tsales@techspray.com or visit our web site at: www.techspray.com.

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