9-984-LVF
Ultra-Fluorescing Conformal Coating

9-984-LVF is a single-component, 100% solids conformal coating specifically formulated for rapid, room-temperature cure when exposed to long wave (320-380 nanometer) UV light. Thin-layer coatings cure in seconds and fluoresce brightly upon exposure to black light. 9-984-LVF also exhibits excellent adhesion to a variety of metal, ceramic, and glass-filled epoxy surfaces. It is a moderately low-viscosity coating which can be cured by exposure to UV light and secondarily with heat for shadowed areas on densely populated circuit boards. 9-984-LVF retains a relatively high-brilliance fluorescence after curing and will not fade. This product is in full compliance with RoHS directives 2015/863/EU.

TYPICAL UNCURED PROPERTIES

Solvent Content	None	
Appearance	Single Component/Clear Fluorescing Liquid	
Specific Gravity	1.05	
Viscosity	150 cP (nominal)	ASTM D-1384

TYPICAL CURED PROPERTIES

PHYSICAL

Durometer Hardness	D80	ASTM D-224
Tensile at Break	6,000 psi	ASTM D-638
Elongation at Break	5%	ASTM D-638
Modulus of Elasticity	60,000 psi	ASTM D-638
Water Absorption	0.4%	ASTM D-570
Cross Hatch Adhesion Test:	Copper 100%	ASTM D-3359
	G-10 100%	ASTM D-3359

THERMAL

Coefficient of Linear Thermal Expansion	69×10^{-6} in/in/°C	ASTM E-831

ELECTRICAL

Dielectric Strength	1,800 V/mil	ASTM D-1304
Volume Resistivity	35.8×10^{12} ohm-cm	ASTM D-1304
Surface Resistivity	384×10^{12} ohm	ASTM D-1304
Dissipation Factor, 1 MHz	0.03	ASTM D-1304
Dielectric Constant, 1 MHz	3.4	ASTM D-1304

Technical Data Collection Prior to 2003

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CURE SCHEDULE - UV Cure with 365 nm UV light [1]:

Cure Time (seconds)	Intensity mW/cm^2	Dymax Lamps
30	50	2000-EC
5	250	5000-EC
1	2,500	F-450

9-984-LVF is designed with an optimum level of fluorescent indicator to allow cure and to fluoresce under a black light. Though UV conformal coatings do not fluoresce as brightly as traditional solvent-based coatings, the following steps should permit adequate brightness for easy inspection:

1. Avoid overcuring the conformal coating. The UV-cure schedule listed above is adequate. Lengthening exposure to UV light lowers fluorescence.
2. Inspect coated boards under black light in a shrouded area. Indirect indoor lighting decreases the effect of the black light in revealing the fluorescence.

Heat Cure Following UV Exposure

Heat can be used as a secondary cure mechanism in shadow areas not exposed to UV light. UV cure must be done prior to heat cure. Application may involve dip, spray, or curtain coat. The following cure options may be used:

120°C	250°F	30 minutes
150°C	300°F	15 minutes

HANDLING AND DISPENSING ADHESIVE

Typically, Dymax 9-984-LVF is sprayed. For questions relating to dispensing, curing systems, the products, or the use of products, contact Dymax Application Engineering.

Repeated or continuous skin contact may cause sensitization and should be avoided. Do not wear jewelry. The use of barrier hand cream is recommended. Do not wear absorbent gloves. Adhesive may be removed with hand soap and water. Avoid eye contact. See CAUTION below. Wipe excess adhesive with paper towels; remove residue with chlorinated solvents, freon, methanol, ethanol, or isopropanol.

STORAGE AND SHELF LIFE

Store the material in a cool, dark place when not in use. Do not expose to light. This product may polymerize upon prolonged exposure to ambient and artificial light. Keep covered when not in use. This material has an 18-month shelf life from date of manufacture, unless otherwise specified, when stored between 10°C (50°F) and 32°C (90°F) in the original, unopened container.

CAUTION

For industrial use only. Avoid breathing vapors. Avoid contact with eyes and clothing. In case of contact, immediately flush with water for at least 15 minutes; get medical attention. Wash clothing before reuse. Keep out of reach of children. Do not take internally. If swallowed, induce vomiting at once and call a physician. Repeated or continuous skin contact with liquid adhesive will cause irritation and should be avoided. For specific information, refer to the product Material Safety Data Sheet.

GENERAL INFORMATION

This product is intended for industrial use only. Keep out of the reach of children. Avoid breathing vapors. Avoid contact with skin, eyes, and clothing. Wear impervious gloves. Repeated or continuous skin contact with uncured material may cause irritation. Remove material from skin with soap and water. Never use organic solvents to remove material from skin and eyes. For more information on the safe handling of this material, please refer to the Safety Data Sheet before use.

The data provided in this document are based on historical testing that Dymax performed under laboratory conditions as they existed at that time, and are for informational purposes only. The data are neither specifications nor guarantees of future performance in a particular application. Dymax does not guarantee that this product's properties are suitable for the user's intended purpose.

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