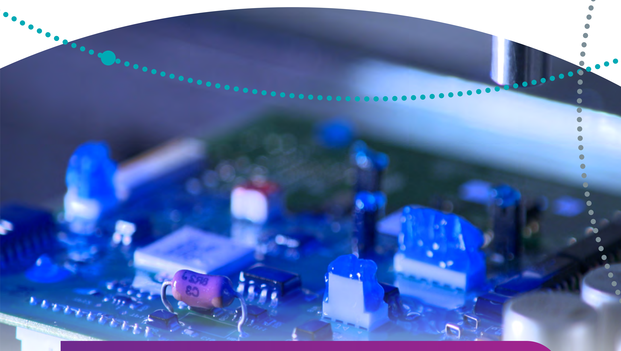
9483

High-Performance Dual-Cure Conformal Coating

Dymax 9483 conformal coating exhibits outstanding heat, chemical, and corrosion resistance, and excels in PCB applications where shadow areas are present. This coating is dual curing - curing tack free in seconds with UV/Visible light and also curing with ambient moisture in 2-3 days in shadow areas. With no solvents added, 9483 is an environmentally friendly coating with no flash off.



Features & Benefits

- No solvents added
- Tack-free surface in seconds with UV/Visible light cure
- Cures in shadow areas in 2-3 days with ambient moisture
- Approvals: UL 94V-0, UL 746-E, Hyundai MS941-04, & MIL-I-46058C
- High-temperature flexibility
- Excellent thermal shock, chemical, & corrosion resistance
- Fluoresces bright blue for easy inspection

9483 Performance & Reliability Testing

Application & Curing of Test Samples:

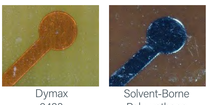
Conformal coatings were applied by precision spraying to obtain a 75 µm (3 mil) dry film thickness. 9483 samples were cured with 2,500 mW/cm^2 light intensity at 1.5 m/min conveyor belt speed and then kept at 25°C, 50% relative humidity (RH) for 6 days to complete moisture cure. The alternative solvent-based conformal coating was air dried at 25°C, 50% RH for 7 days.

85°C, 85% RH Damp Heat Reliability

Testing: Coated boards were placed in a humidity chamber set to 85°C, 85% RH.

Results: No delamination or cracking with either coating. The solvent-based polyurethane coating became translucent with severe oxidation on copper.

After 2,000 Hours



Dymax 9483 | Solvent-Borne Polyurethane

Thermal Shock Reliability Test

Testing: Coated boards were exposed to -55°C and +125°C with 30 minutes dwell time at each temperature and 15 second transition time between lowest and highest temperatures. Any cracks or delamination was inspected with magnification.

Results: After 1000 cycles, the solvent-borne polyurethane coating became translucent with severe oxidation on copper. No cracks or delamination was observed with 9483.

After 1,000 Cylces

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Salt Spray Corrosion Resistance Test (ASTM B117)

Testing: Coated boards were exposed to 5% sodium chloride solution at 35°C in a salt spray chamber.

Results: 9483 showed no corrosion on the copper. The solvent-based conformal coating showed a significant amount of corrosion on the copper.

After 1,500 Hours

Dymax 9483

Solvent-Borne Polyurethane

Want to see more 9483 performance data?

Download the white paper *High-Performance Light & Moisture Dual-Curable Automotive Conformal Coating* to see additional test data and how 9483 performed against additional conformal coating chemistries.

DYMAX®

Dymax manufactures light-curable adhesives, coatings, and maskants, as well as compatible dispensing and curing equipment. We focus on creating materials that cure clean, green, and fast, helping engineering teams accomplish more in less time and with less negative impact on the environment.

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