

UV-CC01

UV Conformal Coating

Gluditec UV-CC01 is urethane-acrylic based composite which fully cured by ultraviolet (UV) light and moisture. A secondary moisture cure mechanism will cure unexposed areas of the coating within 2-3 days at ambient conditions. Meet the stringent requirements of the industrial control electronics industry. After solidification, it forms a dense protective film layer which is insulated, moisture-proof, dust-proof, anti-pollution, anti-corrosive gas. For moisture, acid, alkali, detergents and chemical solvents, all have excellent resistance. It's suitable for high-reliability hybrid integrated circuits, military aviation, maritime circuits, industrial electrical equipment, industrial instrumentation, telecommunications equipment, appliance controllers and other electronic gas facilities protection.

FEATURE

- UV Curable
- Moisture Cure
- Excellent Adhesion
- Fast Curing
- Non-ozone Depleting
- Meets requirements IPC-CC-830
- UL certification, the number is E76307

TYPICAL UNCURED PROPERTIES

Properties	UV-CC01
Appearance	Liquid
Color	Transparent
Viscosity	120 ± 20cps
Density	1.12 ± 0.05 g/cm ³
Solid Content	100%
Flammable	V-0, UL-94
Shelf life at RT	6 months

APPLYING METHODS

- Brushing

High-quality brush is used for brushing operation. This will not cause the bristles and brushmarks to remain on the circuit board. It avoids damage to the circuit board and components from the surface. At the same time, attention must be paid to keep the plastic product tank closed. Pour out the proper amount of gum and wait outside.

- Spraying

Spraying is primarily for computer controlled (atomized or curtain) selective spraying equipment. This selective spray equipment can be selectively coated only on the area where the PCB needs coating. The operation needs to select the nozzles suitable for the current viscosity and the spray pressure according to the instructions of the different equipment's (usually suitable for medium-viscosity coating glues for the

best coating effect), in order to ensure that the coating penetrates into the bottom of the components. And the edge position of any coupling position, spraying should be sprayed smoothly from all angles.

TYPICAL CURING PROPERTIES

- UV Cure

UV-CC01 is a highly cross linked coating. In order to achieve maximum cross linking density, the product must be exposed to the correct spectral output. We have modelled the performance of UV-CC01 using Fusion UV curing equipment. The table below outlines the required dosage and irradiance values necessary to reach UV-CC01 tack free. Minimum figures should provide a tack free surface. The maximum recommendation represents highest tested values by GLUDITEC. The cure recommendations may change as curing technology develops.

	Dose J/cm ²			Irradiance W/cm ²		
	UVA	UVB	UVC	UVA	UVB	UVC
Min	1.5	1.5	0.3	0.6	0.6	0.1
Max	3	2.9	0.7	1	0.9	0.3

- Moisture Cure

Moisture is used as a secondary cure mechanism for shadowed areas that can't be cured with light. While moisture cure time is typically 2-3 days at 25°C, 50% RH, actually moisture cure time is application specific and may vary. Cure time depends on humidity level, amount of coating in shadowed areas, and proximity of shadowed coating to humidity. Coating entrapped under large components may have a prolonged cure time. Exposure to heat (typically 65-80°C) and higher relative humidity will accelerate cure.

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TYPICAL CURED PROPERTIES

Glass Transition Temp., (DSC), °C	57
Recommended Coating Thickness (micro)	40 ~ 125
Thermal Shock (°C), 50 cycles per MIL-I-46058C	-65 ~ 125
Dielectric withstand Voltage per MIL-I-46058C (V/mm)	2200
Dielectric Constant, at 1MHz and 25°C per ASTM D150-98	2.82
Dielectric Constant, at 10GHz and 22°C per ASTM D2520	342
Dissipation Factor, at 1MHz and 25°C per ASTM D150-98	0.01
Insulation Resistance, per MIL-I-46058C (ohms)	3.14×10^{15}
Moisture Insulation Resistance, per MIL-I-46058C Fungus (ohms)	6.2×10^{11}
Resistance, per ASTM G21	Pass
Resistance to Chemicals	Excellent

be purged with a dry, inert gas such as dry air, nitrogen or argon before closure, otherwise premature polymerization by atmospheric moisture will occur.

CAUTION

Application of UV-CC01 should be carried out in accordance with local and National Health and Safety regulations.

PACKAGING AND AVAILABILITY

UV-CC01	1L
UV-CC01	5L

ENVIRONMENTAL POLICY

We are 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.

CLEAN UP

To flush equipment and clean uncured UV-CC01, non-alcohol based solvents should be used.

STORAGE

UV-CC01 is photosensitive. The product should not be exposed to direct sunlight or full spectrum fluorescent lighting. UV-CC01 should be stored away from excessive heat, in tightly closed opaque containers at 0 to 25°C to ensure maximum shelf life is achieved. Prior to use, allow the product to equilibrate for 24 hours at room temperature. UV-CC01 is a moisture curing material and care should be taken to protect process vessels and partial containers from moisture. Partial containers must

The data contained in this bulletin is provided only as a guide for evaluation/consideration. These material characteristics are typical properties that are based on a limited number of samples tested in the laboratory. We cannot assume responsibility for results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any product or method. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide.