INSTRUCTIONS/USE CIRCUIT COATING

Description

NanoTech Circuit Coating is a clear, 2 part, non-conductive coating for circuitry designed to replace standard conformal coatings and to provide protection of most circuits, PCBs, and electrical components from the damaging effects of moisture intrusion, corrosion, dirt and sand.

Surface

NanoTech Circuit Coating is ideal for circuitry, PCBs, and electrical components.

Solution

NanoTech Circuit Coating protects against moisture, dirt and corrosion.

Characteristics

Appearance:	Clear
Finish:	Gloss
Vehicle Type:	Solvent Base
Flash Point:	(C Penskey-Martens closed Cup) -9c/15F
VOC:	Less than 100 g/L
Weight per Gallon:	7.36 lb/gallon
Non-Breathable	

***REQUIRES PART B CATALYST

Spread Rate

Recommended Spread Rate per coat:
Wet mils: 2.0 - 3.0
Dry mils: 0.7 - 1.0

Coverage

Coverage: 500 - 800 sq ft./gal (approximate)
Coverage will vary depending on the porosity and texture of the substrate.

Surface Preparation

NanoTech Circuit Coating will not adhere to silicone coated surfaces. All circuits and electrical components must be clean and free of contaminates prior to application. Use circuit manufacturer's cleaning recommendations and approved cleaners to avoid damaging the circuits or electrical components. Make certain circuits and components are completely clean and dry, prior to application. .

Test Area

NanoTech Circuit Coating can be applied to many (but not all) types of circuits and electrical components. It is critical to test for adhesion, performance and compatibility on a test component prior to full-scale application

Application

NanoTech Circuit Coating is a two component product consisting of 1:1 ratio Nanotech Circuit Coating and NanoTech Coatings Catalyst. It is a non-conductive quartz matrix. It can be applied by spraying or dipping. It is not designed to be removed (permanent). With either application method, always mask off connection terminals and any adjacent surfaces to keep them free of drips or accidental coating. If applying outdoors, make certain the ambient temperature is between 45° F and 105° F, 90% RH or less, and that there is no chance of rain for a minimum of 5 hours after the estimated time of completion of the coating process. Take necessary precautions against natural elements.

Spraying

NanoTech Circuit Coating is a 2 component product requiring PART B CATALYST. When surface preparation is complete and surface is dry and free of contaminates, shake the container of NanoTech Circuit Coating thoroughly. The nanoparticles will sink to the bottom, these need to be resuspended in order for proper performance of the coating. Then pour the desired amount into a clean container large enough to allow for an equal amount of the NanoTech Coatings Catalyst to be added. Then pour an equal amount of the NanoTech Coatings Catalyst into the container with the NanoTech Circuit Coating. Stir both components together thoroughly. Approximately every 15-20 minutes re-stir to resuspend the nanoparticles during the coating process. Using a high volume, low pressure (HVLP) spray gun with an approximately 1.4 size tip and the pressure set at approximately 25 psi. Spray the component "up and down", "right and left", approximately 6-8 inches off the surface. Apply only one coat.

Caution

If using spray application method,make certain to tent off the area being sprayed with plastic tarps to avoid spray dust from traveling and contaminating other surfaces with overspray dust. Enclosed work areas should always have excessive ventilation. Never spray near any open source of ignition such as pilot light flames, or anything that may spark, as this may cause ignition and explosion of the fumes and vapors. When spraying outdoors, make certain there will be no rain for at least 5 hours after your anticipated completion time. If there is high wind this can disrupt the spray pattern from your HVLP. It can also contribute to contamination of the coating with blowing dust. Take necessary precautions against natural elements.

Dipping

When surface preparation is complete and surface is dry and free of contaminates, open the cans of Circuit Coat and Catalyst. Stir Circuit Coat thoroughly to re-suspend the nanoparticles that have settled to the bottom. Make certain to re-stir every 15-20 minutes to ensure proper performance. Stir slowly to avoid creating air bubbles, which can affect the performance of the coating. In a separate, clean container large enough to hold equal parts of Circuit Coat and Catalyst, pour in the appropriate amount needed for the project and stir to thoroughly combine. Pour the mixture into a high density plastic (HDP) tray deep enough to cover the circuit or component being dipped.
If several components are going to be dipped put a blanket of nitrogen gas over the dipping pan to prevent solvents from flashing off. Completely submerge the desired area of circuitry. Let sit approximately 1 minute, then gently as to not create air bubbles, move item "back and forth" and "up and down" to ensure complete saturation. Remove item allowing excess coating to drip back into tray. Coating wet film thickness (WFT) should be approximately 2.0 to 3.0mm. Once the coating dries, it is designed to repel everything, including a second coating of NanoTech Circuit Coating. Allow to cure for 7 full days before exposing to corrosion or moisture conditions.

Made in USA

Environmentally Friendly
Low VOCs

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Dry Time

Drying Time (@ 77 F, 50% RH):
Drying time is temperature and humidity dependent.
Touch: 1 hour
Through: 2-4 hours
Dry: 24 hours
Full Cure: 7 Days

Clean Up

Clean tools and flush equipment with acetone thoroughly immediately after application, before product dries.

Caution

Always wear OSHA approved 1910.134 and ANSI Z88 2 respiratory protection. Fresh air and exhaust should be provided in the work area. If inhaled, move to fresh air. If breathing difficulties occur, call physician immediately. Wear butyl-rubber gloves and other skin protection to avoid contact. In the event of contact with skin, wash skin thoroughly with soap and water. Chemical safety goggles or splash shields are required. Do not wear contacts without eye protection. Immediately flush eyes with water for 15 minutes after contact and get medical attention.
If accidentally swallowed, rinse mouth thoroughly, and obtain immediate medical attention.

Care & Maintenance

CAUTION: Always turn power off before attempting to clean the component. Use a dry cloth to wipe up spills or an air hose to blow off dust. Avoid using liquid cleaners around electrical components due to risk of shock or shorting out components that are not coated with the NanoTech Circuit Coating. NanoTech Circuit Coating is a durable quartz coating. However, if damage occurs and there is a breach in the protection, it can be repaired.
CAUTION: Turn off power to the damaged piece. Very carefully remove any pieces of loose coating, then carefully abrade just the edges of the damaged or missing coating so the new coating can bond. A small file or 220 grit sandpaper works well. Make sure to not touch any of the circuitry itself. Wipe clean and reapply Circuit Coat to the area following the application instructions.

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