Parylene Dimer Type C

DESCRIPTION

Parylene Type C Dimer is the solid, granular starting material used to produce parylene conformal coating films.

FEATURES AND BENEFITS:

- Parylene N film meets all requirements of MIL-I-46058C, IPC-CC-830B and NASA-STD-8739.1 as type XY
- USP Class VI biocompatibility
- UL-94 V-0 flammability rating
- No VOC's or solvents used in deposition process
- RoHS and REACH compliant
- Vapor deposition has a high penetration power and is extremely conformal
- Deposition occurs in a vacuum chamber at room temperature and does not exert any force during deposition
- No curing cycle
- Excellent barrier and dielectric properties
- Chemically and biologically inert
- Extremely thin and lightweight coating
- No outgassing, approved by NASA
- Hydrophobic
- Able to sterilize with all common sterilization methods

APPLICATIONS

- Barrier layer protection. Protects devices from moisture, bodily fluids, corrosive gases, vapors, liquids and other contamination.
- Waterproof electronics up to IPX8 protection level and meet requirements for IPC, MIL specs and NASA standards.
- Prevents corrosion of printed circuit boards and electronic components.
- Dielectric layer to protect electronics from shorts and arcing.
- Thin film encapsulation is used to protect electronics from vibration or shock.
- Tin whisker mitigation

TYPICAL PROPERTIES OF DEPOSITED PARYLENE C FILM

Property	Result
Gas Permeability, O2	2.8 (cc*mm)/(m^2*day*atm)
Short Term Service Temperature	115℃
Continuous Service Temperature	80℃
Coefficient of Friction (Static and Dynamic)	0.29
Rockwell Hardness	R80
Tensile Strength	10,000 psi
Penetration Power	5 X
Dielectric Strength @ 1 mil	5.6 KV
USP Class VI Polymer	Yes

APPLICATION METHOD

Parylene is applied with a vapor deposition process performed in a customized vacuum system. There is no curing involved. Typical coating thickness ranges from 2-50 microns.

STORAGE AND SHELF LIFE:

Store in a cool, dark place in the original unopened container when not in use. Do not place in view of UV light source including sunlight. Dimer is not known to degrade when stored out of direct sunlight and below 30°C. Recommend retesting after five years from manufacturer date.

ADHESION

Cleanliness of the substrate is of extreme importance for the successful application of parylene. Surfaces must be free of moisture, dirt, wax, grease, flux residues and all other contaminants. Due to the vast variety of substrates used, appropriate adhesion testing should be performed to ensure the adhesion of the coating is adequate for the end use. Adhesion may be improved by priming or by special surface treatment such as chemical or plasma etching.

REPAIRABILITY

Parylene coatings can be removed mechanically from substrates and circuitry by scraping or cutting the parylene film and separating the film from the substrate. Microblasting may also be used to remove parylene. Localized heat, for example a soldering iron, may be applied directly to the coating to melt the coating. Proper ventilation of any fume should be employed. If a circuit board has been repaired, the area should be cleaned by brushing or by using solvents. The repair area can be recoated with RTV coatings or the component can be re-coated with parylene.

Consult SDS Prior to Use
