Plasma Ruggedized Solutions

The leading provider of custom ruggedized engineering solutions.

Parylene Coating now available at Plasma Ruggedized Solutions

Jun 23, 2009

Plasma Ruggedized Solutions announces the operation of its vertical parylene coating system located at its San Jose facility. The following data is provided as a brief treatise on Parylene and its considerable attributes.

Parylene Facts

Parylene is a polymer created from a chemical compound known as dimer, which is in a powder form. When heated, it is transformed into a gaseous state (monomer), cooled, and then introduced to a vacuum deposition chamber where it is polymerized and develops a film, which then deposited on nearly any available surface. The gaseous nature of the deposition process allows parylene to penetrate and coat surfaces that are unreachable by liquid coatings, including sharp edges, crevices, deep cavities and other hard to reach areas.

Parylene provides exceptional dielectric strength, and resistivity. These electrical properties are essentially independent of temperature. It provides a conformal, pinhole-free coating that is corrosion resistant. These unique properties and consistency makes parylene the first choice of protective coatings for extreme or challenging electronics in the medical, automotive, defense, aerospace and aviation industries.

There are three primary polymers: Parylene N, C, and D. Although they all have the same coating properties, and are applied in the same manner, each has a unique molecular form which results in specialized performance and uniqueness. Parylene N and C are most commonly used in the medical industry.

Parylene C is the most widely used dimer; it provides a useful permutation of properties, plus a very low permeability to moisture, chemicals and other corrosive gases.

Parylene N provides high dielectric strength and dielectric consistency which does not vary with changes in frequency. Preeminent alternative, if superior coating shield is required. Due to the greater molecular activity at the monomer stage parylene N offers the highest penetrating power.

Parylene D keeps its physical strength and electrical properties at higher temperatures.

Have questions?

Drop us a line at sales@plasmarugged.com

Sincerely,

Plasma Ruggedized Solutions Marketing Team