# *Information About Parylene and Parylene Coatings*

Parylene coatings are used around the world for protecting a wide range of equipment. Military, medical, electronics, automotive and other industries use such coatings for protecting various machines and devices. Parylene is a chemically resistant, hydrophobic compound which offers an excellent barrier against organic as well as inorganic media, gases, strong acids, water vapor and caustic solutions. It offers transparent and thin coatings which help in maintaining insulation gaps and are very useful in protecting critical equipment used in various industries. It is a polymer which is mainly deposited through vapors.

**Applications**

The different applications of this polymer are as follows:

* In creating barrier layers (for diaphragms, filters, valves etc.)
* In the production of microwaves
* Creaition of sensors for rough environment (air sensors, automotive fuel etc.)
* For hydrophobic or water resistant coating (such as moisture barriers for biomedical equipment)
* For manufacturing electronic devices used in the military
* For manufacturing devices used in space travel
* Protecting metallic surfaces against corrosion
* For reinforcing micro-structures
* For reducing friction in acupuncture needles, micro-electromechanical systems and guiding catheters

**Advantages**

The various advantages of parylene are follows:

* It can be used to coat the sharp edges and narrow columns of various objects
* It is highly resistant to friction, corrosion and water because of which it is able to protect critical equipment
* It is ideal for protecting valuable equipment used in different industries
* Parylene has a completely homogeneous surface which makes it a perfect substance for coating objects
* It has a high electrical impedance and very low permeability to gases
* It is highly stable and is able to protect different objects under extreme environmental conditions
* It can be used to protect rubber, plastic and other materials used in the construction of commercial goods

The substance is thermally stable up to a temperature of 220 degree Celsius and is mechanically stable up to -200 degree Celsius and up to +150 degree Celsius. Thus, it is of no surprise that it is used for coating valuable devices, machineries and equipment across industries. When any objects are coated with Parylene, their operational abilities are not affected. This is why, the military uses this substances for coating components of guns, tanks and other machines etc.

In the automotive industry, different components of a vehicle such as circuit boards, LED lights, sensors etc. are coated with this substance so that they are protected from all kinds of environmental factors such as rain, excessive heat etc.

Article Source: [http://EzineArticles.com/expert/Rajot\_Chakraborty/1170702](http://ezinearticles.com/expert/Rajot_Chakraborty/1170702)

Article Source: <http://EzineArticles.com/7946750>