

When Failure is not an Option!

Johnstown, Pa - Para-Coat Technologies, Inc. (PCT) was started in a small 1,000 sq. ft. garage in 2010 with husband and wife team, Mike and Krista Rager. There was a need locally for conformal coating services and they wanted to fill that void. Fast-forward eight years later and the company now occupies a 30,000-sq. ft. ESD protected facility in downtown Johnstown and employs 26 people with hopes of adding an additional 15 employees in 2019. When the couple started the company in 2010 they knew how important it was to obtain ISO certification in order to gain business, and made that goal top priority. PCT believes in constant improvement to our quality system, states Owner Michael Rager. Our goal is to provide the customer with an on time, quality product, while receiving great customer service. We knew we wanted to be a seamless extension to our manufacturing customers and being ISO certified /ITAR was the first step.

Para-Coat Technologies, Inc. is a global conformal coating supplier to the Aerospace, Medical, Military and Automotive industries. PCT offers Acrylic, Urethane, Silicone and Parylene conformal coatings along with parylene machine / dimer sales and consulting services. We have vertical, horizontal and tumble coating machines in place. We also offer potting/encapsulation and removal/stripping of conformal coating. Conformal coatings are generally applied in a liquid phase by spraying, dipping, or brushing. However, Parylene materials are applied within specialized vacuum chambers and the material forms linear, highly-crystalline polymers that can be usefully produced as coatings and films. The resulting film is thin and highly conformal, has no pinholes, can completely encapsulate a substrate to protect it from many environmental conditions such as moisture, chemicals, fungus, dirt and dust.

Para-Coat Technologies specializes in Parylene coatings. Parylene is a common generic name for a unique series of polymers based on paraxylene. Parylenes are formed by the pyrolysis of a di-p-xylene (dimer) in a vacuum chamber and is applied as a gas that disperses evenly throughout the chamber to target surfaces and forms as a clear polymer (plastic) film. Para-Coat Technologies, Inc. offers two types of Parylene, N and C. Some common application examples are implants, pacemakers, catheters, microcircuits, sensors, circuit boards, hearing aids, elastomeric keypads, silicone, rubber parts, O-rings, needles and various consumer electronics.

As medical devices become smaller and more compact, the use of parylene coatings finds increasing value due to its molecular level deposition. Thin film, pinhole free parylene conformal coatings provide the ultimate protection for life-saving devices and instruments in the medical industry. Inert, vacuum deposited parylene is biocompatible and biostable and offers excellent dry film lubricity, thermal stability, moisture, chemical and dielectric barrier protection. Additionally, PCT Parylene is FDA-approved and certified with a USP Class VI biocompatibility rating that allows safe for use within the body.

Parylene's ultra-thin, optically clear and flexible characteristics has been shown to enhance the performance of rubber and elastomer components by protecting surfaces and modifying surface properties. Objects coated with this polymer film include a diverse range of rubber

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components, ranging from gaskets and seals to rubber keypads and medical catheters. Due to its unique molecular structure, the parylene film barrier is practically insoluble in all known organic solvents up to 150°C and extremely resistant to most of the inorganic reagents including strong acids and alkali.

The unique properties of parylene make it the most effective conformal coating for electronics. State-of-the-art protection is required for advanced electronics to ensure improved functionality and reliability as well as extending functional life under the harshest conditions. Parylene's high dielectric strength provides unique insulating properties and a low dielectric constant that is independent of frequency. Parylene is electrically insulating, making it perfect for LED signage, which requires a lightweight coating that will protect electrical components from the elements. The Parylene coating, once solidified, is invisible to the eye and is up to 100 times thinner than a human hair. Parylene typically ranges in thickness from 0.25-1 mil but can be applied up to 3 mils.

Our highly trained and professional personnel adhere to all current ESD precautions as per ANSI 20.20, ISO: 9001:2015, IPC-A-610 Class 3, IPC-J-STD-001, and IPC-CC-830. Our repair and rework are held to IPC-7711 and IPC 7721 standards. All assemblies are properly handled, thoroughly inspected and tracked through a fully documented production process. A 100% visual inspection is performed and coating thickness is measured to ensure and maintain the highest quality possible.

Our experienced staff and proven process can accommodate all types of orders from full production to small engineering runs. We offer a fast 2-5 business day turnaround time for most orders (standard industry turn time is 10 days). For those time-sensitive orders, we offer an expedited service in as little as 1 day depending upon the complexity and quantity.

Para-Coat Technologies, Inc. offers parylene dimer sales and consulting services. The purity of dimer is the most important part of selecting a raw material supplier. When the dimer contains less contaminant, a greater quality and more uniform film is achieved. PCT's dimer is 99%+ pure and results in shorter, more efficient run times. PCT's parylene N and C comply with USP biological testing requirements for Class VI plastics. If you operate your own parylene coating equipment, PCT can provide you with high quality dimer at a competitive price!

If you are interested in purchasing your own state-of-the-art Parylene deposition equipment, Para-Coat Technologies can help. We offer Parylene deposition systems and packages that are designed from the ground up based on your needs. With our design experience, process development, training and support, we truly are the best choice for your Parylene needs.

As Para-Coat Technologies continues to grow, we are looking to add locations across the US to better serve our customers. We know in order to stay relevant in this ever-changing world we need to constantly improve all aspects of our operation and strive to put customer service first!

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Please contact PCT today for your conformal coating requirements, we look forward to working with you!