

# Conformal Coating Q & A

**Q. What is Conformal Coating and why do I need it?**

**A. Conformal Coatings were created to form a barrier over the finished assembly in order to protect against exposure to moisture, salt, temperatures, fungus, dust and other environmental contaminants. Corrosion can be prevented by spraying, dipping or brushing all or part of an assembly with the appropriate coating. Coatings are available in epoxies, polyurethanes, acrylics and silicones. Plasma Ruggedized Solutions can provide complimentary selection guides, as well as technical upon request.**

**Q. Won't my housing protect the assembly just as well?**

**A. Sometimes, although coatings offer permanent protection. Coatings have also been found to be more cost effective by their ability to save both time and money by reducing the number of failures to be dealt with, as well as the reduction in engineering, tooling and material costs. Coating brings the protection directly to the surface being protected, therefore the coating can provide reliability by eliminating leakage from high impedance circuits, enhancing dielectric strength, reducing mechanical stress on components and protection from thermal shock, enhancing durability and extending product life.**

**Q. You said "Permanent". Can these coatings be reworked in case of error or failed components?**

**A. Yes, most coatings offered by PRS can be easily reworked. The method of rework is dependent on the type of coating used. Rework kits, as well as rework clinics, are part of our service.**

**Q. Why shouldn't I buy an aerosol can from the hardware store and spray myself?**

**A1. Cost: In comparing equal dollar values of an aerosol to PRS's method of HVLP (High Volume, Low Pressure) spraying, we have found that the PRS method can coat evenly, to specified thicknesses, up to four times the surface area of the aerosol. In addition, PRS purchases in volume and mixes accordingly to lot sizes, thus reducing waste.**

**A2. Quality: PRS offers knowledge and experience. From details like what coating is compatible with each other or your solder mask, as well as possible RTV's within the board assembly to thickness coupons run with each batch. Our spray booths are state-of-the-art, equipped with air dryers on the compressor, includes in-line filters, and filters at the gun nozzle. All staff is trained in ESD procedures. We inventory proper masking boots and tapes. Since coatings are typically transparent, our inspection stations are equipped with proper lighting to allow proper visual inspection.**

**A3. Safety: Since many coatings and solvents are deemed hazardous by Federal Standards, PRS takes all precautions. During the spray process, air is continuously forced through incoming air filters to outgoing charcoal abatement systems in order to protect your assembly from debris, as well as protect our operators from fumes. PRS holds active permits to operate, through the air quality management district. PRS continuously works at exceeding all environmental regulations in order to provide the safest environment for ourselves and our neighbors.**

**Plasma Ruggedized Solutions**

**Plasma is a Global Provider of Custom Ruggedized Engineering Solutions across Industry**

