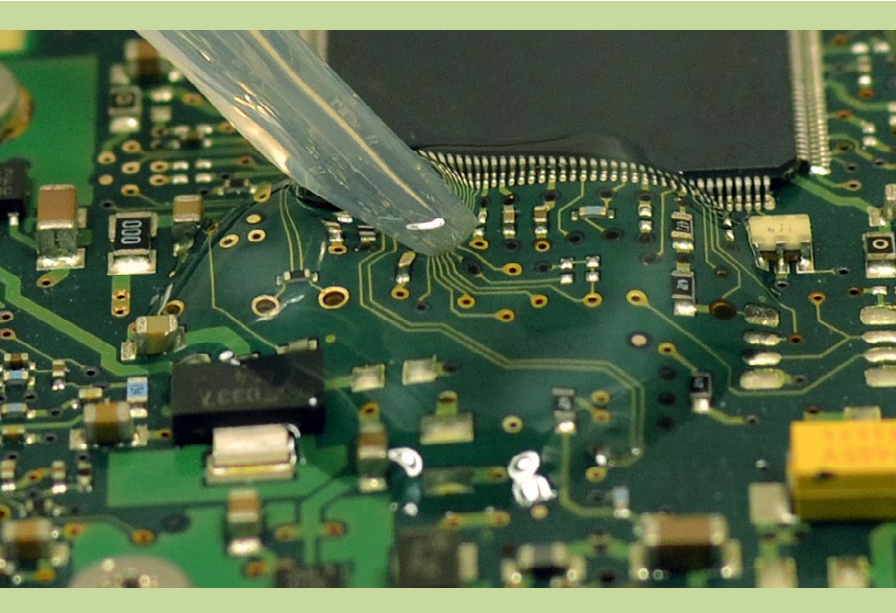


Surface Modification

Enhancing the Adhesion of Coatings

■ A partnership with TriStar gives you a competitive edge.



The Treatment of Housings and Devices for the Promotion of Potting & Encapsulation Media

In order to protect sensitive electronic devices – such as printed circuit boards, sensor assemblies, coils, etc. – against moisture, shock or vibration, or dust, manufacturers will often coat the device with a compound such as urethane, epoxy, or silicone.

In order to promote maximum adhesion of the compound to the device, and/or the housing in which the device may be potted, many manufacturers employ the use of low-pressure (vacuum) plasma processes for cleaning and functionalization prior to coating.

Why Plasma?

Plasma treatments remove all trace amounts of organic contamination that may prohibit uniform wetting of the substrates being coated. This facilitates the flow of resin into all areas of the potted device and minimizes bubble formation and/or bubble adhesion.

Advantages

- Low-pressure (vacuum) plasma treatments are extremely uniform and repeatable.
- Our treatment processes are environmentally safe (no hazardous byproducts or waste).
- Plasma treating devices prior to potting or encapsulation has proven to increase production yield and reduce in-field failures.
- In most cases, the effectiveness of the plasma treatment is not limited by complex part geometries.

Examples:

- Sensor devices
- Electrical components
- Fiberoptic devices
- Unidirectional filter media

Considerations

- Plasma processes can be tailored for specific resin formulations as well as substrate composition
- TriStar can reduce the overall cost of the assembly by specifying and providing housing materials
- The cost of surface treatment will generally offset the cost of reworking devices and/or field failures

We're ready to put our engineering expertise to work for you from prototype to production.

Engineering | Custom Fabrication | Manufacturing



CJ Composite

- Self-Lubricating
- Low weight | High Strength
- Chemical Resistance
- Direct replacement for Bronze



Ultracomp®

- Self-Lubricating
- High Load | Low Speed
- 54,400 PSI Compressive Strength
- Exceptional Resistance to Vibration and Impact



TriSteel™

- Self-Lubricating
- High Load | High Speed
- Metal Backed Bearing System
- 100% Lead Free



Rulon®

- Self-Lubricating
- Low weight | High Strength
- Low Coefficient of Friction
- Chemically Resistant



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