



## Conformal Coating Masking Boots FAQs

### How often can you reuse conformal coating masking boots?

For typical spray coating processes most boots can be re-used 150-250 times.

In fact, we have some boots that have never been replaced and still in use in our coating service that have probably been used over 400-500 times.

They can last a long time if looked after in production.

### What factors affect the lifetime of the masking boot?

The number of times a boot is reusable is dependent on a number of factors including:

1. The conformal coating process
2. The complexity of the boot
3. The thickness of the wall of the boot
4. The conformal coating material used
5. How tight you require the boot to fit
6. The way they are used by operators

If you have a thin walled masking boot (<2mm) and tight fitting masking boot part then it will not last as long as a masking boot with a normal wall thickness of 2-3mm.

### What is the temperature limit of the masking boots?

The maximum temperature the masking boot should be exposed to is approximately 200°C since they are made of silicone.

### How do I clean the masking boot?

**The masking boots should not be cleaned in solvents.**

**This may damage the integrity and lifetime of the boot.**

The conformal coating generally does not stick to the masking boot. Also, the masking boot material is a soft silicone so is very flexible.

So, if you flex the boot, the conformal coating will crack and it is generally possible to peel or flake the coating away.

This is the easiest method.



## **How many times can I use the masking boot with Parylene?**

If you require a tightly fitting gasket seal for processes like dipping or Parylene coating you may not be able to use the boot more than 1-2 times.

This is because the seal has to be perfect. Even after a few uses the boots do stretch slightly.

However, you can use liquid latex to seal the boot to the board and this will form a complete barrier to the coating.

## **What is the typical thickness of the masking boot wall?**

Typical thickness is 2-3mm but we can customize to any thickness.

A thicker wall ensures the boot lasts longer but it will cover more of the board and shield the area.

We can discuss and change on a case-by-case basis.

## **Where are conformal coating masking boots used in the production process?**

The masking boots provide protection for many different types of components on a circuit board.

This is for all of the conformal coating application techniques including batch coating, selective robotic spraying (as an alternative to difficult programming), vertical and horizontal dipping and vapour deposition of coatings such as Parylene / Chemical Vapor Deposition (CVD) and atomic layer deposition (ALD).

## **How are conformal coating masking boots used?**

The masking boots are placed over the components such as connectors, plugs and sockets that require protection from the conformal coating applied.

They can be simple boots that fit over the top of a connector. Or, they can be a more sophisticated design.

## **Why use conformal coating masking boots in your production process?**

Masking boots can be an integral part of a full masking solution in coating applications for printed circuit boards.

This can be for both liquid conformal coating process or a vapour deposition process such as Parylene.



Many components and printed circuit board locations must remain uncoated. The purpose of the conformal coating masking boots is to prevent migration of the conformal coatings into components and keep out areas.

The use of masking tapes, dots and liquid latex is an effective process in protecting components from ingress of conformal coating. However, the application of the masking can be labor intensive, especially in higher volume applications.

Therefore, masking boots can offer a labor saving alternative in both the masking and de-masking stages of the coating process.

### **What types of masking boots are available?**

Thin Film Partners provide custom boots solutions for a customer.

We have a wide range of custom boots and designs within stock or ready to manufacture. We can quickly match these to your needs.

If this is not possible then we help develop a custom solution through our design services to help you get the protection you need in your conformal coating process.

The key is to determine the best Return on Investment (ROI) when using masking boots for the customer for their particular application.

### **How do I get a quote for custom masking boots?**

There are two practical options for getting accurate quotes for custom masking boots.

These are:

1. Supply a sample of the PCB along with a masking diagram
2. Supply photos of the PCB along with exact dimensions of the components. You can get this from the component supplier.

With this information we will then check against stock and quote you a price.

We will make the boots to a very high tolerance and need to get the measurements correct. Please remember we want to get this right so we cannot guess.

### **What conformal coatings can be used with the masking boots?**

The masking boots are compatible with almost all conformal coating materials and solvents.

This includes all of the Parylene compositions and the liquid conformal coatings like acrylics, polyurethanes, silicones and epoxies.



### **Why would a conformal coating masking boot leak?**

They are completely leak proof if they are undamaged. The coating cannot go through the silicone wall.

However, it can go under the boot and leak in that way. So, care has to be taken with conformal coating leaking under the masking boot.

### **Can a custom mark be added to the surface of the masking boot to make identification easier?**

We can add detail markings if this will help. They can be embossed.

As long as the marking can fit on the boot, cap or plug then there is no problem.