



Preserve your investment in masking

Masking, and in particular custom masking, is an investment. As such, it needs to be maintained in order to ensure it works for you.

More and more people are benefiting from custom masking. Custom masks can be manufactured quickly and at a reasonable cost, enabling the finisher to process repeating jobs efficiently and accurately. There is, however, an investment required for custom masking, so it is important to protect that investment by taking care of your masking. Here are a few preventative maintenance tips to ensure your masking is always performing at its best.

Remove excess paint buildup –Masks should be cleaned on a regular basis, either in a chemical solution that is compatible with the mask material or in a tumbling machine to break the paint off. Layers of paint on a mask will reduce the flexibility of the mask and can mean that it stops masking correctly. Excess paint on the mask can also break off during the finishing process and fall onto a newly painted surface. If your process is prone to depositing an excessive amount of paint on the masks, then advise your masking supplier. A good masking supplier can provide samples in a different compound for you to try through your process. Often a different compound can mean the paint behaves differently on the mask. This different compound can also be provided in a different colour so you can easily evaluate the results of any trials you perform.

Splits or cracks – Look carefully at splits and cracks to see if they are always in the same place; if they are, then contact your masking supplier. They may be able to redesign the mask to stop the splitting. Have the masking supplier visit you to review how you apply and remove the mask. If a mask is splitting at a corner when it is being removed from the part, it may be possible to change the design to add a radius corner instead of a square corner. If a mask is splitting because it is being stretched too tightly over a part, then your masking supplier can suggest modifications in either design or material. They can also review the tool that the masks are being made in to check there are no sharp edges that can damage the mask as it is being removed from the tool. Manufacturing precise rubber masks depends on the easy flow of material around the tool. Well placed chamfers or fillets on tooling is often the sign of good tool design and can make or break a mask. Chamfers and fillets on tooling can also make the masks easier to produce, so it is in the masking supplier's interest to review the tool and tool design carefully.

Colour - Watch for masks that have changed colour since you first started using them. Clear masks may start to go brown as they fatigue due to multiple passes through an oven. A once light blue mask can become dark blue after multiple runs through a chemical plating process. Display a picture of a new mask in the area where you store your masks, to help people monitor how the colour is changing over time. Without a reminder of what the masks should look like, it's difficult to detect a gradual change of colour.

Hardness – Masks can change hardness as they are used multiple times. Changes in hardness can mean the mask becomes very hard and brittle or it can mean the masks become soft and almost sponge-like. Your masking supplier will have designed the rubber mask to work at a particular hardness, once that hardness moves away from the optimum it may not work as well in the finishing process. Keep a new mask as a master so you know how they should feel. If you detect a dramatic change then replace your masks. Just like monitoring the color, monitoring hardness can be challenging without a master to refer to.

When to replace masks – As each process is different, it is difficult to know precisely when to replace masks. Off-line trials can be carried out with sample masks in order to determine the optimum number of uses. The best option is to count how many times the masks have gone through the process before they show evidence of failure and reduce that number by 20% to determine when to reorder. So, if a mask has been known to survive 50 uses through your process, it should be reordered once it has been used 40 times. That 20% safety factor will give your supplier time to manufacture new masks before your old ones fail. Naturally, the reorder level will also be determined by the number of masks you have and the frequency you run the job.

Excessive paint on a mask can reduce the performance.



Colour and hardness of masks needs to be monitored. In this case the light blue mask is new and the dark blue mask has been used multiple times.



Track your masks - ask your supplier if you can order a different color to help track new masks every time you order. When all your new masks are red and the old ones were blue, it is easy for you to spot which ones need to be removed from the process. This may mean your masking supplier has to set up two different part numbers, one for red and one for blue. That, however, should be an easy thing to do in order to help you control your masks and ultimately your process.

These are just some of the things you can do to protect your investment in masking and to ensure that you are consistently producing quality finished parts for your customer.

If you are interested in protecting your investment, a good masking supplier such as Caplugs or any of their distribution partners such as Greentree can provide help.

John D. Gill

John D. Gill is an Engineer with experience in masking and product protection throughout the UK, Europe and USA. He can be reached at www.johndgill.com and via Twitter @masking101


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T 01827 55777
F 01827 53713
E info@thermaset.co.uk
W thermaset.co.uk
A Thermaset Ltd, Claire Works, Anders,
Lichfield Road Industrial Estate, Tamworth,
Staffordshire, B79 7TA, United Kingdom