

A Winning Process For Custom Masking

An introduction to custom molded masks by John D. Gill

Most masking supply companies carry a variety of standard molded masking items such as caps and plugs.

Sometimes, however, that just isn't enough and a custom molded item is needed.

A custom molded solution can be anything from a simple cap to a complex molded product forming an integral part of the finishing or protection process.

All custom molded masking solutions start with a problem. This can be as basic as the lack of a standard mask for the component, or a production problem such as not being able to mask enough components per hour. The process of getting to the solution using a custom molded mask should follow a series of logical steps.

Firstly, there needs to be a lot of listening. The masking supply company needs to listen to the problems and completely understand the requirements. They also need to appreciate the process that the masking or protection product will go through in its lifecycle.

Secondly, there needs to be a series of concept drawings and ideas, with a frank exchange of information between the engineer designing the solution and the people who will be using it. This exchange of information will ensure sealing areas are in the right place; handles are optimized to reduce shadowing whilst still being ergonomic and that poka-yoke systems are present. An investment of time by the right people at this stage will guarantee the solution has the best possible chance of success.

In parallel with drawing up concept designs, material selection can

silicone or lower temperature materials such as neoprene, vinyl or EDPM. There's a much wider range of materials available when it comes to a custom masking solution, which in some cases may be more suitable or economic for the application. Materials such as natural rubber, nitrile, vinyl, SBR or even a high temperature vinyl such as Flex500 from Caplugs may all be good choices depending on the application. Samples of materials should be tested in the finishing process at this stage.

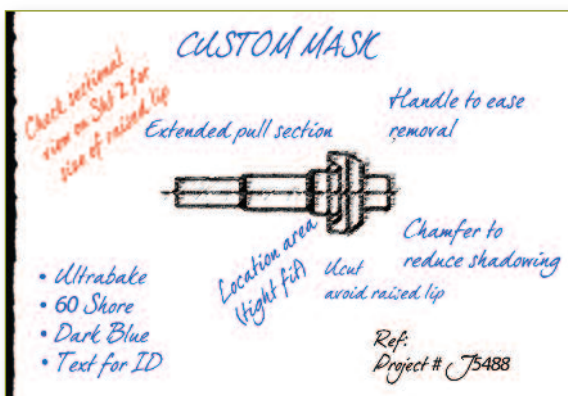
The next stage of the development may involve prototypes. Prototypes can be produced using 3D printers or by additive manufacturing as it is also known. 3D printing has been in the news a lot recently and there is no reason why a good masking supplier can't provide you with 3D printed prototypes of your custom mask. Some masking companies, such as Greentree, can supply prototypes made from a rubber-like material that has similar properties to the final product.

Whether or not you have a prototype made will depend on the budget for the project. Either way, your masking company should provide first articles. These will allow you to test the product that comes off the tool you have invested in. They are usually the result of a lot of hard work, so they are worth waiting for and it is worth investing the time to test them on your product and through your process. Under no circumstances should you skip the first article stage.

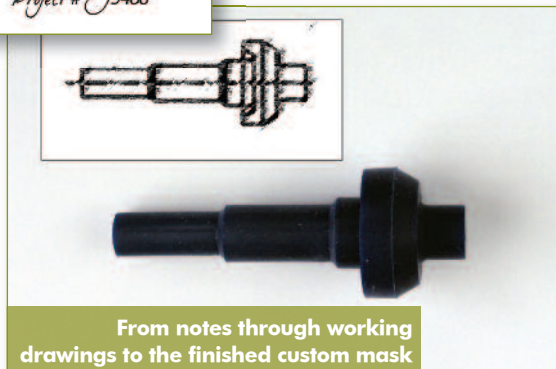
Now you are ready to give the go ahead to run the production volumes of the custom molded mask. Congratulations – you have removed your production problem for good!

John D. Gill

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Engineering notes and sketch from initial discussion



From notes through working drawings to the finished custom mask

be undertaken. When it comes to molded masks, most masking companies will provide products in either a high temperature material such as