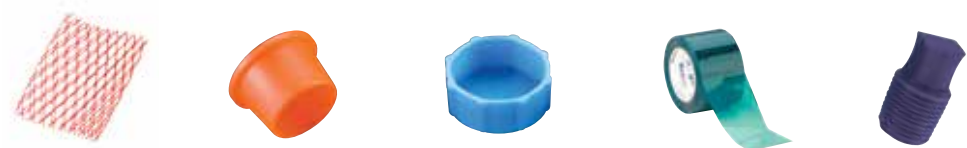




With manufacturing and distribution facilities all over the world, Caplugs can effectively serve our customers – **wherever they are** – with reduced production and delivery times. We produce over 10 million parts per day with 12,000 of those being standard parts. Caplugs likely has your solution, before you even know what it is.

As a partner you can count on, Caplugs will listen to your challenges and provide the best solutions for a variety of markets from medical to general manufacturing. We don't just sell parts – we're here to ensure your needs are met with the right part that protects your product, no matter how simple or complex the application may be.

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Why Masking Shouldn't Be a Last-Minute Consideration

If you're masking with traditional methods, you know the process can bring costly challenges to your production line and bottom line. Although masking always serves as an essential barrier for areas that require coverage during powder coating, it is a process that is most often reduced to an afterthought. Potential options aren't typically considered until the product is entering the finishing process, which limits manufacturers to a quick fix. But these traditional, "one size fits all" methods fail to provide reliable long-term protection that meets specific needs and can significantly impact both labor and product costs.

When micrometers matter

Hand-cut tape or lacquer methods appeal to manufacturers in need of a hasty masking solution, but while those choices address one problem, multiple long-term setbacks are simultaneously created for an operation.

As a manual procedure, traditional masking methods are susceptible to human error throughout the entire process. The laborer must possess advanced skills in order to accurately read engineering blueprints and notes to determine an appropriate solution for the specific product. Then they must demonstrate an impressive dexterity and steadiness to precisely measure and apply the standard tape or lacquer to the product. The entry points for human error are numerous in the cumbersome process, where a single mistake threatens to compromise the entire solution, at any point. Ill-fitting masks can cause edge-lift, which leads to leaking and the potential for considerable damage.

Regardless of a highly skilled workforce, many traditional techniques still involve innate safety concerns. In some methods, a razor is used to cut tape for appropriate sizing, which significantly raises the potential for injury. Other processes may create extended exposure to acetone during lacquer removal, creating harmful side effects on the body such as headaches and dizziness.

In addition to the risk of human error and safety concerns, traditional masking methods are consistently longer when compared to customized masking solutions. Such skilled labor may require a comprehensive three- to six-month training session, and if lacquer was the chosen solution, it involves extensive curing and removal time, as well as a thorough inspection to ensure proper removal – adding between 20 to 75 minutes on the final production time.

The additional skilled labor, safety risks and process time all contribute to higher incurred costs for a seemingly quick fix. Although manufacturers can allocate appropriate funds for an advanced laborer, there is no way to anticipate human error or accidental worker injuries, which bring significant long-term costs to an operation.

That's why manufacturers are looking for more efficient, yet still cost-conscious masking methods. They need reliable protection that improves production processes without sacrificing product quality. Consistency is of utmost importance, and to ensure each and every product looks the same is extremely difficult with manual labor – even with the most skilled employee. But if an employee misses an area and the product is off by even a millimeter it matters, especially in the aerospace industry where a micrometer difference is critical.

A precision solution

In order to offer greater reliability and ensure complete consistency, Caplugs engineers a wide variety of solutions that precisely mask a part – the first time, every time. With a standardized cap or plug, a manufacturer can always expect the same results. Although it may seem more costly up-front, using this highly efficient protection can actually be cheaper than traditional methods when considering long-term time and labor savings.

Caplugs is also uniquely positioned as masking experts since acquiring Shercon recently. With such advanced molding capabilities, state-of-the-art technologies and custom design expertise, the company can produce a solution no matter the size, color, material, process, or other requirement. Leveraging over 60 years of experience in the masking industry and a support staff of engineers with a combined knowledge base of 25 years, Caplugs understands a customer's application and will not only provide a solution but find ways of improving the overall process.

Improving the bottom line

In fact, Caplugs designed a custom silicone molded mask for Bodycote, an international network of 190 facilities that provides thermal processing services. One location in particular utilizes Caplugs during

“When we get a request, we always dig deeper to see how we can improve masking times.”

– Rohit Swami,
Sales Engineer at Caplugs

carburizing and nitride surfacing. Before Caplugs' solution, Bodycote's expertly trained staff would apply a lacquer, which took about 15 to 20 minutes for application drying and curing, and then remove the mask by soaking it in an

acetone solvent for another 15 to 20 minutes.

To accomplish this process, Bodycote employed a skilled force of ten people in their masking department with two additional employees manning the hardening oven. With manual labor, unavoidable errors occurred from missed brush strokes, which require the part to be scrapped because of a failure to meet the specifications. Not to mention, there are increased safety liabilities and contamination risks associated with 10 to 12 hour exposure to hazardous materials.

So when Bodycote switched to a custom Caplugs solution, they saw significant cost savings in time, labor and materials. The original masking application time of 15 to 20 minutes was reduced to a mere 45 seconds, providing a savings of approximately 4,000 man hours and tens of thousands of dollars annually. Because Bodycote was able to eliminate the use of hazardous lacquers and acetone, they greatly reduced accident risks and material expenses. The company also reorganized the workforce and shifted skilled labor to other departments to

retain top talent. Now their masking solution can be applied like a cap or plug, which eliminates the need for razors and cut-resistant gloves, saving time and money for production.

Bodycote referred to Caplugs as an invaluable partner that greatly improved their bottom line. “Caplugs took the time to understand our process and build a personal connection,” said Eric Stoltz, wet process manager at Bodycote. “Their knowledge of our process, the local service they provided and their vast product line was more than helpful. They had the generic plugs we were looking for and the custom solutions we needed to perfect our process.”

Due to the overwhelming success of the molded solution, Bodycote currently relies on Caplugs for a number of product solutions including die-cuts, tapes and plugs for a variety of other processes.

Advanced manufacturing capabilities

Caplugs' advanced manufacturing capabilities allow them to engineer protective solutions that solve their customers' issues with a variety of material options. Through the company's deep knowledge of the industry, Caplugs employs a rigid structure for developing a final solution. For some competitors, it can take multiple revisions to get a prototype right. But with Caplugs' expertise, they can offer rapid prototyping and quick development – sometimes in as little as 24 hours.

An in-house team of design engineers works diligently to ensure the process is as streamlined as possible through complete customer collaboration. Engineers will work one-on-one with each customer to develop a part that fits their need exactly. They also consult with Caplugs' sales representatives, who assist heavily during the development phases.

And, when it comes to custom solutions, the engineering team will develop a unique piece for a specific size, shape, material, color, or process requirement. With an in-house tool room, a detailed parts modification process and vast molding capabilities with vinyl dip,

rubber and silicone methods, Caplugs can produce whatever it is that customers need. Engineers will assist in selecting the right material to meet specific performance conditions that include temperature resistance, texture for gripping, Pantone matching and chemical/fluid resistance. Chemists can also mix a custom compound to meet more specific material needs.

Caplugs even has a variety of die-cutting equipment to produce tapes, discs and other custom die-cuts for extremely accurate, quick solutions. Shorter, quicker runs are also possible for smaller quantities since masking is so often an afterthought.

Caplugs is truly a masking partner, offering the advanced capabilities and expertise needed to help manufacturers solve their process challenges. By working together to understand a company's existing solution, thinking strategically on how to improve a masking process and providing a standard or custom part, Caplugs can certainly save time, labor and costs – all to improve a bottom line.



Bodycote serves the needs of a diverse client base including automotive, aerospace and general industrial markets.



The Caplugs engineering team will develop a unique piece for a specific size, shape, material, color, or process requirement.

Significant Savings for Bodycote



masking time reduced to **45 SECONDS**



saving approximately **4,000** man hours



and tens of **THOUSANDS OF DOLLARS** annually