

SANDBLAST COATED METAL

RTIC | YETI | OZARK



Metal tumblers are continuously growing in the market of personalization. People love the fact that these quality metal containers keep their drinks ice cold or piping hot all day, and they are willing to pay for it.

There are several styles of metal tumblers available today: stainless, coated and painted. The coated and painted tumblers are available in vibrant colors and have become popular for personalization. We often receive calls from customers inquiring on how to sandcarve tumblers that are coated or have a painted surface:

What Mil thickness do I use?

How long should I sandcarving?

Can I blast through coated material?

These are all valid questions on producing a quality personalization for your customer on these metal tumblers. After all, who wants to ruin a pricey product or turn down a profit?

Rayzist tested sandcarving with multi color painting on a few different types of metal tumblers (Yeti, Ozark and RTIC) using photoresist film. All of the metal tumblers etched well, but they were each slightly different in etching.

All of the tumblers were etched with a 3/32" nozzle, 150 Aluminum Oxide, and blasting pressure of 45psi in our 2034VXA Sandcarving System. We used SR3000 5Mil photoresist film with extra RZ2 adhesive. The extra adhesive will cause the photomask to adhere to the textured surfaces. It is important to know, depth cannot be achieved on metal surfaces with sandcarving.

TIP: If the photomask is left on the surface for a long period of time or if excessive blasting occurs, residue from the photomask may transfer to surface.



RTIC tumblers resulted in etching the quickest. This brand had a slightly different coated surface, which seemed like a painted surface. The abrasive penetrated the surface quickly, resulting in an etched image in less than five minutes. A 4Mil photoresist film could be used on RTIC tumblers considering the sandblast is quicker than the other brands.



Ozark tumblers we used had a coated surface. The abrasive took longer to blast through the coating compared to the RTIC brand. Using a 5Mil photomask on this surface was ideal for longer blasting. Once the coating was removed, we again stopped blasting to avoid any residue.



Yeti tumblers also had a coated (DuraCoat) surface. The coating is durable, which resulted in a longer blast time than RTIC and Ozark tumblers. It took several minutes before the coating started to break through. Due to the longer blast time on this surface a 5Mil, or even 6Mil photoresist film is recommended. The 6Mil photoresist film will allow an increased blasting pressure from 50psi to 60psi. The increased blasting pressure will speed up the blast time for this particular project.

APPLICATION INSTRUCTIONS



Use a water based sharpie to create an alignment for photomask. The water based sharpie will wipe off with glass cleaner after blasting.



Create a pull tab by folding a corner of the mask on the sticky side, crease with your fingers separating the clear liner, giving you a pull tab. Do not remove completely.



Apply photomask to surface. Use the white alignment line to apply mask. Even though RZ2 adhesive is applied, the photomask is somewhat repositionable.



Apply pressure with squeegee to secure photomask to surface. There should be enough pressure to move the wrinkles out.



Remove clear liner. In some cases the photomask may lift up when peeling away the clear liner. With clear liner off, press mask down with fingers.

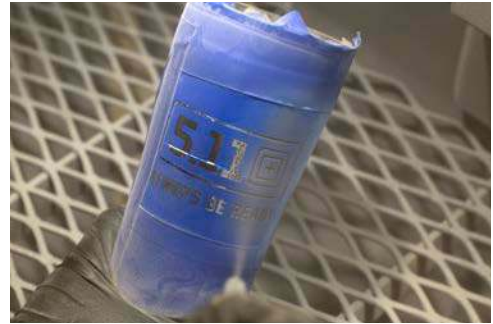


If a several wrinkles occurred while removing the clear liner, pull up a side of the mask and gently pull, removing the wrinkles.

BLASTING & PAINTING INSTRUCTIONS



Tape project. Cover the exposed area with a vinyl sandblast tape. The vinyl tape is recommended for sand resistance when sandcarving for depth or removing a coated surface.



Sandcarve. Blast at 40 - 45psi with a 3/32" carbide nozzle, and Aluminum Oxide 150grit.



The blasting distance is approximately 4 to 5" from the photomask. Sandcarve until the coating is removed, revealing your image. You will not achieve depth in metal, but only remove the surface.



Use masking or painter's tape to cover the area that will not be painted.



When painting with multiple colors, cover the design with cover paper (non-stick paper) to protect the design from paint.



Part of the design is covered with cover paper, protecting this area from the white paint. **TIP:** You can also cut or laser a low tack material of a silhouette in place of cover paper.



Paint image in light coats. Do not over paint, paint should never run or drip down tape or photomask.



Paint from different angles by rotating tumbler. This will allow paint to fill the etch area.



After first color is dry, cover white painted area with cover paper and masking tape. This will protect area from second color.



Remove cover paper from other area and prepare for second color of paint.



Repeat painting in light coats from different angles. Again, do not over paint area. Overpainting can cause the paint to lift up when the photomask is removed.



Use hair dryer to speed up paint drying time if needed. Otherwise let paint air dry completely (12 to 24 hours).



Once paint is dry, remove photomask and tape. The photomask will remove easily from surface.



Use an X-Acto knife or picker tool to remove small pieces of photoresist. You can also use a small strip of Rayzist sandblast vinyl tape to remove photoresist in place of picker tool.



Once the photoresist is completely removed, clean your piece and enjoy the two color sandblasted metal tumbler. In some cases, a residue is left behind, we recommend using Petroleum Naphtha "white gas" on a clean cloth to clean the piece.

Using photoresist material is a great way to quickly sandblast metal surfaces and it provides amazing detail for intricate images.

Adding a paint fill application with one or more colors will provide contrast to your piece.



Liz Haas lives in San Diego, Ca and is an sandcarving educator, trainer, customer support and event coordinator for Rayzist Photomask for the past 17 years. She has in-depth knowledge of photoresist film, sandcarving process and sandcarving equipment.

