

Stainless steel molds can be used for either slumping or draping but if used for slumping it's important to ramp slower than you would for ceramic molds. When cooling, the metal will contract or to press so tightly it's impossible to remove. It's safer to just restrict the use of steel to draping and use ceramic molds for slumping.

It's risky to use any metal other than stainless steel for kiln molds. Most non-ferrous metals will warp from the heat and non-stainless steel (iron) will spall distributing what looks like black metal dandruff throughout the glass.

Stainless steel molds must be coated with something to prevent the glass from sticking to the metal. Although many artisans used boron nitride, it has been my consistent experience that that product is consistently unreliable. I recommend it not be used and stainless molds be coated with kiln wash the same as ceramic molds.

Preparing a stainless steel mold

1. Kiln wash won't stick to smooth metal. You'll have to rough up the metal surface to provide some texture for the kiln wash to stick. Sandblasting is preferable, but if you don't have access to a sandblaster, you can hand sand it thoroughly with 80 or 100 grit sandpaper. Sanding in a combination of vertical and horizontal strips to produce a scratched grid works best.

2. Heat the mold before applying the kilnwash. The easiest way to do this is on your kiln. Put a piece of tin foil or a cookie tray on your kiln lid when it's firing and put the mold on it. When the mold is thoroughly heated, apply the kilnwash with a brush. Just as water forms drops when rain first falls on a windshield, the kilnwash will cover in some areas and pull away in other areas. No problem. When that mold is really hot, the kilnwash dries in about 1 minute. When the kilnwash is dry, apply more on the bare spots. Keep doing that until you have a complete uniform covering. Then apply several more coats. Once you've thoroughly coated your mold with kilnwash, you can use it dozens of times. Just take care to not touch the kilnwash when handling the mold. If the kilnwash starts to deteriorate, just scrub it off with warm soapy water and something like a "choreboy" scrubber then recoat with fresh kilnwash.