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Using Casting Molds

PREPARING THE MOLD

Carefully clean the mold to remove any dust and scrub out any remaining kiln wash from previous firings. Single-use kilnwash like “Hotline” is preferable to multiple-use kilnwash like “Bullseye” because it’s easier to scrub out. An old used toothbrush is an effective tool for removing kilnwash or a bristle brush on a Dremel will speed up the job.

Prepare the mold with 3 or more coats of thin kiln wash. More thin applications are better then few thick coatings. Be careful to not apply so much kiln wash that you fill in all the detail in the mold. Don’t just coat the inside part of the mold that will be filled with glass, but also coat the top upper surface. Any small pieces of glass that are left on that surface will become permanently imbedded into the mold if you don’t.

FILLING THE MOLD

The glass level will drop as it melts into the mold. Take care to be sure you have enough to fully fill the mold. The smaller the pieces of glass you use, the less it will sink. On average, the finished casting will be about half the depth of the loose filled mold. Because the glass level drops, you may prefer to fill part of the mold with a pieces of glass stood vertically to provide the extra glass needed to fully fill your mold.

FRIT & POWDER

Glass powder and very fine frit doesn’t stay transparent but will turn slightly opaque making the finished casting looking more like alabaster then glass. Some attractive special effects can be achieved by putting small amount of glass powder in the details of the casting and filling with larger pieces of a different colour.

FIRING SCHEDULE FOR CASTING (COE 96)

1. 800 dph to 1475°F hold 20 min
2. FAP to 960°F hold 30 min
3. 600 dph to 300°F OFF

FINISHING THE CASTING

Your casting will have some spikes along the edges. You can cold finish to remove them – either by hand or with a grinder or wet belt sander. The casting will also have some texture from the mold. You can remove the texture and smooth off the scratches from cold finishing by turning the casting over and returning it to the kiln to fire polish.

FIRING SCHEDULE for FIRE POLISH

1 500 dph to 1000°F hold 20 min
2 1500 dph to 1300°F hold 5 min
3 FAP to 960°F hold 60 min
4 500 dph to 200°F OFF min

The above firing schedules are for COE 96 glass.
For COE 90 add 20°F to all top temperatures.
For float glass add 50°F.