



## *Holiday Stars, North Star, & Star of David*

*Our stars designs are a great way to brighten up the drabness of winter days. They are perfect decorations for a holiday tree, window, or even an office cubical.*



### **Preparing the Molds**

The molds must be primed so the glass doesn't adhere to the ceramic material from which the molds are made. There are two choices for primers: Hotline Primo™ Primer and ZYP BN Lubriccoat (formerly MR-97). The ZYP is the easiest to apply and remove. It is an aerosol and, after firing, brushes off easily from the molds and can be washed off the pieces. Castings created using ZYP have exceptionally

smooth surfaces and almost never require grinding or "cold work."

Primo is a traditional kiln wash that is applied with an artist's brush. It's a trusted and proven product, but requires a bit more "elbow grease" to remove after firing. Primo's big advantages are its low cost and availability.



Brief instructions for each option follow:

To apply ZYP, hold the well-shaken can 10 to 12 inches from the mold. Hold both the mold and the spray can upright. Apply the first, light coat using a two to three-second burst of spray in a sweeping pattern across all the mold's cavities. Do not saturate the surface. If it is the first time ZYP has been applied to this mold, it is necessary to apply a second coat of the product. Before applying the second coat, let the mold dry for five minutes. Apply the second coat

using another two to three-second burst of spray. In either case, let the mold dry for ten to fifteen minutes before filling. Again, the double coat of ZYP need be only applied the first time. Thereafter, only one coat is necessary. For more information about ZYP, visit our website. Then, download and read *Priming with ZYP Boron Nitride Aerosol*.

If you choose to use Primo Primer, give your mold three to four thin, even coats of Hotline Primo Primer kiln wash. Use a soft artist



brush to apply the Primo Primer and a hair dryer to completely dry each coat before applying the next.

Again, more detailed instructions can be found on our website. See *Tricks of the Trade*. When using Primo Primer, best results are ob-

### **Tools**

- ✓ Small artist's brushes
- ✓ Digital scale
- ✓ Holiday Stars, North Star, and/or Star of David designs
- ✓ Small measuring spoons

### **Supplies**

- ✓ Fine colored frit
- ✓ Medium Clear frit
- ✓ CBS Dichroic Flakes
- ✓ ZYP BN Lubriccoat or Hotline Primo™ primer

tained when using fine frit. Larger frit can produce excessive casting spurs that require cold work.



**Filling the molds**

The molds can simply be filled with frit or a mixture of frits to create simple holiday stars. Consult the Fill Weights table below and use the weight in the column labeled “Total Fill Weight”. We find the best results are usually obtained by “diluting” colored frit with clear frit. Even dark, opaque colors like blacks and browns become much more rich when mixed

with clear frit. (See our document *Creating Frit “Paint Chips”*) It is important to remember that, when using frit, to wear a dusk mask.

The technique on which we concentrate in this project sheet results in a more complex look but still requires only one firing.



Consult the table below and note there are different Base, Flakes, and Clear weights for the Small and Large stars. Choose a fine colored frit - either opal or transparent - to use as a base layer.

Weight out the appropriate Base Color weights and put them in each star. Level this with a small artist’s bush.

Next, evenly sprinkle about half to one or two grams - dependent on the star size - of CBS Dichroic Flakes over the colored frit. Use a small artist’s brush to move any dichroic flakes away from the mold’s edges.



Fill the remainder of each cavity with the specified medium Clear frit. Evenly distribute it and, if necessary, gently use the artists brush to level the Clear frit.

Once all the cavities have been filled, fire the mold according to the General Firing Schedule.

**Fill Weights**

Design	Base Color	Dichroic Flakes	Medium Clear	Total Fill Weight
Small Star	6 grams	1 gram	10 grams	17 grams
Large Star	10 grams	2 grams	13 grams	25 grams
North Star	12 grams	3 grams	15 grams	30 grams
Small Star of David	12 grams	3 grams	15 grams	30 grams
Large Star of David	15 grams	5 grams	30 grams	50 grams

**General Firing Schedule**

Segment	Ramp	Temperature	Hold
1	300°F/165°C	1440°F (780°C)	10 minutes for fine frit 10-20 minutes for medium frit
2	AFAP	900°F/485°C	30 minutes. Off

\*Schedule for COE 90 or Bullseye Glass. For COE 96, decrease casting temperature by 20°F/10°C and anneal at 960°F/515°C. AFAP means “As Fast As Possible”, no venting.





### **Using Colored Dichroic Frit**

Another technique is to use colored dichroic frit. This is really effective in creating a beautiful, shimmering effect.

Again, start with a newly primed mold. Starting with medium, clear frit, fill the mold's cavity or cavities with one-third of the fill weight. Next, add one-third of the mold's fill weight of fine or medium colored, dichroic frit. Finally, add a third, equal layer of medium, clear frit. The result is a frit "sandwich" with the "bread" being clear frit and the "cheese" being colored, dichroic frit. Fire according to the General Firing Schedule.

**Reusing the Molds**

Clean mold thoroughly after each firing with a stiff, nylon bristle brush. Avoid breathing any dust by wearing a proper dust mask. Reapply primer before subsequent firings.

If correctly primed and fired, a Colour de Verre mold will yield many castings.