



## Napkin Rings

*Our Napkin Rings can be filled with any color frit to match your, your friends', or your customers' decor. Further, they can be embellished with decals, enamels, frit balls, or other castings.*



### 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.

Before applying the primer, make sure any primer from previous firings is completely removed. We use a kitchen brush with stiff, nylon bristles for this job.

Brief instructions for each option follow:

To apply ZYP, hold the well-shaken can 10 to 12 inches from the mold. Hold both the can and the mold completely upright. Apply the first, light coat using a three to four-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 three to four-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 web-site. Download and read *Priming with Boron Nitride Aerosol*.



*Round Napkin Rings filled with Uroboros Dots and GG Glass cane.*

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

### Filling the molds

Frit can either be used straight from the manufacturer's container or blended. However, we find the

### Tools

- ✓ Small artist's brushes
- ✓ Digital scale
- ✓ Colour de Verre Round and Square Napkin Rings
- ✓ Small measuring spoons

### Supplies

- ✓ Fine, Medium, or Coarse Frit
- ✓ ZYP BN Lubriccoat (formerly MR-97) or Hotline Primo™ primer

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”*) *Note: It is important to remember that, when using frit, to wear a dusk mask.*



*Filling with a mixture of favorite medium frit mixed 50/50 with medium Clear*

Fill each cavity according to the Fill Weights chart. Use a small artist’s brush to generally level the frit. Fire according to the firing schedule charts.

**Napkin Ring Firing Schedule (Fine and Medium Frit)**

Segment	Ramp	Temperature	Hold
1	300°F/165°C	1420°F (770°C)	10 minutes for fine frit 20 minutes for medium frit
2	AFAP	960°F/515°C	30 minutes
3	100°F/55°C	600°F/315°C	Off

**Napkin Ring Firing Schedule (Coarse Frit)**

Segment	Ramp	Temperature	Hold
1	300°F/165°C	1430-1440°F/ 777-782°C	10 to 20 minutes for coarse frit
2	AFAP	960°F/515°C	30 minutes
3	100°F/55°C	600°F/315°C	Off

\*Schedule for COE 96. For COE 90, increase casting temperature by 15°F/8°C. AFAP means “As Fast As Possible”, no venting.

**Fill Weights**

Design	Grams per Cavity
Square Napkin Rings	85
Round Napkin Rings	75

Of course, the perfect firing schedule for your kiln will depend on ambient temperature, glass color, kiln load, kiln age and whether the kiln has top or side elements. If you notice that that the corners of your Square Napkin Rings castings are significantly rounder than those of the mold, reduce the target temperature in subsequent firings.

**Reusing the Molds**

Clean mold thoroughly after each firing with a stiff, nylon bristle kitchen 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.

**Variations**

The Round and Square Napkin Rings are great canvases for creativity. Here are some techniques:

**Cane** Lay a thin bed of medium Clear frit into each cavity. Stand small segments of vitroglyph cane “shoulder-to-shoulder”. Top with medium, Clear frit until fill weight is reached. Fire.



*Round and Square Napkin Rings with CBS Dichroic Flakes.*

**Dichroic Flakes** Choose a fine colored frit - either opal or transparent - to use as a base layer. Measure out one-half of the fill weight and put this in the cavity. Level this with a small artist’s brush.

Next, evenly sprinkle about one to two grams 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.

Measure out another half of the fill weight minus one gram (to account for the dichroic flakes) in medium Clear frit. Evenly dis-

tribute this into the cavity. If necessary, gently use the artists brush to level the Clear frit.



*Top-left napkin ring was created with Uroboros Reactive Red Clear and Ming Green*

**Reactive Glass** Consult glass manufactures' documentation for good reactive combinations. Use medium or course frit.



*Enamels combined with sandblasting. Artist: Jeri Warhaftig*

**Enamels and Decals** Beautiful results have been achieved by using enamels and decals and combining enamels with sandblasting.



*Playful napkin rings embellished with frit balls*

**Frit Balls** Create frit balls (We have a great discussion about these in Serpentine Basics project sheet.) Decorate the napkin rings with frit balls held temporarily in place with small dabs of white glue. Place cast napkin rings back into freshly primed molds. Fire the pieces to 1275°F (690°C) at 300°F (165°C) per hour. Hold for 10 minutes. Anneal at 960°F (515°C) for 30 minutes.



*Square Napkin Rings created with dichroic frit technique*