



How to Make and Use Nano Beads

Colour de Verre's Nano Beads are the smallest members of the Company's Jewelry product line. They look great paired with other elements of the Jewelry line or mixed with manufactured beads. However, their design is strong enough so they can stand on their own.



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 MR-97™. The MR-97 is the easiest to apply and remove. It is an aerosol and, after firing, brushes off easily from the mold and can be washed off the pieces. Castings created using MR-97 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 MR-97, hold the can and the mold vertically about 10 to 12 inches apart. 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 MR-97 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 MR-97 need be only applied the first time. Thereafter, only one coat is necessary. For more information about MR-97, visit Colour de Verre website's Project Ideas section. There, download and read *Advanced Priming with 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 in the Project Ideas section of Colour de Verre's 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 and refiring.

Availability

Colour de Verre molds are available at fine glass retailers and many online merchants including our online store, www.colourdeverre.com.

Tools

- ✓ Small artist's brushes
- ✓ Digital scale
- ✓ Nano Beads molds
- ✓ Small measuring spoons

Supplies

- ✓ Fine or Medium Frit
- ✓ MR-97™ or Hotline Primo™ primer



Filling the molds

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

| Element | Frit per Cavity |
|--------------|-----------------|
| Square Beads | 2 to 3 grams |
| Round Beads | 1 to 2 grams |
| Cabochons | 1 gram |

Fill each cavity according to the chart above. Use a small artist's brush to evenly level the frit.

Place the filled molds on a *leveled* kiln shelf and fire according to the Firing Schedule shown below.

Firing Schedule*

| Segment | Ramp | Temperature | Hold |
|---------|-------------|----------------|---|
| 1 | 300°F/165°C | 1400°F (760°C) | 5-10 minutes for fine frit 15-20 minutes for medium frit |
| 2 | AFAP | 960°F/515°C | 30 minutes. Off |

*Schedule for COE 96. For COE 90, increase casting temperature by 20°F/10°C. AFAP means "As Fast As Possible", no venting.



Firing Considerations

Designs with points or corners require lower target temperatures to prevent the glass' surface tension from rounding the points. Coarse frit is a poor choice for the Nano Beads.



Since the beads are quite small and lightweight, they sometimes don't fall out immediately when the mold is inverted. If this is the case, lay down several pieces of newspaper, invert the mold, and tap it gently against the newspaper. If the mold was properly primed, the pieces should fall out.

Stringing the Beads

Our favorite materials include 3mm rubber cords, silk ribbons, and leather cords. However, consider using stainless steel ball chain or cable. Another option is to purchase chain with large links - half an inch or large, breaking the chain into separate links, and assembling a chain by alternating glass beads and the metal links.



Reusing the Molds

Clean the 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.