



## Sea Life Inspired Bowl

*Even if you don't live at the beach, this bowl looks great in any living or dining room. Match your color choices to your tastes and decor.*

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This piece is impressive but creating it isn't at all overwhelming – even for a person new to glass casting. The project is easily broken down into four manageable steps, each culminating with a firing:

- Create a collection of sea life castings. (Make more than you expect to use so that you can experiment with various layouts.)
- Fuse two pieces of sheet glass together to create the panel. In

the same firing, create some frit balls to help “tie together” the design.

- Tack the fish, clams, conchs, sea horses, frit balls, etc. to the panel.
- Slump the panel using a shallow form.



### Cast the Sea Life Forms

Before each firing, clean your molds with a stiff nylon brush to remove any old kiln wash. (This can be skipped if the molds are brand new.)

Hotline Primo™ primer is the only conventional primer we recommend because it doesn't obscure the mold's fine detail and is easy to remove after firing.

Give each mold cavity four *thin*, even coats of Hotline Primo Primer. Use a soft brush to apply

the primer and a hair dryer to completely dry each coat before applying the next. The mold should be completely dry before filling.

If you prefer, you can use boron nitride aerosol primer. (We used this for our project) We recommend ZYP BN Lubriccoat (formerly MR-97) exclusively. You can read more about this in *Advanced Priming with Boron Nitride Aerosol* which can be found on our website.



The sea life is cast from fine Ming Green frit. Before adding frit to the molds, use a small sifter to dust the molds with a very small amount of Black powder frit. The powder will highlight the designs' details. Whenever working with frit, especially powders and fine, it is advisable to wear a dust mask.

### Tools

- ✓ Sea Horse and Starfish, Tropical Fish, Beach Shells-Medium, and/or Beach Shells-Small
- ✓ Small and Large artist's brush
- ✓ Small containers for mixing frit
- ✓ Digital scale
- ✓ Shallow slumping form

### Supplies

- ✓ Hotline Primo Primer or ZYP BN Lubriccoat (formerly MR-97)
- ✓ Fine Ming Green frit
- ✓ Clear sheet glass and thin, iridized Ming Green sheet glass
- ✓ Powder Black frit
- ✓ Coarse Ming Green frit

Fill Weights

Design	Fill Weights
Sea Horse and Starfish	Sea horses, 7 to 9 grams each; starfish 12 to 18 grams
Tropical Fish	Large fish, 32 to 36 grams; small fish 12 to 15 grams each
Beach Shell-Small	Starfish, 8 grams; scallop, 18 grams; clam, 10 grams; whelk, 7 grams
Beach Shell-Medium	Conch, 18 grams; spiral whelk, 10 grams; scallop, 32 grams

Using the fill weights from the table above, evenly fill each cavity. Lightly tap the mold to level the frit and transfer the mold to the kiln. Fire the molds according to the Component Casting Schedule.

The unusually low temperature is to produce thin, delicate castings. If the castings “ball up,” decrease either the hold time or target temperature. Given the differences between individual kilns, it may take one or two test firings to get perfect results in your particular kiln.

After removing pieces from the kiln it is important to wash them thoroughly to remove all Primo primer or ZYP

Creating the Panel

Cut a 12x12” (30x30cm) square from Clear sheet glass. Cut a 11.5x11.5” (30x30cm) square from thin, iridize Ming Green sheet. If you wish, the squares’ corners can be rounded with a power grinder. Protect the kiln shelf with primer

or a piece of ThinFire™ shelf paper. Stack the Clear glass on top of the thin, iridize Ming Green glass making sure (1) the iridize surface is “sandwiched” between the two sheets and (2) the Clear sheet’s edges extend equal distances beyond the Ming Green sheet’s edge. Place the stack in the kiln. To make the frit balls, use course Ming Green frit or snipped Ming Green rods. Arrange the pieces on a second sheet of Thin-Fire in one layer with half an inch (1cm) between each piece. Fire the two sheets and the small rod or frit pieces according to the Sheet Glass Fusing Schedule below. For more information about making frit balls, visit the Learn section of our website.

white glue to temporarily hold the components in place.



When dry, move the panel to a kiln shelf that has been protected with primer or a piece of ThinFire shelf paper. Fire the piece according to the Tack Fuse Schedule.



Attaching the Elements

Remove the fused panel from the kiln and place on the workbench. Create a pleasing arrangement of sea life castings and frit balls on the fused panel. Use small dabs of

Component Casting Schedule\*

Segment	Ramp	Temperature	Hold
1	300°F/165°C	1290-1310°F/700-710°C	20 to 30 minutes
2	AFAP	960°F/515°C	30 minutes. Off. No venting.

\*Schedule for COE 96. For COE 90, increase casting temperature by 25°F/15°C. AFAP means “As Fast As Possible,” no venting.

Sheet Glass Fusing Schedule\*

Segment	Ramp	Temperature	Hold
1	250°F/135°C	1200°F/650°C	30 minutes
2	250°F/135°C	1400-1420°F/760-770°C	10 minutes
3	AFAP	960°F/515°C	60 minutes
4	100°F/60°C	700°F/370°C	Off. No venting

\*Schedule for COE 96. For COE 90, increase casting temperature by 25°F/15°C. AFAP means “As Fast As Possible,” no venting.



**Tack Fuse Schedule\***

Segment	Ramp	Temperature	Hold
1	200°F/120°C	1200°F/650°C	30 minutes
2	200°F/120°C	1250-1265°F/675-685°C	5-10 minutes
3	AFAP	960°F/515°C	60 minutes
4	50°F/30°C	800°F/425°C	None
5	100°F/60°C	600°F/315°C	Off. No venting

\*Schedule for COE 96. For COE 90, increase casting temperature by 25°F/15°C. AFAP means "As Fast As Possible," no venting.

**Slumping the Panel**

Place the panel into a primed slump mold. Slowly fire the piece according to the Slumping Schedule. It is important not to rush the firing as there is quite a bit of thickness variation.



**Slumping Schedule\***

Segment	Ramp	Temperature	Hold
1	100°F/60°C	200°F/95°C	15 minutes
2	100°F/60°C	400°F/205°C	10 minutes
3	150°F/85°C	1220-1240°F/660-670°C	5-10 minutes
3	AFAP	960°F/515°C	60 minutes
4	50°F/30°C	800°F/425°C	None
5	100°F/60°C	600°F/315°C	Off. No venting

\*Schedule for COE 96. For COE 90, increase casting temperature by 25°F/15°C. AFAP means "As Fast As Possible," no venting.

**Variations**

Consider a different color palette and a shape other than square. For example, cast pieces from a 20% mixture of fine Sky Blue and 80% fine Clear. Follow the above instructions to create a rectangular panel from thin, tropical blue, iridized glass and standard thickness of Clear glass. Include "waves" made using Colour de Verre's Serpentine Former. See our publication "Serpentine Basics."

