



# ARTGLASS

GLASS YOU CAN SHAPE WITH YOUR HANDS

Products and Classes Offered By;

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## The History of Kiln-Formed Glass

The earliest evidence of glass has been linked to Mesopotamia as far back as 3500BCE, nearing the beginning of the Bronze Age. Glass was created, somewhat roughly, to be used for reflective surfaces or small windows or tiles.

Kiln-formed glass, also called “hot glass,” generally describes two specific styles of glass creation: either glass is slumped into a mold, or multiple layers of sheet glass are fused together. This style of glass was not introduced until the Roman Empire, and by then craftsmen had learned how to add color to their work. Hot glass was often formed for tile, beads, or holding vessels for liquids.

Traditionally color was added to glass in one of two ways, either by infusing electrically charged ions (for example, sulfur, carbon, and iron salt ions together form amber tones) or by precipitation of finely dispersed particles (these are called “photochromic glasses.”) Historically, early kiln-formed glasses had purpose. These hot glass items were used as vases, perfume bottles, serveware, trinkets, sconces, or jewelry.

In the 19th century, glass became fancier, and also for the first time was purchased as non-functional artwork. The Art Nouveau movement saw the invent of new techniques and applications for glass adornments and vessels, frequently in cameo glass and using various luster techniques.

By the 20th century, glass sculpture had entered the fine art world. Artisans would use large kilns to soften glass, sculpting it to their own intricate designs. The 1920s saw the first real commercial use of glass molds, which allowed artists and industries to mass-produce specific hot glass forms. As a result, most glass items became much less expensive for consumers.

In more recent years, new styles of textured and colored glasses have come to the market. Dichroic glass has quickly risen to become the most popular ingredient of kiln-formed art glass today.

## Enter ArtGlass Clay

Now, for the first time, “hot glass” does not have to be formed while hot! ArtGlass Clay is a true clay, made of smoothly ground glass particles and organic binder. Artisans can take only the portion they need for use, add plain water, and create a malleable, soft clay. The ArtGlass Clay can be molded, sculpted, textured, twisted, braided, stamped... You can use any general clay shaping method to create gorgeous artwork while the clay is still moist and easily workable.

Not only does ArtGlass Clay allow for the simple formation of glass art, but the technical side of color and finish are also made easy! With pre-created colors (which can be mixed to make even more hues), adding contrast to glass art has never been so effortless. Various finishes can be achieved with straightforward firing adjustments.

## Suggested Tools for Working with ArtGlass Clay

Like other clays, ArtGlass Clay can be formed, molded, sculpted, and shaped using your own hands, and just about anything else you can find lying around.

### Standard Tools

These are the most basic, frequently used, most suggested items:

- Portable, hard working surface
- Thin non-stick surface
- Palette knife or spatula
- Rolling tool
- Spacers (slats or playing cards)
- Small paintbrushes
- Cocktail straws
- Volume measuring tools
- Craft knife
- Small file set
- Dust mask
- Tweezers
- Rubber block
- Firing/Kiln materials
- Digitally programmable kiln



This pendant was created using ArtGlass Clay with a silicone texture sheet.



A spatula or palette knife is a great tool for mixing and compressing ArtGlass Clay.

### Specialty Tools

These tools may be beyond the basics, but they are still easy to find and great to have available:

- Specialty-tipped shaping tools
- Clay sculpting tools
- Rubber stamps
- Silicone texture sheets
- Tissue blade or ceramic scraper
- Magnification lenses
- Specialty shape cutters (like fondant or small cookie cutters)
- Gemstone-setting tools/burs
- Hand drill/pin vise
- Engraving tools
- Extruders
- Silicone molds

## Getting Started with ArtGlass Clay

1. Mix the clay, using 2 parts ArtGlass Clay to just under 1 part water. Use a spatula or palette knife in a chopping motion to distribute the water evenly around the glass powder. Once generally mixed, compress the clay against the side of the mixing container.



2. Knead the clay in your hands until the clay feels even, non-sticky, and soft. If the clay is tacky, allow moisture to evaporate. If the clay gets crumbly, add a little more water.



3. Shape the clay as desired using molds (shown), texture sheets, or sculpting by hand. Multiple layers can be added by pressing moistened clay together. This is important when using many different colors of ArtGlass Clay with detailed molds. To make sure layers adhere, press or roll firmly.



4. Release ArtGlass Clay from molds and textures while still moist to prevent cracking. If desired, press fireable gemstones, small glass embellishments, or other embeddables into the clay while it is still wet. (If adding glass cabs, make sure they are the same COE as your ArtGlass Clay.)



5. Pierce or drill any holes into pieces of ArtGlass Clay before they are fired. Once the piece is fired, a diamond drill is necessary to drill through the delicate glass. Dry the clay completely using a hot plate, dehydrator, or by letting it air-dry.



6. Refine the dried piece with sanding materials, such as small files, sanding sponges, or fine grit mesh. There should be no obvious sharp areas or loose bits.



7. Spread ArtGlass Clay pieces out in the kiln, leaving at least a good inch of space between items. For a fiber kiln, ramp 500°F per hour to 1325°F, and hold for 30 minutes. For a brick kiln, ramp 500°F per hour to 1275°F and hold for 30 minutes. Do not crash-cool the kiln when firing is complete!



-Or- Fire ArtGlass Clay pieces in a Microwave Kiln\* (i.e. Paragon Magic Fuse) with an 800 watt –1100 watt microwave with turntable. Set microwave timer for 5 minutes on full/high setting and start. Check pieces every minute by opening the microwave and lifting kiln lid for 2-3 seconds. Once the pieces reach a red-hot glow, re-cover kiln and remove from microwave. Set on kiln posts and allow to cool until room temperature.



8. Finished ArtGlass Clay pieces can be re-fired, either to fix imperfections or to adjust the shine of the piece. Treat fired ArtGlass Clay like the true glass it is—if you drop it, the piece may shatter!

\*All kilns are different, as well as all microwaves. Please test kiln/microwave for best results.

# Embellishing ArtGlass Clay

## Gemstones

Various man-made and lab-grown gemstones, such as cubic zirconia, are very compatible with the firing schedule for ArtGlass clay. These gems can be pushed into the clay while it is still moist, then dried and fired in place. Many natural gemstones, such as garnet, peridot, and sunstone, are also compatible with the firing of ArtGlass Clay.

## Metal Clays

ArtGlass Clay is very compatible with certain metal clay formulas. Low-fire silver clay formulas can be used to create bezels and bails for ArtGlass Clay cabochons and adornments (shown below, left). Art Clay Silver Overlay Paste can be painted directly onto dried or fired ArtGlass Clay as an embellishment in particular areas of any piece (shown below, left center).

## Fused Glass Elements

ArtGlass Clay is suitable in itself as an embellishment for any glass of the same COE. All ArtGlass Clay is COE90, and can be added to sheet or fused glass pieces that are also COE90. Likewise, smaller glass cabochons or bits can be added to ArtGlass Clay designs so long as they are also COE90 (note the dichroic cabs centered in two of the pieces shown below.)

## Colorants for Fired Pieces

Once ArtGlass Clay is fired, there are many surface applications that can be used to accent the glass designs. Gilders paste can be applied to the glass surface to add a hint of contrast or metallic color (see below, center right). Alcohol inks or ink patinas can also be applied to the glass surface as color enhancements.

## ArtGlass Clay as Design Enrichment

ArtGlass Clay is the perfect medium for making beads (below, right), toggles, and other design components. Just remember that ArtGlass Clay is true glass, and may need reinforcement to prevent cracking or shattering if you intend to create a functional item such as a toggle.



ArtGlass Clay with Art Clay Silver bezel, bail, and leaves



ArtGlass Clay with Art Clay Silver Overlay Paste embellishment



ArtGlass Clay with Gilders Paste



ArtGlass Clay beads

## Helpful Hints

- Make sure all glass to be included in the same ArtGlass Clay project is the same COE as the ArtGlass Clay itself.
- Shake the ArtGlass Clay jars very well before opening to make sure the binder is equally distributed throughout the glass powder.
- ArtGlass Clay has an unlimited shelf life as a powder, so take and use only what you need at the time for each project, leaving the rest in powder form.
- Store already-mixed ArtGlass Clay in an air-tight container.
- When mixing colors to create a new hue, keep careful track of how much glass powder was used from each color, in the event you need to re-create the same tone later. This same measurement will tell you how much water to add to the powdered clay.
- Do all carving and hole-punching while clay is wet or in the dry stage. Fired glass must be drilled with diamond bits, in order to prevent its shattering.
- Wear a dust mask during mixing and sanding to avoid inhaling glass powder, which can be damaging over time.
- While drying ArtGlass Clay, make sure the drying temperature is below 212°F, which is the boiling point of water. Exposing wet clay pieces to this high temperature may cause steam blowouts in the item.
- When firing ArtGlass Clay, a digitally-programmable kiln is recommended. This style of kiln helps prevent accidental overheating of the kiln and damaging the glass.
- Test-fire a couple of ArtGlass Clay pieces in your kiln before moving on to a piece you've spent lots of time and effort on. This minor calibration gets you familiar with how your kiln specifically operates, as kiln parts can wear over time and affect temperature readings.
- Do not crash-cool your kiln or keep the kiln door open too long if peeking during firing. Glass can thermal shock or shatter if exposed to cold air too quickly.
- For a shinier finish, fire the ArtGlass Clay a little longer; for a more matte finish, shorten the firing time by a few minutes. Be cautious not to underfire the glass or melt the piece!
- If a piece needs to be repaired, pack the crack or tear with ArtGlass clay and re-fire.



ArtGlass Clay™ is available in 24 rich colors, packaged in 2oz jars. Each jar contains powdered glass and binder, and comes with basic instructions.



ArtGlass Clay™ is also available in 5 different pre-boxed sets of 4 jars each.



Color Kit A:  
Ochre, Denim,  
Sea Foam,  
Lemon



Color Kit B:  
Abyss, Steel,  
Blue Nile, Bone



Color Kit C:  
Bone, Leaf  
Green, Blue  
Lagoon, Red



Color Kit D:  
Tree Frog  
Green,  
Ultramarine,  
Persimmon,  
Alexandrite



Color Kit E:  
Caramel, Brick  
Red, Morro  
Bay Grey, Java