

EZ960[®] Sterling Overview & Firing



Available in lump clay form, slip/paste and syringe, EZ960 sterling silver metal clay comes right out of the package ready to form, fire and finish with no mixing and no carbon required. Invented by Bill Struve from Metal Adventures, the inventor of BRONZclay™, COPPRclay™ and FS999™.

EZ960 is a sterling silver alloy that is comprised of 96% fine silver and 4% copper. In comparison to fine silver, this alloying provides greater post firing strength. This inherent strength makes EZ960 the perfect choice for jewelry that takes lots of abuse, such as rings and bracelets. It is also great for jewelry with findings and components such as bails, hinges and clasps, as well as delicate pieces that would benefit from the strength of sterling silver.

Wet Clay

Ready to use directly from the package, the first thing you will notice is its smooth, creamy consistency. The clay accepts and telegraphs the smallest of details in textures very well. It is easy to roll and form, and is non-sticky. It also has a high moisture content, making it easy to work with in its wet form, as it stays workable and pliable without drying and cracking when forming, texturizing or molding. For best long term storage and to maintain hydration and workability, store unused EZ960 in a clay hydrator charged with distilled water.

Silhouette Paper Cutter

EZ960 clay, when rolled to 1 or 2 cards thick, cuts cleanly on the Silhouette paper cutter.

Greenware & Dry Construction

In its dried, greenware stage, EZ960 is easy to sand and carve. Dried pieces are quite flexible, which is a plus when fitting parts and pieces or when handling, assembling or manipulating your greenware. EZ960 drills easily in its greenware state, and is not prone to cracking or chipping.

Embedding Objects

Nano gems, cubic zirconia, lab created gemstones, bezel cups and other findings or embeddables can be co-fired with EZ960. Please refer to our Gemstone Firing Guide for a comprehensive list of gemstones that are compatible with the firing times and temperatures of EZ960. Most, but not all CZs and lab created gemstones can be fired at 1675°F/ 913°C for 2-4 hours on an open kiln shelf (see Firing Schedule below) without failure or color change. To ensure color and brilliance, nano gems should not be set in metal clay without an azure. An azure (a setting that includes a hole to allow light to enter from the back side) will ensure nano gems retain their color, luster and brilliance.

Firing

This clay requires a kiln. It cannot be torch fired. After ensuring the clay is bone-dry, kiln fire on a hard ceramic kiln shelf raised up from the kiln floor. Fire at full ramp speed at either of the times and temperatures below:

1675°F/ 913°C 2 hours
1675°F/ 913°C 4 hours (if bending post firing)

Note | If bending post firing, we recommend firing for 4 hours at 1675°F/ 913°C, as not all kilns are accurately calibrated. An additional one or two hours of “soak” time ensures complete sintering.

If firing a piece flat, we recommend a raised, hard ceramic kiln shelf lightly dusted with alumina hydrate to prevent sticking as the metal clay shrinks and sinters. For irregular pieces, fire in a kiln safe container such as an open stainless steel firing pan or a ceramic dish filed with alumina hydrate. We do not recommend using a fiber blanket, cordierite or a fiber board kiln shelf as these may stick to EZ960 during firing. Vermiculite is an excellent firing media for irregular shapes, but should be crushed to a very small, fine consistency prior to firing. Course vermiculite, combined with the high temperatures in a kiln may cause the clay to “take on” or telegraph the shape of the vermiculite in the fired piece. Fired items directly from the kiln may be slightly grayish in appearance. This is normal for an alloy of this type.

Note | Muffle kilns have heating elements on three side (no heating element in the door), therefore any air leakage around the door can create cool spots near and around the door. For this reason, to ensure complete sintering, we recommend firing all metal clays in the rear center position of the kiln. It is always important to ensure your kiln is properly calibrated as kilns can fire at a higher or lower temperature than they state. For more information, check out the Firing Metal Clay and Operating Your Kiln section of our Learning Center.

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Firing in Carbon

Carbon firing of EZ960 is not necessary unless you require carbon for another reason, such as co-firing an oxygen sensitive gemstone. Fire in a kiln safe container such as a stainless steel firing pan with a vented cover. Fire at full ramp speed as noted:

Coconut Carbon	1590°F/ 85°C	3-5 hours
Magic & Coal Carbon	1590°F/ 85°C	3-5 hours

Fire for shorter durations for small pieces and smaller loads. Fire for longer duration for larger and thicker pieces or for larger loads.

Shrinkage

During firing, EZ960 will shrink 10% to 11% as a result of the sintering process, as the organic clay binders burn off in the kiln.

Finishing & Polishing

When finishing, EZ960 provides either a satin finish, or, if you like, a mirror finish. For a satin finish, steel brush your piece directly out of the kiln, followed by 1 to 2 hours in a rotary tumbler. A magnetic tumbler will drastically reduce the time needed in a tumbler. For a mirror finish, use the same process as above. Then, using a flex shaft or other rotary tool, polish with radial bristle discs and, lastly, silicone wheels and points.

Enameling

When enameling over silver, most enamelists choose fine silver as a base, as it does not require depletion gilding prior to firing enamels. EZ960 can be enameled **without** depletion gilding. Transparent and Opaque enamels can be enameled on EZ960 with good results. Create a test strip to check transparent colors before applying as most have the same appearance as enamel on fine silver, but some colors may not appear as luminous.

For all enamels, the prep work, firing sequences and firing schedules are the same as with fine silver. Choose EZ960 for accent enameling on rings, bracelets, or wherever an alloy or additional strength is desired.

Patination

To achieve a good, dark result from Liver of Sulphur (LOS) or Patina Gel, ensure your piece is absolutely clean by soaking and then brushing with hot water, soap, and ammonia. Using a strong solution of LOS in very hot distilled water, dip or soak your piece in the solution until you get the darkness or result you desire. Adding a teaspoon of ammonia to your LOS bath can also help achieve a darker result or, possibly, a rainbow effect. A bath of baking soda and water will neutralize the LOS bath and halt the patination process. Then, either by hand or by machine, bring up the high points with a polishing cloth, Scotchbrite™ pad (satin finish), or polishing wheels (high shine or mirror finish).

Soldering

Once fired, this sterling silver clay is metallurgically just like other metals, but, like other fired metal clays, it is more porous than sheet stock or cast items. Due to this porosity, this silver will “soak up” solder. When possible, prepare areas for soldering by burnishing to close to open pores and reduce the tendency to absorb solder. Join other metals and findings to fired bronze clay by using the same flux, solder, and torch(es) as you would solder other silver products.

Hallmarking

Hallmark as .960 or Sterling.