

White COPPRclay Overview & Firing Guide

WHITE COPPRclay created by Metal Adventures is easily sculpted, molded, carved and formed, and becomes a solid metal piece when fired.

Note: WHITE COPPRclay is composed of copper and nickel. Customers within the European Union, please be aware that this item contains nickel and may not be in compliance with EU regulation EN1811-2011.

WHITE COPPRclay is just that: a clay. Like clay, it's highly workable but it also dries quickly. You'll notice the clay stiffening and cracking when it begins to dry.



Some tips to keep in mind:

- Rub a dab of SLIK on your hands before you begin working with the clay.
- While working the clay, refresh it periodically with a small amount of water using a spray bottle or brush.
- Wrap pieces that you are not currently working on in plastic and place to the side.
- Avoid using tools that absorb water.
- While storing or while in use, keep clay wrapped in a piece of loosely sealed plastic wrap and store in a clay hydrator for added longevity. Refrigerate when not in use.

Making Slip

Slip will quickly become one of your favorite tools for working with WHITE COPPRclay, and it's easy to make. Simply mix tiny pieces of clay (filings, small dried or wet pieces, etc.) with water (we recommend distilled water for a longer shelf-life) until you reach a yogurt consistency. Keep your slip stored in a sealed container.

Drying the Clay

Once you've finished your piece, you will need to dry the clay before firing it. Gently place the piece on a warming surface such as a coffee mug warmer; an inexpensive vegetable dehydrator works well, too. Once dry, you'll notice the clay is leather hard, making it very easy to add finishing touches such as filing, drilling, sanding and carving. Once WHITE COPPRclay is fired, it's much more difficult to finish, so take advantage of this pre-fired stage to do as much of your detailed finishing work as possible.

Firing

Firing WHITE COPPRclay is a two-phase process that uses low heat to vaporize the binder, then high heat to sinter the alloy.

Phase 1

1. Place dried piece(s) on a stainless steel mesh rack inside the kiln.
2. Fire with a ramp of 500°F/hour (270°C/hour) to 600°F (320°C), and hold for 10 minutes.

Phase 2

To allow proper sintering, the piece(s) must be surrounded by activated carbon during the second firing phase.

1. Spread a layer (1/4" minimum) of activated carbon on the bottom of a stainless steel firing container.
2. Place the piece(s) on top of the layer (piece can be cool or still warm); if firing two or more pieces, leave at least 1/2" between pieces, more if the pieces are large.
3. Pour another 1/2" layer of activated carbon granules on top of the piece(s). If you are firing many pieces in layers, make sure there is at least 1/2" of space between the vertical layers as well. Note: For best results, do not fire more than 100 grams of clay at once; overloading may cause poor sintering.



COOL TOOLS

4. Put the stainless steel lid on the firing container and place it in the kiln on stilts to allow good heat circulation.
Note: Most kilns are cooler in the front near the door. Compensate for this by placing the pieces closer to the sides and back of the firing container. If you have a top-loading kiln, there's no need to adjust.
5. Fire at full ramp to 1850°F (1010°C) and hold for two hours.

WHITE COPPRclay can be combined with COPPRclay to produce interesting mixed-metal patterns and designs! Fire according to the same schedule outlined above.

Finishing

Once fired, the WHITE COPPRclay piece is a solid piece of metal. As with other metals, it can be sawn, drilled, sanded, patinaed or soldered using traditional jewelry tools and materials. Keep in mind that many finishing techniques will be easier to perform at the dried, pre-fired stage. For a brown to black patina we recommend using Cool Tools Patina Gel.

Safety

The binder in WHITE COPPRclay is non-toxic, and no toxic fumes will be present during firing. Though rare, it is possible for some individuals to experience some sensitivity to WHITE COPPRclay since it contains nickel. We recommend wearing a dust mask while working with the activated carbon.