



PMC Basics

PMC is a Mitsubishi Materials product with clay like consistency. This product is a mixture of microscopic silver particles, a binding agent, and water. The soft clay can be formed like modeling clay and then be transformed into hard, strong metal after being dried and fired. The Prometheus Copper Clay we carry is the same consistency, except with microscopic copper particles instead of silver.

PMC Paste – Can be used to stick clay to clay, fix parts to the clay, and attach two fired pieces together as well as mend finished pieces. The paste can also be used to transfer patterns. In this process the paste is applied to the surface of a textured material, and the pattern is imprinted on the paste. When the piece is fired the pattern is embedded in the surface of the piece as the material is burned away.

PMC Syringe – Use the syringe for fine, decorative work, you can even write on your piece! The syringe has an adjustable nozzle so you can change the thickness of the clay coming out.

PMC3 - clay with 90% silver content and needs to be fired between 1112° F and 1652°F. This clay produces a brighter, stronger finished piece. The shrinkage is between 10% and 18%. The silver content of the fired clay is 99.9%.

PMC+ - clay with 90% silver content, it fires very quickly. It shrinks by 8% to 15% during firing and is 99.9% silver after being fired.

Texturing – There are many different options for texturing your PMC such as pattern mats, textured objects, molds you can make out of molding putty or carving your own texture.

Rolling out your clay – Use playing cards to roll out your clay evenly.

Drying – You can use a candle warmer or a Teflon griddle to dry your PMC before firing.

Clean Up – Sand your piece with 3M sanding sponge and needle files throughout the process of creating your piece in order to avoid any cleanup after your piece is fired. It will be easier to clean up the dried clay than the hard metal.

Firing Silver PMC – You can either use a kiln or a torch to fire your PMC. Firing your piece at the highest possible temperature for the longest possible time will give you the best results, the highest strength and the best luster.

Torch Firing – Place your piece on top of a clean fire brick or stainless steel mesh. Turn out the light and turn on your ventilation. Begin to fire your piece and when it turns a dull orange color fire for about 4 minutes.

Kiln Firing – This is a safe, stable way of firing that has the fewest constraints on the condition of the piece. You will need to fire your piece in a steel container filled with carbon. The firing schedule for each type of PMC is different and the instructions are included in the package. Our Even Heat Kiln has pre programmed firing schedules for PMC.

Firing Copper Clay – There are three different ways to fire Prometheus Copper Clay.

Conventional Method – Preheat a kiln to 1700° F and place your piece(s) on a stainless steel mesh. Once the kiln has reached temperature, place the screen in the kiln and wait for it to get back up to temperature. Once it has done so time it for 30 minutes.

Carbon Method – Put your piece(s) on a stainless steel mesh and fire it at 932°F for 10 minutes. Let piece cool. Put 3 cm. of activated carbon on the bottom of a steel container and place your pieces on top with some space in between. Fill the container with the activated carbon and put it into a kiln that is heating to 1570°F. Once the kiln has hit temperature let it fire for 90 minutes. You can also fire at 1472°F for two hours.

Torch Firing – Place the piece on a stainless steel mesh or on a fire brick. Fire the piece evenly until it reaches a dull orange color. Once your piece has reached that color, heat it for 5 – 10 minutes depending on the size.

Finishing – You can do many things to finish your piece such as put a patina on it or polish it with a brass brush or bristle discs, do what you find aesthetically pleasing. Tumbling your PMC is also a great way to clean and strengthen your piece after firing.