Prometheus® Jeweller's Sterling White Bronze Clay

Prometheus® Jeweller's Sterling White Bronze (PSW®) is a claylike material which turns into pure solid bronze, similar to sterling silver colour, when fired in a kiln. It is a mixture of micron sized bronze powder, water and organic binder. It can be formed by hand, rolled into a sheet or a rope. It can be molded, textured, even turned on a potter's wheel. **PSW®** can be fired with most lab-created gemstones (cubic zirconias), pre-tested natural stones, glass beads, ceramic, porcelain and **PROMETHEUS® METAL CLAYS.**

When the clay is fired in a kiln, the organic binder evaporates and burns away and you're left with pure, solid white bronze.

You can create unique jewellery, ornaments, hollow ware, statues, sculptures and many other decorative objects. Anything you create with **PSW®** is a piece of art. You can perform multi-color pieces by combining **PSW®** with other **PROMETHEUS® METAL CLAYS.**

Combine it with your imagination and let your fingers do the rest!

Working with PSW®

It is similar to working with **Prometheus® Metal Clays (Silver, Copper & Bronzes)**, polymer clays, modelling dough, flower dough and ceramic clays. It is very easy to use.

Wet Stage
At normal consistency, **PSW®** does not stick to hands, working surfaces, instruments or molds without need of any lubricating oils. However, oiling your fingers and the working surface lightly is useful and would not harm your clay. Olive oil is preferable.
Remove the clay from its plastic bag and place it on a clean plastic surface or wax paper. Use your fingers, roller, spatulas, clay shapers, craft knives, tooth picks and other simple tools to shape it, texture it, or turn it on a potter's wheel. You can texture the clay with rubber stamps, texture mats, leaves, paper, and other interesting textures.
When you take the clay out of the package, **"The Wet Stage"** begins. Try not to work at this stage for too long in order to avoid your clay from drying out but, don't rush your work, **PSW®** gives you enough time to play with. However, if you detect any cracks on the surface, apply some water straight away with a brush or spray, and fill the cracks with a little paste* to repair them.

**To make paste, mix a little clay with a little water until it is the consistency of thick yoghurt.*

To join two pieces together, simply apply some water to the points that will touch, or add a little paste. If the two pieces are dry, wet the touching points well and apply some paste to create a secure bond.

Store any unused clay in a plastic bag with a zipper to prevent it from drying out. Place any offcuts in the bag straight away whilst you're working, and keep it closed. If you're not planning to work with the clay for a while, put the sealed plastic bag in a jar with a tight lid. Placing a wet sponge to the bottom of the jar will keep your clay at a good condition, until your next usage. If you are storing it for a long time, keep an eye on the sponge and add water if needed.

Drying

Before firing the **PSW®**, you need to dry your piece completely. A hair dryer or putting it on top of a kiln will do it well. Hot-plates or food dehydrators work well too.

To check if the clay is completely dried, put the hot clay (straight from drying) on a cold mirror. After a few seconds, move it and check that there is no condensation on the mirror. This test is especially important for big and thick pieces. If the piece is not dried completely, then it can crack, break or have bubbles on the surface while firing.

We don't recommend fast drying for large and/or massive pieces (statues etc.). For these, it is recommended to leave them in room temperature for some time, and then continue drying at moderate temperatures, in order to avoid any cracks.

Dry Stage

Even though the dried **PSW®** is strong, you still need to take some care while working with it. You can carve

designs on the surface*, file it, grind it, drill holes with hand tools or rotary tools and engravers. To join dried pieces, wet the joining points with a brush and apply some paste.
**Draw your design with a pencil, wet the lines with a brush and make your carving with any instrument even a toothpick.*
After completing your design, it is easy to sand uneven surfaces, using sand papers, and sanding sponges. It is a lot easier to do this step now - before you have fired the clay!

Firing PSW®

Before firing your works, test your kiln's accuracy by firing a small piece of clay. Electric kilns may show slight deviations, due to their temperature control systems and isolations. According to your test result, you may change the firing temperature by 5% (up or down) until you reach to the correct sintering.

Firing PSW is a 2-step-method.

Step.1 Place the dried pieces on a stainless steel mesh and put it into a cold kiln, let it raise to 500°C/932°F and fire for 15 minutes. Take it out on to a fireproof surface and let it cool down.

Step.2 Put approximately 3 cm. of activated carbon to the bottom of a steel container. Place the pieces with at least 1.5 cm space between each other and fill the container with activated carbon, close it and put it into the preheated kiln to 770°C / 1420°F. Let the kiln raise to the target temperature again and fire it for 2 hours. When the firing is completed, either leave it to cool down in the kiln or, carefully take it out and leave it on a heat isolated surface until it is cold enough to take your pieces out.

Combining Prometheus® Clays

You can combine different **Prometheus® Base Metal Clays** in one piece and fire them together. When firing use the 2 Step Carbon Firing Method. To determine the second step firing temperature, refer to the firing instructions of the clay which requires the minimum firing temperature within your combination. Fire at least 2 hours.

The Shrinkage rates are; **PCC®** is 9-10%, **PBC®** 12-13%, **PSB®** 12-13%, **PSW®** 15-16%, **PGY®** 13-14%, **PLY®** 17-19% and **PWB®** 10-11% .

Annealing

If your pieces are **thin** and **long** than we recommend you to anneal your pieces in order to maintain high strength and malleability.

For the annealing process, put your pieces in a pre-heated kiln to 565°C (1050°F), wait for 5 minutes and take them out and quench in water.

Finishing PSW®

Polish the piece with a burnisher, polishing papers, a tumbler or polishing motor. Using polishing compounds can give extra shine to your works.

Safety Precautions

1. PSW® contains organic binder, water and bronze powder. It is non-toxic and does not contain any harmful chemicals. There have been no reports of allergic reactions; however, people with allergies should of course be cautious and use the product with care.

2. While firing, individuals with lung or respiratory problems may be affected by the smoke created. Fire in a well-ventilated place or under a kitchen extractor fan. Firing large pieces, like sculptures, is best done in a furnace with a smoke extractor.

3. Wear gloves and safety glasses, use tongs, paddle when loading and unloading a kiln.

4. Put your hot pieces and tools on heat proof surfaces.

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