

# PROMETHEUS® SUNNY BRONZE CLAY INSTRUCTIONS

## a) What is PROMETHEUS® SUNNY BRONZE CLAY ?

PROMETHEUS® SUNNY BRONZE CLAY is a clay-like material which turns into pure, solid bronze when fired in the 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. PROMETHEUS® SUNNY BRONZE CLAY can be fired with most lab-created gemstones (cubic zirconias), pre-tested natural stones, glass beads, ceramic porcelain. PROMETHEUS® COPPER CLAY and PROMETHEUS® BRONZE CLAY.

When PSB® is fired in a kiln, the organic binder evaporates, burns away and you're left with pure, solid bronze. Brush it, if needed pickle it, to remove any firescale, and finally polish.

You can create unique jewelry, ornaments, hollow ware, statues and many other decorative objects with PSB®. Any thing you create with PSB® is a piece of art. Combine it with your imagination, and let your fingers do the rest!

## b) Working with PROMETHEUS® SUNNY BRONZE CLAY

Working with PSB® is similar to working with PROMETHEUS® COPPER CLAY, PROMETHEUS® BRONZE CLAY silver clay, polymer clays, modelling dough, flower dough and ceramic clays. It is very easy to use.

### Wet Stage

-At normal consistency, PSB® does not stick to hands or plastic working surfaces. 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, Teflex sheet or wax paper. Use your fingers, rollers, 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, papers, and any other interesting textures.

-Keep the "Wet Stage" not too long, to avoid your clay from drying out, but don't rush your work. PSB 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 wet pieces together, simply apply some water to the points that will touch, or 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

### Dry Stage

-Before firing, you need to dry your piece completely. A hairdryer or putting it on top of a kiln will do it well. Hot-plates or food dehydrators work well either.

-To check if the clay is completely dried, put it on a cold mirror while it is hot. After a few seconds, move it and check that there is no vapour 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 recommend large and/or massive pieces, statues etc, to be left in room temperature for some time, and then continue drying at moderate temperatures, in order to avoid any cracks.

Whilst the dried PSB® is stronger than the other metal clays, you still need to take some care when 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 tooth-pick.

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.

## c) Firing PROMETHEUS® SUNNY BRONZE CLAY

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 results, you may raise the firing temperature up to 5%.

Firing of PSB® you have 3 choices:

### CONVENTIONAL METHOD

Place the dried piece (or pieces) on a stainless steel mesh and put it into the pre-heated kiln to 820°C/1500°F. \* Wait for the kiln to raise up to its target temperature again, then start timing your firing for 30 minutes.

When the firing is completed, take out the piece, put it on a heat proof surface and wait for it to cool down or much better, quench it in water while it is hot. \*\* Most of the fire scale leaves the piece. If any left, leave it in hot pickling solution for some time then rinse with water.

\*Most kilns are cooler near the front door, so put them close to the back of the heating chamber.

\*\* Be aware of water vapour.

### CARBON METHOD

This is a 2-step-method.

Step 1. Place the dried piece (or pieces) on a stainless steel mesh and put it in to the pre-heated kiln to 500°C/932°F, or on a kitchen stove. Fire it for 10 minutes, take it on to a fire proof 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 820°C/1500°F. Let the kiln raise to the target temperature again and fire it for 60 minutes. 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. One other firing schedule is 820°C/1500°F for 2 hours which is preferable when PSB® is combined with PBC® & FCC®.

### TORCH FIRING

Place the dried piece on a stainless steel mesh. Put the mesh on a fiber brick or a thick construction brick. Fire the piece homogeneously at an orange-red colour for 5-10 minutes according to the size of the piece. Avoid melting. After firing is completed, either leave it to cool down or quench in water. Leave the fired piece in hot Picklean® solution to get rid of any fire scale if any left.

## d) Finishing PROMETHEUS® SUNNY BRONZE CLAY

Brush your piece with a metal brush and, if necessary, put it in hot pickling solution. \* After pickling, rinse the piece thoroughly with water and dry. This will give you a nice warm reddish bronze color. You can also use many different patina solutions to give you other colours.

\* We recommend Picklean® granules. Mix one table spoon of Picklean® to a glass of hot water and leave your piece in it for some time.

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

## e) Safety Precautions

1. PROMETHEUS® SUNNY BRONZE CLAY 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 sensible and use the product with care.

2. Persons 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 tool on heat proof surfaces.

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