

# PMC PRO™



Bracelet  
Barbara Simon

## Working Properties

PMC PRO™ is like the other forms of PMC only better! It can be rolled, modeled, carved, layered, cut, textured, and assembled like Original PMC, PMC+ and PMC3. It has a longer working time and more green strength.

As with bronze and copper clays, use the same tools but wipe them with a cloth when switching between materials. Allow a little longer for PMC PRO™ to dry.

## Firing

PMC PRO™ is fired for one hour in activated carbon at 1400°F (760°C). Smaller pieces can fire at a reduced time and larger pieces should be held for two hours. Most people use a stainless steel container but any vessel that will withstand the required temperatures can be used. Provide about ½" of activated carbon between each piece and between the top and bottom of the batch. If more carbon is needed (for instance for an unusual shape) extend the firing time to two hours. Do not fire above 1425°F (774°C).

## Combining Clays

PMC PRO™ should not be physically mixed with other clays but it can be used alongside objects made of PMC3. Fire for 30 minutes on an open shelf (i.e., without using activated carbon) to properly burn off the binder. For the second step of firing, transfer the work to a vessel where it is covered with activated carbon and hold at 1400°F (760°C) for at least 30 minutes.

## Finishing

After firing, PMC PRO™ will be white or slightly gray. Finish as you would any other silver clay, by burnishing, sanding, tumbling, or polishing. PMC PRO™ responds well to conventional darkening solutions.

## FAQ

*Can I make slip?*

Yes, just like other metal clays. Add water to scraps and sanding dust or smear water into fresh PMC PRO™.

*Can I mix PMC PRO™ with other PMCs?*

The materials can be used side by side but they cannot be mixed together into a single hybrid clay. Similarly, scraps of PMC PRO™ should be kept separate from your other PMC.

*Can I enamel and use Aura 22?*

Yes on both counts. Fire the PMC PRO™ as recommended, then apply enamel or Aura in the usual way.

*Can I solder on PMC PRO™?*

You can use any low-temp solder and easy or medium silver solder. Do not use hard solder because its melting point is close to the melting point of PMC PRO™.

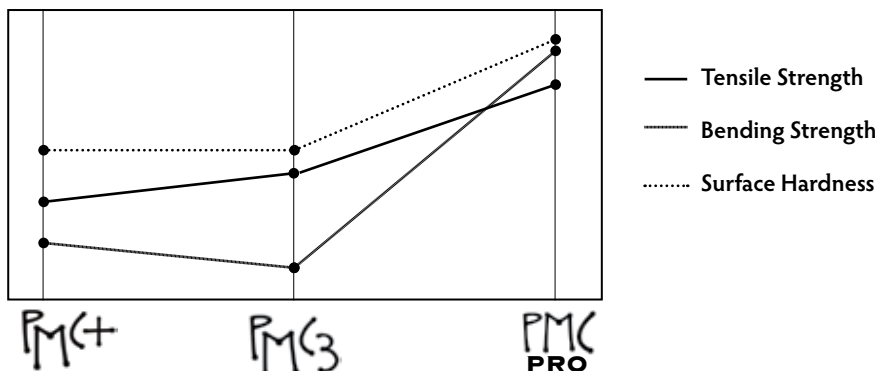
*When will PMC PRO™ be available?*

October in the United States.

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## Quick Comparison

For more technical data, visit [www.PMCguild.com](http://www.PMCguild.com).



# Comparison of Silver Metal Clays

	ORIGINAL PMC	PMC+	PMC3	PMC PRO	STERLING - cast -
Metal	Fine silver	Fine silver	Fine silver	90% silver alloy	92.5% silver alloy
Metal Content	77% clay weight	90% clay weight	90% clay weight	90% clay weight	—
Shrinkage (size)	25–30%	10–15%	10–15%	15–20%	—
Recommended Firing	1650°F for 120 min.	1650°F for 10 min. +	1650°F for 120 min.	1400°F in carbon	—
Elongation	15%	30%	35%	30%	35%
Tensile Strength	60 N/mm <sup>2</sup>	130 N/mm <sup>2</sup>	140 N/mm <sup>2</sup>	210 N/mm <sup>2</sup>	310 N/mm <sup>2</sup>
Bending Strength	30 N/mm <sup>2</sup>	50 N/mm <sup>2</sup>	30 N/mm <sup>2</sup>	150 N/mm <sup>2</sup>	240 N/mm <sup>2</sup>
Surface Hardness (Vickers)	n/a	30 HV	30 HV	60 HV	60 HV
Density	7.9 g/cm <sup>3</sup>	9.8 g/cm <sup>3</sup>	9.9 g/cm <sup>3</sup>	9.7 g/cm <sup>3</sup>	10.4 g/cm <sup>3</sup>

## Explanation of Terms

### Metal

The first three clays are 100% silver. PMC PRO contains 90% silver with the balance being a proprietary alloy. Sterling contains 92½% silver, balance typically copper.

### Metal Content

The nonmetal content refers to water and binder.

### Shrinkage

In all clays, shrinkage occurs equally along the x-, y-, and z-axes unless the clay is constrained or restricted. The degree of shrinkage is related to the amount of binder.

### Recommended Firing

Some clays offer options that balance a lower temperature against a longer soaking time. See other charts for the relative merits of the other schedules. Always fire at the highest temperature and longest time possible.

### Elongation

This refers to the degree a sample can be stretched before it breaks. Relevance: A ring with a higher number can be sized by stretching.

### Tensile Strength

Related to elongation, this measurement shows how much force is needed to break a sample. A higher number means the piece will be harder to break.

### Bending Strength

This is a measure of how much force is needed to bend a sample. The higher the number, the more rigid the piece will be. Relevance: A ring with a high number will not bend out of shape when worn.

### Surface Hardness (Vickers)

This refers to a test that measures what happens when a point of specific size is pressed into a sample. Relevance: A high number here means the surface is hard; textures and details will not wear away quickly.

### Density

We can think of this as a measure of how tightly packed the crystals are. Generally the tighter the structure, the tougher the metal.