

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 ² | 130 N/mm ² | 140 N/mm ² | 210 N/mm ² | 310 N/mm ² |
| Bending Strength | 30 N/mm ² | 50 N/mm ² | 30 N/mm ² | 150 N/mm ² | 240 N/mm ² |
| Surface Hardness (Vickers) | n/a | 30 HV | 30 HV | 60 HV | 60 HV |
| Density | 7.9 g/cm ³ | 9.8 g/cm ³ | 9.9 g/cm ³ | 9.7 g/cm ³ | 10.4 g/cm ³ |

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.