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 for 60 minutes	—
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. In objects of a given size, a denser material will weigh more.