

RIO GRANDE®

Since 1944

For your bench. At your side.



Welcome to Precious Metal Clay®

An Introduction to the Tools & Techniques
for Working with Precious Metal Clay®

8th Edition

Text by Tim McCreight, revised by Rio Grande. Illustrations by Jeff McCreight.

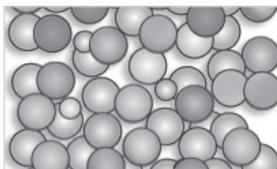
2007 Saul Bell Design Award
First Place, Metal Clay
"Botanical Bracelet"
by Patrik Kusek



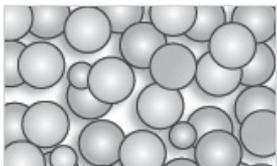
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#RioJeweler

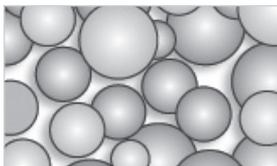
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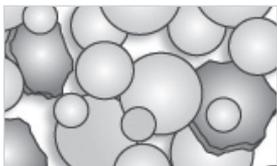
Particle size and shape in PMC Sterling



Particle size and shape in PMC3™



Particle size and shape in PMC+™



Particle size and shape in PMC®

What is PMC®?

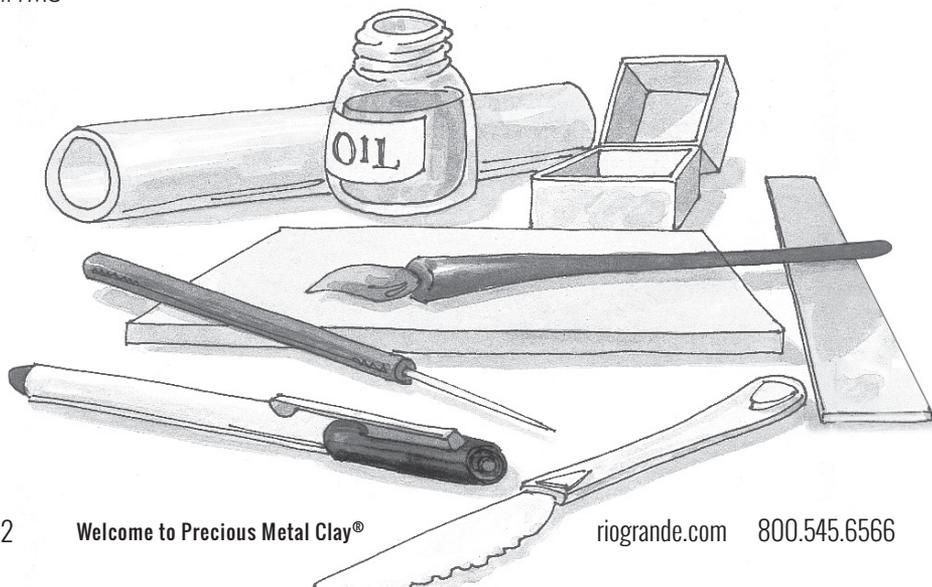
Precious Metal Clay® represents a dramatic development in the handling of precious metals. PMC® consists of microscopic particles of silver or gold suspended in an organic binder to create a pliable material with a consistency similar to modeling clay. PMC can be worked with the fingers and with simple, inexpensive tools to create an infinite range of forms, surfaces and textures that would be unattainable or laborious with traditional techniques.

When PMC is heated to a high temperature, the organic binder burns away and the metal particles fuse, forming solid metal that can be sanded, soldered, oxidized, patinaed and polished like conventional material. This booklet describes some of the techniques devised for PMC and will guide you through your first firing experience.

History

PMC® was developed and patented in the early 90s at the Mitsubishi Materials Special Products division in Sanda, Japan. Since then, many additional materials have joined this family of products. The principal ingredient in PMC is silver or gold, reduced to tiny particles smaller than 20 microns in size. These flakes are so fine that it would take as many as 25 of them clumped together to equal a grain of salt.

PMC also consists of water and an organic binder. During the drying and firing process, the water and binder burn away completely and what remains can be hallmarked as .999 pure silver, sterling or 22-karat gold. Dried out or unwanted PMC objects can be refined just like conventional precious metal.



How Does PMC® Work?

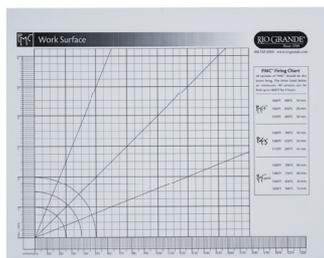
Under the proper conditions, particles of metal fuse together in the same way that droplets of water run together to make larger puddles. In the case of metals, any oxides (tarnish) that form naturally on most metals prevent this from happening. PMC+®, PMC3® and PMC® Flex solve this problem by using precious metals in their pure states. These do not readily oxidize, so even at the high temperatures needed to induce fusion, they remain free of coatings. With PMC Sterling, firing is a two-step process; step one is an open-shelf firing and step two requires a firing pan with activated carbon media, which prevents oxidation from occurring.



"Rowing Cottage"
Ivy Soloman
2006 Saul Bell Design Award
1st Place, Metal Clay

Form

Using very simple tools, PMC® can be rolled, pressed, squeezed, layered and molded into any desired shape. More clay can be added, removed and refined as you go, making the creative process spontaneous and liberating.



PMC® Work Surface
#111-567

Fire

After it has dried completely, the PMC® object is taken to a specific temperature (as described on page 11). This process burns off the binder, which dissipates as harmless smoke. At this point in the firing process, the PMC is a fragile, porous, metallic husk. At higher temperatures, the particles sinter together and form a solid, dense metal. Depending on the type of PMC and firing method, this can take from ten minutes to two hours.



PMC® Kiln
#703-117

Finish

After firing, the object can be handled like any other gold or silver item—it can be soldered, burnished, buffed, tumbled and plated to achieve the finish you desire.



Dura-BULL Double-Barrel
Rotary Tumbler
#202-211

PMC Type	PMC3™	PMC+™	PMC® Flex	PMC® Sterling
Description	<p>PMC3 is dense and still fires fast, but it also fires at remarkably low temperatures. Three distinct firing options provide a range that makes PMC3 especially useful for co-firing glass, findings and some stones.</p>	<p>PMC+ offers several distinct firing options. PMC+ can go from clay to metal in as little as 10 minutes. This material is slightly more expensive because of the increased ratio of metal to binder.</p>	<p>With its extended window of working time, this variety of PMC silver clay is ideal for use in the classroom and for anyone new to working with metal clay. The clay firms up somewhat but stays pliable enough to bend, twist, shape—even join edges with slip—up to a month later.</p>	<p>This Precious Metal Clay™ comes out of the kiln as a solid sterling silver piece! Because it is sterling, this clay will have more than twice the strength of original fine silver PMC, ideal for more delicate designs and for pieces that just have to have the added strength. Due to the different formulation, PMC Sterling requires a second firing in carbon.</p>
Shrinkage	12%	12%	15%	15-20%
Firing Temp & Time	<p>1,290°F (700°C) for 10 min. 1,200°F (650°C) for 20 min. 1,110°F (600°C) for 45 min.</p>	<p>1,650°F (900°C) for 10 min. 1,560°F (850°C) for 20 min. 1,470°F (800°C) for 30 min.</p>	<p>1,290°F (700°C) for 10 min. 1,200°F (650°C) for 20 min. 1,110°F (600°C) for 45 min.</p>	<p>Step 1: 1,000°F (538°C) for 30 min. Step 2: 1,500°F (815°C) for 30 min.</p>
Max Strength Firing	1,650° (900°C) for two hrs.	1,650° (900°C) for two hrs.	1,650°F (899°C) for two hrs.	<p>Step 1: 1,000°F (538°C) for 30 min. Step 2: 1,500°F (815°C) for 30 min.</p>
Melting Point	1,762°F (960°C)	1,762°F (960°C)	1,762°F (960°C)	1,640°F (893°C)

PMC® OneFire Sterling™ 	PMC+™ Silver Clay Paper 	PMC® Gold 	Aura 22 Gold Solution 
<p>OneFire Sterling PMC™ delivers the best of both worlds. This Precious Metal Clay™ comes out of your kiln as a sterling silver object after just a one-step, open-air firing process (no need to embed in carbon!), and the clay is as easy to work with as original fine-silver PMC™.</p>	<p>PMC+ paper is a thin, flexible sheet that allows you the creative freedom to fold, form, onlay, weave or decorate. After firing, it comes out of your kiln as a pure fine-silver object</p>	<p>PMC Gold is similar to PMC™ in its particle structure and size, its finished strength, and its shrinkage characteristics. PMC Gold 22KY, offers you four firing options:</p> <ul style="list-style-type: none"> 1,650°F (899°C) for at least 10 min. 1,560°F (849°C) for at least 30 min. 1,380°F (749°C) for at least 60 min. 1,290°F (699°C) for at least 90 min. 	<p>This remarkable liquid contains 91.6% pure gold and 8.4% pure silver and can be painted with a brush onto fine silver designs. It is especially effective on heavily textured surfaces or in difficult-to-access areas. Once applied, simply fire the Aura 22-accented piece on a hot plate and burnish thoroughly to fuse the metals.</p>
<p>15-20%</p>	<p>12%</p>	<p>12%</p>	<p>n/a</p>
<p>1,600–1,650°F (870–900°C) for 60 min.</p>	<p>1,470°F (800°C) for 30 min. 1,560°F (850°C) for 20 min. 1,650°F (900°C) for 10 min.</p>	<p>1,650°F (900°C) for 10 min. 1,560°F (850°C) for 30 min. 1,380°F (150°C) for 60 min. 1,290°F (700°C) for 90 min.</p>	<p>Torch until bright red and hold for a few seconds. 850°F (454°C) for 30 min.</p>
<p>1,600 –1,650°F (870–900°C) for one hour</p>	<p>1,650°F (899°C) for two hrs.</p>		
<p>1,700°F (927°C)</p>	<p>1,762°F (960°C)</p>	<p>1,832°F (1,000°C)</p>	

Tools and Techniques

One of the great things about PMC® is that you can find useful tools almost anywhere. There is a growing number of specialty tools like stamp patterns, shaping tools, Embeddables® findings and more that are made specifically for PMC.

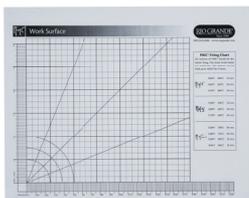


PMC Tool Kit
#111-411

Basic Tool Kit

Rio carries a handy PMC tool kit that includes all of the basic tools you'll need to begin working with PMC. Tools come in a gray canvas pouch, keeping them separate from other metal clay tools to avoid contamination. Tools include:

- Retractable scalpel (111-563)
- #6 soft taper-point chisel (111-402)
- Polyblade (111-385)
- Brass brush (111-388)
- Cool Roller™ (111-426)
- Size-4 spacers (111-430)
- 2-1/2" bent burnisher, (113-023)
- Shrinkage ruler (100-975)
- Paint/slip brush (111-388)
- Awl (111-386)



PMC Work Surface
#111-567

Work Surface

Rio Grande's exclusive plastic PMC® work surface features a quick-reference firing chart and rulers, grids, lines and arcs to help you lay out your PMC® work.



PVC Cool Roller
#111-426

Uniform Rolling

Rolling is one of the most common forming methods used when working with PMC. The PVC Cool Roller™ has a groove milled at each end to accept calibrated spacer rings-for a uniform, repeatable thickness. To change thickness, roll off the spacers and roll on another size. Each includes one pair of size-4 spacers. Additional spacers are available.



Color-Quick
Thickness Guide Set
#111-569

If you already have a roller you would like to use, consider Rio's handy set of thickness guides to roll your PMC to varying thicknesses. They are durable and made of plastic for easy cleanup.

It's All In the Cards...

Do you have a deck of cards you're not using? Place two equal stacks of playing cards on each side of your roller to achieve a universal thickness.



Use cards as a thickness gauge.

Making the Cut

A narrow-tip knife, X-Acto® blade, awl, or needle tool can be used to cut clay. Once cut, the pieces can be lifted off your work surface by using the edge of an index or playing card or other piece of card stock.

Working with Texture

To achieve rich textures, press PMC against any rough surface or roll the surface over a sheet of PMC. Even simple objects like bottle caps leave interesting trails, and leaves, bark and wood offer many possibilities.

Rio carries an assortment of clear Makin's Texture Sheets that are designed to embellish your PMC® jewelry designs.

Specialty Tools

As your interest grows, you'll find yourself adding more tools to your collection. You might find these useful:

- Tweezers
- Tissue blade
- Magnifiers
- Rubber Stamps
- Straws (holes-making)
- Files
- Basic Ruler
- Design Templates
- Small Chisels
- Blackening Patina Solution
- Toothpicks
- Manicure Sanding boards

Helpful Hints

Prevent Sticking and Maintain Hydration

Add a few drops of olive oil on the palms of your hands before starting. This will prevent the clay from sticking to your hands and help keep your clay hydrated.

Joining Parts

To join parts, set them close together and apply a drop of water with a pointed brush. Let the water penetrate for a few seconds, then press the parts together.

Making a Bail

One way to make a bail for a pendant is to roll out a slender rod and form it into a loop. Cut off the ends to make a solid attachment, moisten with water and press it into position.

Rehydrating

Most work is done with moist clay, but it is also possible to work with PMC after it has dried. Create the general idea of the form you want, then refine it with carving tools or files when the PMC is leather-hard. Use slip to join parts at this stage. If the PMC becomes dry as you work, spray or brush on a little water (not too much!) and cover it with plastic wrap for a few minutes to allow it to rehydrate. If you add too much water, just set the PMC aside, loosely wrapped, and allow it to dry out.

Drying Shortcuts

Allow the work to air-dry, or speed up the process with a warming plate, hair dryer, heater or slow oven. Set the work on a screen, a wad of paper towel or a piece of foam rubber to allow air to reach all sides.



Use a sharp edge to cut PMC®.



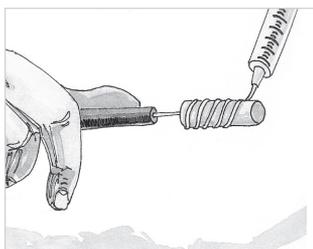
Use almost anything to add texture.



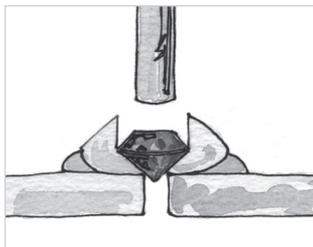
Makin's Texture Assortment
#111-457



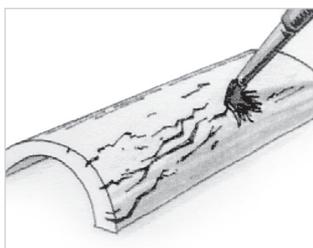
Manicure sanding boards are ideal for sanding and shaping.



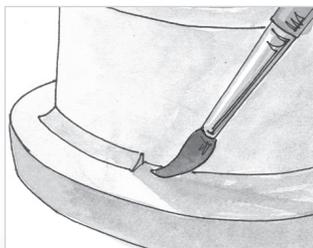
Use slip to decorate your designs.



Use slip to trap a stone in place.



Fill small cracks that can appear as the piece dries.



Use paste to fill between elements.

Using Slip

PMC® slip is available pre-loaded in ready-to-use plastic syringes and small jars. Slip is used for connecting and fusing workpieces together and opens enormous design possibilities; here are just a few:

Decorating

Use the syringe to make trails that curl and loop around your designs. These make the surface more active and interesting, particularly when the work is blackened and polished.

Setting Stones

Press a lab-grown gemstone (see more on page 12) into place and trap it with a network of threads from the syringe.

Making a Net

On a sheet of plastic, squeeze out a series of lines about 1/4" apart. Cross this with a similar series at a right angle. Return to the first direction and lay threads of PMC® between the first lines, then repeat in the second direction. The effect is a woven appearance that adds texture.

Making Repairs

Because of its strength and handy dispenser PMC3™ slip is suitable for attaching parts, repairing breaks and reinforcing delicate areas such as the point where a loop attaches to a pendant.

Transitioning

Use paste to fill crevasses between elements when creating an organic effect.

Using with Ceramics

Both slip and paste will bond to either glazed or unglazed ceramics. Make certain all surfaces are clean and then apply the PMC® firmly so there are no air spaces beneath it.



2006 Saul Bell Design Award
2nd Place, PMC
by Barbara Fernald

Making Molds & More

PMC® lends itself easily to working with molds since they allow for repeated elements and the production of multiples. Hollow forms allow your work to be light and help your PMC go further. Here are some different ways to work with molds:

Soap & Wax Blocks

A simple way to get started is to carve a pattern into a bar of soap. Press PMC® into the depression, peel it away, and you have a molded form. If you don't like the result, re-work the carving and try again.

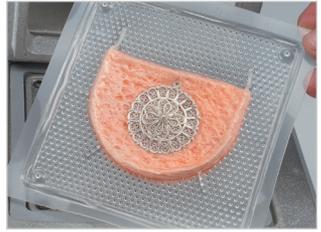
Rubber Molds, Stamps & Texture Sheets

Make your own molds with a two-part silicone mold compound (such as Rio Cold Mold™, shown at right). If your mold needs lubrication, spray lightly with an aerosol cooking oil such as PAM® or Cool Slip (#111-448).

Hollow Forms

Make beads and other hollow forms easily with PMC®. Start by making a core from a material that will burn away completely. Examples include paper clay, tissue, bread and cereals. Coat these with PMC, decorate and fire. The cores will smoke as they burn off so you will want to vent this from your shop or work area.

Cork clay is another material great for creating hollow forms, shapes and textures with PMC®. Simply shape or form cork clay item #100-976 and allow it to dry completely—if not allowed to dry completely, steam may form when the piece is fired and may damage the PMC. Once cork clay is dry, coat evenly with PMC and fire. The cork material burns out during firing.



Use PMC® with Pro-Form Vac-U-Form. **#700-658**



Rio Cold Mold™ compound, 1 oz. **#701-042**



Create a mold out of nearly any artifact.



Thin slip with water and apply with a brush to create hollow beads.



PMC® vessel by Celie Fago



Use cork clay as a core when creating hollow PMC® objects.



PMC® Kiln
#703-117



Ultralite Kiln for PMC®
#703-016



PMC3™/PMC+™ Torch Kit
#500-085

Firing Equipment

PMC® can be fired in any device that will sustain the required temperature for the recommended time. These range from manually operated torches and furnaces to fully automatic programmable kilns. When used correctly, any of these devices will yield an equally good result. Beyond reliability and convenience, there is no reason to prefer one method over another.

Kilns

Small electric kilns are ideal for PMC® and can also be used for glass, enamels, ceramics and wax burn-out. A programmable unit allows you to set the ramp (heat-up) time, the holding temperature and the holding time at this temperature. Large ceramic kilns are not recommended for PMC because heat fluctuates from one area to another inside the kiln.

Torches

Any torch customarily used for jewelry work is suitable for firing PMC+™, PMC Flex™, and PMC3™. Set the work on a soldering block in a dimly lit space and heat the dried clay until it glows red. Hold at a clear red for the prescribed time (see table below). A butane torch with a special nozzle reduces the risk of overheating.

AT THIS TEMPERATURE:	THIS IS HAPPENING TO ALL SILVER PMC®:
500°F (260°C)	Binder burns away; some flame, smoke and odor
1,000°F (538°C)	PMC® starts to show dim red glow
1,100°F (593°C)	Clear red color; threshold for early sintering
1,200°F (650°C)	Glowing red color (20 minutes here completely fires PMC)
1,300°F (700°C)	Bright red color (10 minutes here completely fires PMC)
1,400°F (760°C)	Luminous, vibrant red color
1,500°F (815°C)	Brilliant red-orange color
1,600°F (870°C)	Glowing red-orange color; surface shimmers
1,700°F (926°C)	Surface shimmers and appears wet
1,761°F (960°C)	Surface shines like mercury, edges curl and the silver draws up into a ball— IMPORTANT! Do not get to this point!

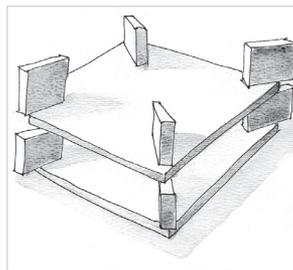
Firing Tips

For all types of PMC®, allow the completed work to dry before firing (firing a piece while it's still damp can cause the moisture to expand and create blisters). Once dry, PMC can sit for weeks before firing.

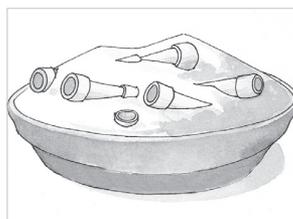
Supports For PMC®

Set dry fine silver PMC® objects on ceramic tiles or soldering pads to take work in and out of the kiln easily and safely. Irregular shapes should be cradled by material that will hold them and be unaffected by the heat, such as alumina hydrate, vermiculite, a cooling blanket or dry Plaster of Paris powder. A thin layer of these is always helpful, especially when firing rings (which need to slide) or enamels (which might stick to the shelf). For larger objects, keep the powder in a clay flower pot saucer or ceramic crucible. **Please Note:** These saucers can break; always hold them over a heat-proof surface. Slow cooling will make them last longer.

Work can be air cooled after firing or, if there are no stones or glass embedded in the piece, it can be quenched in water. After firing, PMC can be quality marked according to industry standards for the corresponding metal.



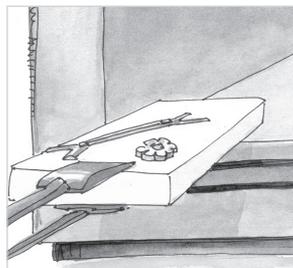
Stack soldering pads on fire-brick stilts to increase surface area.



Support pieces in a clay flower pot saucer filled with alumina hydrate.



by Barbro Gendell
2011 Saul Bell Design Award
2nd Place, Metal Clay



Use a soldering pad or ceramic tile as if it were a cookie sheet to move pieces into and out of the kiln.

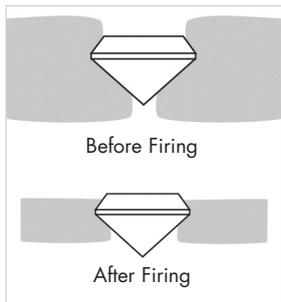


Rio PMC® Kiln Shelf Kits
6" x 6" Solderite™ shelf kit
#703-067

7" x 7" Ceramic shelf kit
#703-080



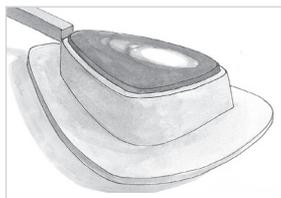
PMC® pendant by Candace Gates



Set the stone deeply into the clay to compensate for shrinkage.



CZs embedded in PMC®



For flat-back stones, create a strap to hold the stone.

Adding Gemstones

Some natural stones may be undamaged by PMC® firing, particularly at the low temperatures used to fire PMC3™, but there is always a risk that they will discolor or crack. Gems composed of laboratory-grown corundum, spinel or CZ, however, are created at very high temperatures and will not be damaged by firing.

Please Note: Organic materials such as pearl, opal, bone, shell, wood and some glass objects (see page 14) are not suitable for firing and should not be set into PMC.

Important: Never fire a doublet stone.

Visit riogrande.com and search "fire-resistant" for a list of stones to use with metal clay, as well as helpful articles and videos to reference.

Setting a Small Faceted Stone

1. Prepare a seat or rim that will provide enough metal to surround the gemstone. This can be added to a form or built into the original shape.
2. Make a conical hole with a pencil point or similar tool.
3. Use a straw or similar tool to remove clay from beneath the stone.
4. Set the gemstone in place and press it down until the table is below the surface of the work. Remember that the clay around and under the stone will contract and squeeze the stone upward so press the stone deeply into the clay to compensate.
5. Fire as usual then allow the piece to cool in the kiln to avoid shocking the stone.

To Set a Flat-Back Stone

1. Create a smooth, flat area for the stone.
2. Roll out a rod then flatten it to make a thick strap. Wrap this loosely around the stone then use PMC® paste to join it securely to the base. If necessary, this can be scraped smooth when dry.
3. For large stones, make a small cut in the back to allow the PMC to shrink without tearing.

To Set a Heat-Sensitive Stone

Rio offers fine silver bezel cups and Embeddables™ prong settings that can be fired in place and then used to set heat-sensitive stones.

Finishing

After firing, silver PMC® has a characteristic matte white color. Because the surface has a microscopic texture, it is as if there is a powdery skin on the silver. If you press it lightly, the texture gives way to a reflective silvery shine. Because of this, some form of burnishing should always be part of the finishing process.

Scratch-Brushing

Brushes made from very thin brass or stainless steel wires can be used to burnish PMC®. Lubricate with any sort of soap and work under a slow drizzle of water. Scrub in all directions. Scratch-brushing can be used in conjunction with any other technique.

Hand-Burnishing

Perhaps the most basic way to polish PMC® is to rub it with any hard, smooth object. Commercial burnishers offer a time-tested tool shape held in a comfortable handle, but you can use knitting needles, teaspoons or polished nails. Lubricate with a few drops of water and rub the PMC in all directions to make it shine. Follow this with a polishing cloth like Rio's Sunshine Cloth® to remove burnishing marks.

3M Tri-M-Ite Imperial Polishing Paper

With 3M micron-graded abrasives, you remove a controlled amount of material, leaving a more consistent finish after each grade of abrasive. This soft, cloth-like WatorDry™ Tri-M-Ite™ material is ideal for interior shapes and for polishing just about any contoured surface.

Tumbling

A tumbler is a mechanical device in which hundreds of steel balls and rods cascade against jewelry objects as they rotate in a drum like a miniature clothes dryer. The advantages are that many pieces can be finished at once and individual handling is minimal. For finishing several pieces at once, tumbling is often the choice of PMC® users.



PMC® ring



Brass brush
#113-172



Set of three burnishers
#113-033



3M Tri-M-Ite Imperial Polishing
Paper Assortment
#337-308



3M Sponge Sanding Pads,
Set of 5
#337-318



Rio Single-Barrel Rotary Tumbler
#202-210

Combining with Other Materials

Whole books have been written about the wealth of opportunities that exist to combine silver or gold PMC® with glass, polymer, paper, leather, fabric, shells, found objects, enamels, wood . . . well, you get the idea.

Embeddables®

Made with our exclusive alloy, silver Embeddables® can be safely fired with your PMC® designs! Simply push the component into an unfired design, then fire. Available in three styles: bails, eyelets and pre-notched settings and rings.



Enamels

PMC® is a perfect medium for enameling. Create a silver object with recesses, fire and finish as usual. Wash enamel powders and pack them into the recesses. Dry and heat (kiln or torch) until the powders melt and fuse. Repeat as needed to fill the cavities.

You can also mix enamel powders into PMC to create a metal/glass hybrid. Knead together equal parts of each material, model a form, and fire slightly shorter than usual.

Glass with Fine Silver and PMC varieties. There are many creative ways to combine glass and PMC® and there are many formulations of glass with a wide range of melting points, so experimentation is recommended. Completed PMC objects can be inserted into lampworked or blown glass, and glass can be slumped over it. Silver has a tendency to create a green tint in some glass. To reduce stresses, all glass should be cooled slowly in a process called annealing.

Found Objects

PMC® can be soldered to bronze, copper, brass and gold. You can also use it with steel and nickel silver elements although, because of heavy oxidation, the PMC will not fuse to base metals. Plan ahead to create a mechanical connection such as a hook, prong, rivet or undercut to secure the finished pieces together.

Polymer Clay

Make a PMC® object and fire it as usual. Sand, burnish and complete any soldering, then press polymer clay elements into it. If possible, provide handles of silver to grip the polymer. Cure the polymer at its manufacturer's recommended temperature. This will cause no harm to the fired PMC. In some cases it is recommended to glue the polymer to the PMC.

2010 Saul Bell Design Award
1st Place, Metal Clay
"Song and Eggs"
by Wendy Wallin Malinow

Health & Safety

Entirely Non-Toxic

PMC® has been certified by an independent testing facility to be safe in every phase of its use and to conform to ASTM D4236. Issues of safety do not arise from PMC itself, but in the normal use of the high-temperature furnaces used in the sintering process.

These kilns should be positioned on a stable surface, away from combustible materials, with a foot of open space on all sides. Never leave a kiln unattended and take special care if animals, young children or uninformed adults are in the area.

As always, when working around heat, wear appropriate clothing and avoid clothes made with synthetic fabrics. There is little reason to look into a kiln but if you do this, eye protection should be worn (see your *Rio Grande Tools & Equipment* catalog).

Storage & Shelf Life

You'll notice that PMC® is packed in an air-tight foil pouch to preserve its freshness. Use this package or a good-quality plastic wrap (or both) to keep your clay moist. It is good practice to take out only what you will use within a few minutes and to add a few drops of water to the lump at the end of each work session.

All PMC can be rehydrated if it dries out, though it is difficult to achieve the homogenous consistency of fresh PMC.

To restore dry material, poke the lump with holes or dice it into small pieces. Add water by kneading, then set the PMC aside to allow the water to penetrate; allow at least a day, more if the clay was very dry.

With the sample wrapped in plastic, knead repeatedly to force the water into the dense metal structure. If you add too much water, spread the PMC on a piece of plastic, glass or waxed paper and allow it to dry to a useable consistency.

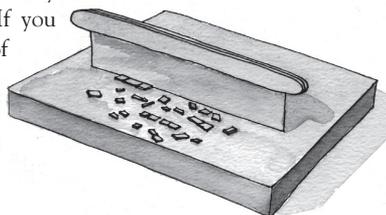
If stored in a stable environment, PMC in a factory-sealed package will remain viable for up to two years.



2013 Saul Bell Design Award
2nd Place, Metal Clay
by Christi Anderson



Lump form PMC+™
#100-880



Chop dry PMC® and
add water to rehydrate.

See your Rio Grande catalogs for PMC® products, tools and supplies.
Call toll-free **800.545.6566** or visit **riogrande.com** to order.

Join Our #RioJeweler Community!

Join a diverse and passionate community, overflowing with ideas and bench advice—#RioJewelers love to collaborate, revel in design triumphs and share moments of breakthrough. Join the conversation! Here's a glimpse of the world through the eyes of some #RioJewelers.



Works by JennyButtons
on Pinterest



@partsync
on Instagram



SilverManiaStudio
on Pinterest

Follow Rio Grande on social media and tag your photos with **#RioJeweler**

Advanced PMC Kit with Kiln #100-926

Ideal for the serious PMC® artist, this kit includes PMC silver clay, a tumbler, and a variety of tools and accessories designed for working with PMC. It also includes a Rio PMC Kiln with a nine-program controller that fires all varieties of PMC®.



Kit Includes:

- Rio kiln, 110 volt
- PMC3® clay; 25g.
- PMC3® slip; 15g. jar
- Rio PMC work surface
- Rio PMC® tool kit
- 2-part mold compound; 1lb.
- 3M Tri-M-Ite® polishing paper asst. pkg/12
- Needle files, cut #2, set/6
- PMC® greenware file; pkg/3
- Midas® liver of sulfur; 8-oz
- Sunshine® Cloth; 5" x 7"
- Double-ended carving tools, set/4.
- Rio single-barrel mini rotary tumbler
- Stainless steel mixed shot, 1-lb.
- Kiln glasses
- Three retractable scalpels
- Super Sunsheen™ burnishing compound, 4-oz.
- Solderite™ shelf kit
- 8" tweezers
- Half-round sanding sticks, set/6

RIO GRANDE
Since 1944

7500 Bluewater Rd. NW • Albuquerque, NM 87121

To order PMC® and tools or for technical support: www.riogrande.com • 800.545.6566

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