

RIO GRANDE®

Since 1944

For your bench. At your side.

Cold Mold™ Silicone Compound

#701-042 (six 1-oz. containers); #701-046 (1-lb. kit)

Product Overview

Cold Mold™ is a fast-setting mold-making silicone compound (platinum catalyst) that can be mixed and applied anywhere—then molded directly to almost any model. Cold Mold's mix ratio is 1-to-1 of part A and part B by weight or by volume. Pot life is 1–2 minutes and cure time is about 10–15 minutes at room temperature. Warmer temperatures will reduce pot life.

Preparation & Applying a Sealer

Store and use silicones at room temperature (72°F/23°C). Warmer temperatures significantly reduce pot life. Silicone rubber may be inhibited by sulfur-based items, resulting in tackiness at the pattern interface. If compatibility between the rubber and the surface is a concern, apply a small amount of rubber onto a non-critical area of the pattern. Inhibition has occurred if the rubber is gummy or uncured after the recommended cure time has passed. To prevent inhibition, spray a “barrier coat” of clear acrylic lacquer directly onto the pattern. **Please Note:** This product is mixed by hand. Ensure that hands are clean and free of oils or other substances that might inhibit curing. If you wear gloves, wear vinyl gloves only—latex gloves will inhibit the cure of the rubber.

Technical Overview

Key Values

- Putty-like material
- Mixing ratio: 1A-to-1B by weight or by volume
- Cure time/demold: 10–15 minutes
- 100% modulus: 119psi
- Tensile strength: 520psi
- G/CC 1.25
- Color: light purple
- Die B tear strength: 140 pli
- Shore A hardness: 35
- CU. in./lb. 21.25
- Pot life: 1–2 minutes
- Elongation at break: 430%
- 100% modulus: 119psi
- Shrinkage: 0.0003in./in.
- Useful temperature range: -65°F to 400°F (-19°C to 205°C)

Rio Cold Mold™: Ideal for Metal Clay



Knead the two parts of the Cold Mold™ compound until the color is uniform.



Press your pattern into the compound, then allow the mold to cure.



Firmly press unfired PMC® into the cured Rio Cold Mold.



Remove the PMC from the mold and prepare it to be fired.



After firing, your pure silver piece retains the pattern you created! Keep the mold to use again.

Measuring

The putty comes as two parts. Dispense equal amounts of Part A and Part B. This may take some practice to find the appropriate amount for the item you are molding.

Mixing

Knead parts together quickly to a uniform color and apply to your pattern immediately. The pot life is about two minutes and the putty will begin to cure at 30 seconds; it will fully cure in 10–15 minutes.

Application

Putty can be applied directly to almost any model surface except skin (see “preparation” on previous page).

Curing

Allow the rubber to fully cure (10–15 minutes) at room temperature (72°F/23°C) before removing your original.

Using Cold Mold™ with Metal Clay

1. Make a mold of a textured item you want to recreate (buttons, conchos, etc.) by mixing equal parts of the Cold Mold™ compound and pressing the object into the mold.
2. Once the mold is set you can remove the object.
3. Roll the metal clay to the desired thickness, press firmly and evenly into the mold. Peel the clay away from the mold; it should pick up the detail of the mold.
4. Trim away any excess clay; dry, sand, fire and finish your piece like you would any other metal clay piece.

Using Your Molds

When first made, silicone rubber molds exhibit natural release characteristics. Depending on what is being cast into the mold, the “slipperiness” on the mold surface may deplete over time and parts may begin to stick. If this occurs, apply a release agent such as CoolSlip or Modeler’s Silicone Mold Release to assist in releasing the patterns; both of these items are available from Rio Grande.

Please Note: The Material Safety Data Sheet (MSDS) for this product should be read before use and is available upon request or at riogrande.com.