





# PMC - 724

LIQUID RUBBER COMPOUND

## PRODUCT OVERVIEW

Used by artists and industry the world over for a variety of design, casting and special effects applications, PMC-724 is by far the most versatile liquid rubber compound available on the market today. It is inexpensive, mixes and pours easily, and will cure to a durable rubber with negligible shrinkage. Low viscosity ensures flawless pick-up of even the finest detail with minimal bubble entrapment.

**PMC-724 PUTS YOU IN CONTROL!** Using optional 'Part D', you can thicken PMC-724 to a paste-like consistency for vertical surface brush-on applications or for getting into those hard-to-reach undercuts. If you like to work with a more flexible rubber, optional 'Part C' is available to soften PMC-724 all the way down to a Shore A6. Typical applications include reproducing sculpture (lost wax process), creating special effects, making fiberglass panel & part molds, on-site architectural restoration and new construction molds. A variety of colors and special effects can be achieved by adding pigments, and for added project dimension, you can foam PMC-724.

**Important:** This rubber will last and perform in production, often for hundreds of castings (depending on what you are casting into the mold). It also exhibits good physical properties and chemical resistance. But **PMC-724 does not have a long "library life"**. Molds will soften and revert to a liquid within 2 – 5 years, depending on exposure to moisture. There are many different mold rubbers that offer a very long library life (25 years and more depending on application). Contact TCS, Inc for information about a complete line of Silicone, Polyurethane and Polysulfide mold rubbers.

## TECHNICAL OVERVIEW

**Key Values:** ~ *Mixing Ratio:* 10 parts A to 100 parts B by weight. ~ *Shore A Hardness:* 40  
~ *Color:* Off-White ~ *Pot Life:* 20 minutes ~ *Demold Time:* 16 hours

PROPERTIES*	COLOR	VISCOSITY**	S.G. g/cm <sup>3</sup>	SPECIFIC VOLUME	MIX RATIO
PART A	Brown	100 cps	1.10	-	10
PART B	White	9,000 cps	1.40	-	100
Mixed	Off-White	4,000 cps	1.38	20.5 cu. in./lb.	-

  

Ultimate Tensile Strength . . . . .	600 PSI.	100% Modulus . . . . .	80 PSI.
Elongation At Break . . . . .	>700%.	Tear Strength . . . (Die C)	90 PLI.
Shore A Hardness . . . . .	40 down to 6***	Shrinkage . . . . .	Negligible.
Compression Set . . . . .	5%	*These are neither minimum or maximum, but average values.	
		**Will vary depending on percentage of Part D thixotropic agent added.	
		***Will vary depending on percentage of Part C flexibilizer added.	

### • START BY PREPARING YOUR MODEL -

**Apply a Sealer...** Models should be clean and dry. Polyurethane rubbers are adhesive and will bond to many surfaces if not properly prepared. Models made of porous materials (such as plaster, concrete, wood, etc.) require a sealing agent followed by a release agent. Suitable sealers include shellac, paste wax, and mold soap. **Superseal** (available from TCS, Inc) will seal porous surfaces WITHOUT INTERFERING WITH SURFACE DETAIL. Liberally apply sealing agent to model and surrounding forms (if porous) and let completely dry. Follow with application of release agent.

**Apply a Release Agent...** A release agent is necessary to release the cured rubber from your model. Use a release agent specifically made for mold making/casting. **Universal Mold Release Agent** is ideal for most applications (available from TCS, Inc). ~**IMPORTANT:** Spray a light mist coating of release agent onto all surfaces that will contact the rubber, and onto the table and surrounding forms. To break surface tension and ensure thorough coating, lightly brush the release agent with a soft brush over the entire surface of the model, into undercuts and areas of intricate detail to ensure thorough coating. Follow with a second light mist coating. Let stand for 30 minutes before applying mold rubber.

**Modeling Clays** that are water based or contain sulfur (such as Roma Plastalina) will inhibit the cure of polyurethanes. To prevent this, a sealing agent must be applied. Spray shellac is a good sealer and is easy to apply.

Apply sealing agent and follow with application of release agent as described on page 1. Sulfur-free clays (Classic Clay or Chavant Clay) require only a release agent.

**Polystyrene** - Laquered surfaces and thermoplastics, such as polystyrene, must be sealed using PVA followed by proper application of release agent.

**Non-Porous Models** such as metal and most plastics should be coated with a release agent which should be allowed to dry before pouring the rubber. If compatibility between the rubber and the prepared model surface is in question, a small scale test should be made on an identical surface to make sure that the rubber cures completely and releases properly.

### • **MIXING PMC-724**

**Proper mixing of this product is critical to achieving best results.**

Your mixing tools and containers should be clean and made of metal, glass or plastic. Materials should be stored and used in a warm environment (72° F / 23° C). To minimize the introduction of harmful moisture to your mix or unused product, do not use wooden utensils or paper containers. Also, immediately replace the lids on both containers after dispensing product. Note: PMC-724 is usable for one year from date of shipment in unopened containers stored in a cool dry place. **XTEND-IT™** moisture eliminating spray can be applied to the unused portion of PMC-724 to extend the shelf life of the product after opening (available from TCS, Inc).

**YOU MUST MIX 'PART B' THOROUGHLY BEFORE YOU BEGIN.** You must use an accurate scale to weigh the components of PMC-724. Use only a triple beam balance or gram scale. Other types of scales (such as diet or postage scale) will not weigh accurately enough to be successful with this product, and the rubber will not cure. Mixing should be done in a well-ventilated area. Wearing latex gloves and long-sleeve garments will help minimize skin contact.

The mix ratio for this product is one part A to 10 parts B. **Important: Pre-Mix the Part B before using.** After dispensing equal amounts of Parts A and B into mixing container, mix thoroughly for at least 3 minutes making sure that you scrape the sides and bottom of the mixing container several times. **If Mixing Large Quantities** (16 lbs./7 kgs. or more) at one time, use a mechanical mixer (i.e. Squirrel Mixer or equal) for 3 minutes followed by careful hand mixing for one minute as directed above. Then, pour entire quantity into a new, clean mixing container and do it all over again. Although PMC-724 is formulated to minimize air bubbles in the cured mold, vacuum degassing will further reduce entrapped air. This is usually not necessary.

### • **YOU'RE READY TO POUR...**

**... other important information**

For best results, pour the mixture in a single spot at the lowest point of the mold. Let the rubber seek its level, filling the detail and undercuts of your model. A uniform flow will help minimize entrapped air.

**Curing...** Allow the mold to cure overnight (at least 16 hours) at room temperature (77 F/25 C) before demolding. The mold will cure faster at higher temperatures and will cure slower at lower temperatures. Do not cure the mold where the temperature is less than 65 F/18C. Note: *Kick-It* Cure Accelerator is available to reduce the cure time to as little as a few hours (available from TCS, Inc).

**Casting Into The Mold...** If casting plaster into the mold, sponging the mold with U-10 Mold Rinse prior to casting reduces air bubbles in the plaster and aids separation. Thermosetting materials such as epoxies or liquid plastics can be cast into PMC-724 molds with the use of a proper release agent. Apply a light mist coating, brush with a soft brush over the mold surface, follow with a light mist coating and let stand for 30 minutes before casting. The number of castings that can be cast from a PMC-724 mold depends on the configuration of the mold, type of material being cast into it and choice of release agent. If casting Polyesters, use Mann's Permalease 650 (available from TCS, Inc) to protect your mold from chemical degradation. **PMC-724 is not suitable for production casting of concrete.** We recommend Brush-On 50 or other rubber that has superior abrasion resistance.

**Mold Performance and Storage...** Fully cured molds made of PMC-724 are tough, durable and will perform in production if properly used and stored. The physical life of the mold depends on how you use it (materials cast, frequency, etc.). Casting abrasive materials such as concrete will quickly erode detail from the mold's working surface. Other mold rubbers should be used if casting concrete (PMC-746 or Brush-On 50). You will enjoy much longer mold life if casting non-abrasive materials such as wax. Before storing, the mold should be cleaned with a soap solution and wiped fully dry. Two-part (or more) molds should be assembled. Molds should be stored on a clean and level surface, indoors in a dark, cool and dry environment. Do not expose the mold to moisture or sunlight (ultraviolet light sources). Do not stack molds on top of each other as warpage could result.



cause lung damage and sensitization by inhalation. MDI is a skin and eye irritant. Flush eyes immediately with water for 15 minutes and seek medical attention. Remove from skin with soap and water.

PMC-724 components can be irritating to the eyes and skin. Avoid prolonged or repeated skin contact. Flush eyes immediately with water for 15 minutes and seek medical attention. Remove from skin with soap and water.

The information contained in this bulletin is considered accurate. However, no warranty is expressed or implied regarding this accuracy, the results to be obtained from the use thereof, or that any such use will not infringe a patent. User shall determine beforehand the suitability of this product for the intended application and assume all risk and liability in connection therewith.

### **Mold Making Accessories:**

**~Kick-It Cure Accelerator**

**~ SUPERSEAL™ Sealing Agent**

**~UNIVERSAL Mold Release™**

**~XTEND-IT™ Urethane Life Extender**

**~Part 'C' Softener**

**~Part 'D' Thickener**

**~PLASTI-PASTE™ Mother Mold Material**

**~Color Pigments**

There are many different liquid rubbers and liquid plastics used worldwide for many different Smooth-Sil™ Silicone Rubbers have superior release properties. Liquid plastics mix and pour easily. Low viscosity ensures flawless pick up of even the finest detail. They cure at room temperature to form tough, solid or semi-rigid plastics. The applications for both are almost endless::

**~Prototype Parts    ~Production Parts    ~Durable Models    ~Ultra thin-wall castings**

**~Special Effects    ~Vacuum Forming Molds    ~Foundry Patterns    ~Artistic Creations**

**~Durable Miniatures    ~Architectural Models    ~High Impact Tooling    ~Die Facings**

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