PMC®-770

Industrial Liquid Rubber Compound

www.smooth-on.com

PRODUCT OVERVIEW

PMC®-770 is a Shore 70A addition to our line of industrial liquid rubber products (such as PMC®-780 and PMC®-790) used for a variety industrial and casting applications. Mixed two parts A to one part B by weight, PMC®-770 pours easily and cures at room temperature to a solid Shore 70A rubber that has exceptional performance characteristics and dimensional stability.

It is suitable for production casting of abrasive materials such as concrete (pre-cast concrete, making concrete stamping pads, etc.) and gypsum plasters with high exotherms. It is also suitable for rubber mechanical parts of varying configurations (gaskets, wheels, pullies) as well as ball mill liners and vibration/shock pads.

PROCESSING RECOMMENDATIONS

START BY PREPARING YOUR MODEL...

Preparation - These products have a limited shelf life and should be used as soon as possible. Materials should be stored and used at room temperature (73°F/23°C). Humidity should be low. Wear safety glasses, long sleeves and rubber gloves to minimize contamination risk. Good ventilation (room size) is necessary.

Some Materials Must Be Sealed - To prevent adhesion between the rubber and model surface, models made of porous materials (gypsum plasters, concrete, wood, stone, etc.) must be sealed prior to applying a release agent. SuperSeal® or One Step® (available from Smooth-On) is a fast drying sealer suitable for sealing porous surfaces without interfering with surface detail. You can also use Sonite® Wax. A high quality Shellac is suitable for sealing modeling clays that contain sulfur or moisture (water based).

TECHNICAL OVERVIEW

Mix Ratio: 2A : 1B by weight	
Mixed Viscosity (cps): 3,000	(ASTM D-2393)
Specific Gravity (g/cc): 1.04	(ASTM D-1475)
Specific Volume (cu. in. /lb.): 26.5	
Pot Life: 30 minutes (73°F/23°C)	(ASTM D-2471)
Cure time: 16 hrs (73°F/23°C)	
Color: Light Amber	
Shore A Hardness: 70	(ASTM D-2240)
Tensile Strength (psi): 750	(ASTM D-412)
100% Modulus (psi)**:** 250	(ASTM D-412)
Elongation @ Break: 750%	(ASTM D-412)
Die C Tear Strength (pli)**:** 200	(ASTM D-624)
Shrinkage: < .001 in./in.	(ASTM D-2566)

* All values measured after 7 days at 73°F/23°C

In all cases, the sealing agent should be applied and allowed to completely dry prior to applying a release agent.

Non-Porous Surfaces - Metal, glass, hard plastics, sulfur free clays, etc. require only a release agent.

Applying A Release Agent - A release agent is necessary to facilitate demolding when casting into or over most surfaces. Use a release agent made specifically for mold making (Universal® Mold Release available from Smooth-On). A liberal coat of release agent should be applied onto all surfaces that will contact the rubber.

IMPORTANT: To ensure thorough coverage, lightly brush the release agent with a soft brush over all surfaces of the model. Follow with a light mist coating and let the release agent dry for 30 minutes.

Because no two applications are quite the same, a small test application to determine suitability for your project is recommended if performance of this material is in question.

MEASURING & MIXING...

Liquid urethanes are **moisture sensitive** and will absorb atmospheric moisture. Mixing tools and containers should be clean and made of metal or plastic.

IMPORTANT: Shelf life of product is drastically reduced after opening. Immediately replacing the lids on containers after dispensing product will prolong the shelf life of the unused product. **XTEND-IT® Dry Gas Blanket** (available from Smooth-On) will significantly prolong the shelf life of unused liquid urethane products.

IMPORTANT: Shelf life of product is reduced after opening. Remaining product should be used as soon as possible. Immediately replacing the lids on both containers after dispensing product will help prolong the shelf life of the unused product. **XTEND-IT® Dry Gas Blanket** (available from Smooth-On) will significantly prolong the shelf life of unused liquid urethane products.

Safety First!

The Material Safety Data Sheet for this or any Smooth-On product should be read before using and is available upon request. All Smooth-On products are safe to use with proper handling and precautions. Read and follow directions carefully.

Be careful

Part A is a TDI prepolymer. Vapors, which can be significant if prepolymer is heated or sprayed, may cause lung damage and sensitization. Use only with adequate ventilation. Contact with skin and eyes may cause severe irritation. Flush eyes with water for 15 minutes and seek immediate medical attention. Remove from skin with soap and water. Prepolymers contain trace amounts of TDI which, if ingested, must be considered a potential carcinogen. Refer to the MSDS for this product. Avoid skin contact by wearing long sleeve garments and latex gloves. If skin contact is made, remove immediately with soap and water. If eye contact is made, flush eyes with water for 15 minutes and seek immediate medical attention.

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

IMPORTANT: Pre Mix the Part B before using. After dispensing the required 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 (24 lbs./11 kgs. or more) at one time, we suggest using 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 this product is formulated to minimize air bubbles in the cured rubber, vacuum degassing will further reduce entrapped air. A pressure casting technique using a pressure chamber can yield totally bubble free castings. Contact Smooth-On or your distributor for further information about vacuum degassing or pressure casting.

POURING, CURING & PERFORMANCE...

Pouring - For best results, pour your mixture in a single spot at the lowest point of the containment field. Let the rubber seek its level up and over the model. **A uniform flow will help minimize entrapped air.** The liquid rubber should level off at least 1/2" (1.3 cm) over the highest point of the model surface.

Curing - Allow the mold to cure (at least 16 hours) at room temperature (73°F/23°C) before demolding. Do not cure rubber in temperatures less than 65°F/18°C. Cure time can be reduced with mild heat or by adding Smooth-On "Kick-It®" Cure Accelerator.

Post Curing - After rubber has cured at room temperature, heating the rubber to 150°F (65°C) for 4 to 8 hours will increase physical properties and performance.

Using The Mold - If using as a mold material, a release agent should be applied to the mold before each casting. The type of release agent to use depends on the material being cast. The proper release agent for **wax, liquid rubber or thermosetting materials** (i.e. Smooth-On liquid plastics) is a spray release made specifically for mold making (available from Smooth-On or your distributor). Prior to casting **gypsum plaster materials,** sponge the mold with a soap solution for better plaster flow and easy release. **In & Out® II Water Based Release Concentrate** (available from Smooth-On) is recommended for releasing abrasive materials like **concrete**.

Performance & Storage - Fully cured rubber is tough, durable and will perform if properly used and stored. The physical life of the rubber depends on how you use it. Contact Smooth-On directly with questions about this material relative to your application.

Call Us Anytime With Questions About Your Application.

Toll-free: **(800) 762-0744** Fax: **(610) 252-6200**

The new **www.smooth-on.com** is loaded with information about mold making, casting and more.