PRODUCT BULLETIN

pathwaypolymers

POR-A-MOLD® 2070

Applications

Por-A-Mold 2070 is used to make molds of detailed masters that do not contain undercuts. Some of the most common uses of Por-A-Mold 2070 are diaphragms, dust boots, gaskets, liners, flexible molds, foundry patterns, wear pads, and concrete stamp pads.

Characteristics

Por-A-Mold 2070 is a two-part polyurethane molding system. Por-A-Mold 2070 is mixed one-to-one by volume and cures at room temperature to a hard (shore A70±2), dark amber rubber.

Instructions for Use

Prepare Master and Mold Housing

First, clean and dry your master thoroughly. If the master has a porous surface (clay, concrete, plaster, etc.) or is made of sulfur-based clay, you must seal it. You can use polyurethane varnish, polyurethane sealant, or paste wax to seal your master. Next, anchor your master and seal the base so that mold material does not leak under your master. A hot glue gun works to anchor and seal the base at the same time. Also, you should seal all of your mold housing connections with sulfur-free clay or hot glue. Then, apply an appropriate release agent (we recommend Synlube 531) to the master and interior of the mold housing. Apply release agent sparingly, while coating all surfaces of the master. Too much release agent may cover the details of the master. You should allow the release agent to dry approximately 10 minutes before you pour your mold.

Measure Curative and Prepolymer

Note: Por-A-Mold 2070 provides approximately 15 minutes for you to mix and pour the mold before it begins to gel.
Make sure that curative and prepolymer are room temperature before mixing them. Please note that in extremely cold or hot weather, it may take up to 24 hours for the curative and prepolymer to reach room temperature. Stir or shake the curative to redistribute the pigment. Then, using two clean, dry, plastic containers of equal size, measure equal amounts of the curative (part A) and the prepolymer (part B).

Mix Curative and Prepolymer

After you prepare the master and mold housing and measure the curative and prepolymer, you are ready to pour the curative and prepolymer into another clean, dry, plastic container. Scrape the curative and prepolymer containers to move all of the material into the mixing container. Combine the two ingredients for several minutes until no color striations are visible. Be sure to scrape the sides and bottom of the mixing container while combining the two ingredients. You must mix the curative and prepolymer completely so that Por-A-Mold 2070 will cure correctly. If air bubbles form during mixing, you should degas the mixture to remove them.

Pour Mold

To ensure that no air bubbles form over the details of you master, you may brush a thin base coat of Por-A-Mold 2070 onto the master and then pour the rest of the mold material. The best way to pour a mold is to tilt your mold housing slightly and pour into one spot at the corner of the mold. Pour slowly so that any air bubbles that may have formed during mixing can break over the lip of the container. Do not scrape the sides or bottom of the container as the material that clings to these areas may not be completely mixed (partially mixed Por-A-Mold 2070 will *not* cure correctly). When you have finished pouring the mold, you may spray release agent on the top of 2070 to break any air bubbles that have risen.

Demold and Cure Mold

Once you have poured your mold, allow the mold to cure 16 hours before demolding. Your mold should reach its ultimate strength and hardness in 2 to 3 days.

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Properties

Curative (Part A) and Prepolymer (Part B)

The following table explains the properties of the curative and prepolymer of Por-A-Mold 2070 before they have been mixed.

Property	Curative (Part A)	Prepolymer (Part B)
Color	Opaque Red	Light Amber
Mix Ratio by Weight	96	100
Mix Ratio by Volume	1	1
Shelf Life	6 Months	6 Months
Specific Gravity @ 75° F (24° C)	1.046	1.088
Viscosity @ 75° F (24° C), CPS	1750	3560

Mixed Curative (Part A) and Prepolymer (Part B)

The following is a summary of the properties of Por-A-Mold 2070 after the curative and prepolymer have been mixed.

Property	Time	Temperature
Mix Time	1-3 Minutes	75° F (24° C)
Pot Life	10 Minutes	75° F (24° C)
Gel Time	Approx. 15 Minutes	75° F (24° C)
Cure Time	24 Hours	75° F (24° C)
Demold Time	16 Hours	75° F (24° C)

Cured Por-A-Mold 2070

The following table explains the properties of Por-A-Mold 2070 after it has cured.

Property	Cured Product
Color	Dark Amber
Elongation, %	900
Modulus, PSI, 100% 200% 300%	402 528 716
Rebound, Bashore, %	43
Reversion Temperature	270° F (132° C)
Shore Hardness	A70±2
Specific Gravity	1.06
Tear, Die C, PLI	264
Tear, Split, PLI	59
Ultimate Tensile, PSI	1468

Storage and Handling

Keep the Por-A-Mold 2070 container tightly closed when not in use and store at temperatures between 50–77° F (10–25° C). Do not expose the curative or prepolymer to moisture! If moisture contaminates Por-A-Mold 2070, it will not cure. If these storage requirements are met, Por-A-Mold 2070 carries a shelf life warranty of six months.

Be sure to read the *Material Safety Data Sheet* that comes with Por-A-Mold 2070. When working with this material please observe the following safety precautions.

- Wear safety glasses, chemical-resistant rubber or plastic gloves, and an apron.
- Avoid prolonged or repeated contact with skin.
- In the case of skin contact, wipe affected area with isopropyl alcohol, followed by soap and water.
- In the case of eye contact, flush eyes with water for 15 minutes and consult a physician.
- If swallowed, drink one to two glasses of water and seek medical attention immediately.