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Urethane Mold Making Resin System 65 A

MMR-1365 A/B

Product Data Sheet

Product Description and Applications

MMR-1365 A/B—65 A Shore is a liquid, two-component, 100% solid Urethane Casting Elastomer that provides firm rubber part with excellent tear strength and abrasion resistance. Its simple 1 to 1 mix ratio and low viscosity allows for easy processing. This firm, yet flexible, urethane system is used for texture and concrete stamp pads, firm rubber molds and parts, concrete form liners, prototype rubber parts or any application where a firm rubber part is required.

Available Sizes: Gal Kit (16 lbs) 5 Gal Kit (80 lbs)

Unique Characteristics

- Excellent High Tear and Elongation Properties
- Easy to Process with 1-1 Mix Ratio
- Rapid Mold Cycle

TYPICAL PHYSICAL PROPERTIES

(For Components)	Component A	Component B
Viscosity (cps):	2000	1000
Mix Ratio, by weight:	1	1
Color:	Clear Yellow	Olive

(For Cured Material)	Test Method	Results
Hardness Shore A:		65
Tensile Strength (psi):	ASTM D-638	1124
Elongation %:	ASTM D-638	880
Tear resistance (pli):	ASTM D-624	210
Specific Gravity:		1.04
Coverage:		27 in ³ /lb

REACTIVITY DATA

Working Time:	15-20 minutes
Demold Time:	3 to 4 hrs
Cure Time:	24-48 hrs

Preparation of Master

MMR-1365 A/B will adhere to most surfaces. A proper mold release must be used on all surfaces—a *silicone* or *wax mold release* is recommended. Wood, plaster, stone, pottery, masonry, or any porous surface must be sealed with lacquer or clear shellac prior to applying release. Part All Film or shellac is suitable for sulfur & water based clays. Allow 24 hours to dry before preparing master with mold release. Plaster masters can release air when pouring larger molds due to some heat generated. Venting the base of your master by drilling several 1/4" holes will release the air downward to avoid air release into mold cavity. Urethane RTV cures to a flexible rubber in above cure times.

Mixing

Before adding A to B, Part B should be stirred or shaken thoroughly to assure that any separated material is remixed. Select a clean, dry plastic container for mixing. Avoid using wood or paper products, which could cause cure problems. Weigh the proper ratio A to B and mix well, scraping sides and bottom of mixing container to ensure a thorough mix. Avoid whipping in air while mixing. An airless Jiffy Mixer blade works well for large batch mixing.

Curing

Pour mixture over master slowly allowing material to fill void and push air out of cavity. A vacuum chamber can be used to remove excess air bubbles before pouring, but usually not necessary. After mixture is poured a light mist of *silicone mold release* can be sprayed on top surface to break tension bubbles. MMR-1365 A/B will cure to solid rubber at above

cure time. Urethane rubber that is colder than 75°F will cure slower. During colder weather material may be heated in a hot water bath (place container in plastic bags first) and the master model should be warmed. Accelerated cures can be reached by heating the mold and material at 100-150°F for 4 to 6 hrs. Cold weather or off-ratio material can produce unacceptable rubber results.

Using Mold

The use of a release aids demolding and is recommended prior to each casting. Release selection is based on material that is to be cast. **Industrial grade petroleum jelly 15% in OMS** is recommended for casting concrete. No release necessary for wax or plaster products. Avoid using other solvent based release agents which can cause mold swelling and distortion.

Storage/Shelf Life

A and B components must be stored in their original, unopened containers at temperatures between 65F and 85F. Shelf life of materials when kept in unopened sealed containers, at the recommended storage conditions, is 6 months. Containers should not be opened until ready for use. Once containers are opened, material should be used in a short time period. Pre-test any aged material before using. Molds or parts should be cleaned with a soap solution and completely dried prior to storing them in a dry, cool environment. Avoid stacking or exposing them to environmental elements—UV and moisture.

Handling and Safety

Use proper equipment—gloves, glasses and apron when using materials. Avoid direct contact with skin and eyes. If skin contact occurs, clean area with waterless hand cleaner or isopropyl alcohol. For eye contact, flush eye with water for 15 minutes and call physician. Use materials under adequate ventilation. **See MSDS/SDS for further information.*

THE INFORMATION AND DATA CONTAINED HEREIN ARE BASED ON INFORMATION WE BELIEVE RELIABLE. EACH USER OF THE MATERIAL SHOULD THOROUGHLY TEST ANY APPLICATION AND INDEPENDENTLY CONCLUDE SATISFACTORY PERFORMANCE BEFORE COMMERCIALIZING. SUGGESTIONS OF USES SHOULD NOT BE TAKEN AS INDUCEMENTS TO INFRINGE ON ANY PARTICULAR PATENT.