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Brush-On RTV RU-435 TH A/B Product Data Sheet

Product Description and Applications

RU-435 TH A/B—35 A Shore is a two-component, 100% solids Urethane Elastomer RTV that becomes thixotropic within minutes for creating thin, brush-on bladder molds within hours. Once cured, this urethane RTV provides a strong, durable mold with excellent tear strength. Use to create thin, flexible molds for easier de-molding or use to cut mold cost through minimizing material usage. Applications include mold making for the art, architectural, and foundry industries. Note: A Mother Mold, usually made of plaster, fiberglass or Trowel-On 60 (Thixotropic Plastic), is used to help support thin bladder mold.

Available Sizes: Pint Kit (2 lbs) Qrt Kit (4 lbs) Gal Kit (16 lbs) 5 Gal Kit (80 lbs)

TYPICAL PHYSICAL PROPERTIES

| (For Components) | Component A | Component B |
|---------------------------------|--------------|-------------|
| Viscosity (cps): | 1000 | 1000 |
| Mixed A/B: | 450,000 | |
| Mix Ratio, by weight or volume: | 100 | 100 |
| Color: | Yellow/clear | Gray |

| (For Cured Material) | Test Method | Results |
|-------------------------|-------------|---------|
| Shore A hardness: | | 35 |
| Tensile Strength (psi): | ASTM D-638 | 406 |
| Elongation %: | ASTM D-638 | 695 |
| Tear Resistance (psi): | ASTM D-624 | 85 |

**Samples tested 100 gram mass. Gel time and cure will vary on various size mixes and hotter summer weather will create quicker gels & cures.

REACTIVITY DATA

| | |
|---------------|-----------------|
| Gel Time: | 15 – 20 minutes |
| Recoat Time: | 30 – 60 minutes |
| De-mold Time: | 3-4 hours |
| Full Cure: | 12 Hrs |

Preparation of Master

Urethane elastomers will adhere to most surfaces. A proper mold release must be used on all surfaces-- *MR-150* or *MR515* is recommended. Wood, plaster, stone, pottery, masonry, or any porous surface must be sealed with lacquer or clear shellac prior to applying release. PartAll Film #10 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 generation from mold RTV.

Mixing and Curing

Before adding A to B, urethane B should be stirred or shaken for 1 minute to assure that any separated material is remixed. Select a clean, dry container for mixing. Avoid using wood or paper products, which could cause cure problems. Mix A & B materials by proper weight or volume, taking care not to whip excess air into mixture. A quick vacuum opening and closing exhaust valve will press out some air. Prepare master with a proper release agent, *ER-2300* or *MR-150*, then apply a thin surface coat of *RU 435th* to capture the detail on the first coat. Light air pressure (hair dryer) can be used to work out air bubbles on surface. Mix only the amount of material needed over a 10-minute application. Many small batches can be mixed and applied as long as you are adding to a sticky surface—within 30-60 minutes. A mold can be built-up in 3-4 coats. Reinforcing with fabric can be applied in areas that may rip and tear, usually along the edge of a mold—avoid reinforcing those areas where the rubber mold needs to be stretched.

Urethane RTV 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 pre-determined time. Cold weather or off-ratio material can result in unacceptable rubber results.

To Build Wall Thickness

Rapidly increasing the mold's wall thickness can easily be obtained by mixing in a powder- *PE Mini Fibers*. After applying the First coat, DETAIL COAT (Unfilled RTV), various ratios of additional powder, 5% to 10%, can be added to RU 435 TH A/B and used to achieve different thickness and flow control. This thickened mix can be troweled or buttered on to the surface-----two coats can be applied within an hour. A mold release should be used to separate the mother mold from rubber mold.

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. **MR-100-50** is recommended for casting concrete. No release necessary for wax or plaster products.

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.