SILPAK RU-480

Liquid Rubber—Urethane RTV

RU-480 A/B—80 A Shore is a liquid, two-component, Urethane Elastomer RTV that is easily processed. This system provides a firm, semi-flexible, durable and abrasion resistant rubber compound. Used for a variety of applications including molds, concrete texture stamps and form liners, and rubber parts. Molds are used to cast concrete, wax, and plaster parts. Also makes molds that are compatible for casting Silicone Platinum RTV.

Features

- Easy to Process with 2 to 1 Mix Ratio
- Excellent Strength Properties
- Dimensionally Stable—Minimal Shrinkage
- Abrasion resistant for long mold life

Applications

Molds are used to cast concrete, wax, and plaster parts. Also makes molds that are compatible for casting Silicone Platinum RTV. Use for making molds or rubber parts. Molds are used to cast:

- Making Molds
- Rubber parts
- Concrete Texture stamps and form liners

Physical and Handling Properties

Property	Typical Value
Cured Color	Yellow/Translucent
Mix Ratio, by weight	2A:1B
Initial Mixed Viscosity, at 77°F, cP	5,000
Shore Harness	A80
Pour Time	20 min.
Demold Time at 73°F	16 hrs.
Specific Volume (in^3/lb)	26
Specific Gravity	1.07
Tensile Strength, psi	800
Elongation, %	550
Die C Tear Strength (pli)	175

Values listed above are typical and not intended for use in specifications.

Proper Use and Safety

Read all instructions and safety data sheets prior to use. Consult safety data sheets for all recommended safety precautions.

Preparation of Master

Urethane RTVs will adhere to most surfaces. A proper mold release must be used on all surfaces—***MR-150*** or ***ER-2300*** 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. Venting the base of your master by drilling several ¼" 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

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 isn't usually required. After mixture is poured a light mist of ***ER-2300*** can be sprayed on top of the surface to break tension bubbles. 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.

Using Mold

Mold release is required when using Urethane RTV as a casting material because of their innate adhesive properties. For epoxy, polyester, and properly dried and sealed plaster molds use release agent—***ER-2300 or MR 150*** before each casting***.*** If using Silicone RTV Rubber molds, ***Platinum Based Silicone*** is recommended. Avoid using Tin Based Silicone RTVs, which may cause unsatisfactory results, i.e. tackiness or gumminess on rubber part's surface. To expedite cure, especially for thin section parts under ¼", post cure part @ 100F for 1-2 hours.

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.