

# SILPAK, Inc

470 E. BONITA AVE. POMONA, CA 91767  
PH (909) 625-0056 [WWW.SILPAK.COM](http://WWW.SILPAK.COM) FX (909) 625-0082

## Urethane RTV RU-485 A/B & RU-491 A/B Product Data Sheet

### Product Description and Applications

These are two-component, high performance, 100% solids Urethane Elastomers developed for their toughness and ease of processing. Applications include automotive and concrete tooling, rapid prototyping, Special FX, and any application where high resiliency, durability, and a firm rubber are required.

Available Sizes: Quart Kit Gal Kit 5 Gal Kit

### Unique Characteristics

- Extreme Durability
- Easy to Process
- Long Work Time

### TYPICAL PHYSICAL PROPERTIES:

#### (For Liquid Material)

	<u>RU-485 A/B</u>	<u>RU-491 A/B</u>
Mixed Viscosity (cps):	6000	1600
Mix Ratio, by weight:	100 A/ 50 B	100 A/ 20 B
Color Mixed:	Tan	Translucent Amber

#### (For Cured Material)

	Test Method	Results
Shore A Hardness:	90A	45D, 95A
Tensile Strength (psi): ASTM D-638	1975	1425
Elongation %:	770	325
Tear Resistance (ppi): ASTM D-624	350	375
Specific Gravity:	1.07	1.08
Coverage:	26 in <sup>3</sup> /lb	26 in <sup>3</sup> /lb

### REACTIVITY DATA

Gel Time:	15-20 minutes	10 minute
De-Mold Time:	10-12 hours	1.5- 2 hours
Full Cure:	16 hours	8-10 hours

\*\*The addition of CS-83 Catalyst is used to create a quicker de-mold time where needed. Add 1% for 1-2 hour demold time.

### Preparation of Master

Urethane elastomers 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 generated. 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. These products are safe to use as directed, check MSDS for safety information.

### Mixing

Before adding A to B, urethane 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 is usually not necessary. After mixture is poured a light mist of *ER-2300* can be sprayed on top 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. Cold weather or off-ratio material can produce unacceptable rubber results.

### **Safety Instructions**

A Material Safety Data Sheet (MSDS) is sent with the original shipment and available upon request. In addition, safety instructions are attached to every container of product. Upon receipt of shipment and before the containers are opened, the safety instructions should be read and understood by all personnel who will come in to contact with the materials. Appropriate storage and hand handling conditions should be observed. If the safety instructions are lost or otherwise not available, please contact for a replacement.

### **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. Avoid using 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.