

Poly 81 Series RTV Liquid Rubbers

Tough, Durable, Polyurethane Rubbers

DESCRIPTION: Use Poly 81 Series rubbers to make firm molds, mold facings, stamping tools, industrial parts, rollers, gaskets, mold shells, bumpers or pads. Poly 81 Series rubbers consist of liquid Part A and Part B that, after mixing, cure at room temperature to tough, durable rubbers. They offer low sensitivity to moisture, and low viscosity for easy vacuuming, if necessary.

MODEL PREPARATION: Porous models, such as wood or plaster, must be sealed with wax, soap (for plaster only), petroleum jelly, paint, PVA or shellac. Sealed or non-porous models must be coated with Pol-Ease® 2300 Release Agent or wax and allowed to dry. If a model is sealed with shellac, it must be thoroughly coated with release agent since Poly 81 Series rubbers bond tenaciously to shellac. If there is any question about the compatibility between the rubber and the prepared model surface, perform a test cure on an identical surface to determine that complete curing and good release is obtained.

Porous models must be vented from beneath to prevent trapped air from forming bubbles in the rubber.

MIXING AND CURING: Parts A and B are clear liquids. The color of Part B may vary, but it has no effect on cured rubber properties. Weigh Part B into a clean metal or plastic mixing container. Then weigh the proper amount of Part A into the same container. Mix thoroughly. Hand mixing with a Poly Paddle is best to avoid mixing air into the rubber. While mixing, scrape the sides and bottom several times to ensure thorough mixing. Vacuum degassing helps to provide bubble-free molds but is usually not necessary. Pour the rubber as soon as it is thoroughly mixed to obtain best flow and air bubble release.

Allow to cure at room temperature, 77°F (25°C). Ultimate properties are reached in about seven days, but molds may be used with care after curing for 24 to 48 hours. Heat accelerates the cure

FEATURES

- Firm rubbers with Shore A90 or D45
- Easy-to-use formulations
- Reproduce finest details
- Make tough, long-lasting molds, tools and parts

-- low temperatures slow the cure. Avoid curing in areas where the temperature is below 60°F (15°C).

Both Parts A and B react with atmospheric moisture and, therefore, should be used up as soon as possible after opening. After opening, but before resealing, spray Poly Purge™ Dry Gas into containers to displace moist air and extend storage life of the products.

USING THE MOLD: Usually no release agent is necessary when casting plaster or molten wax in Poly 81 Series molds. Sponging, dipping or spraying the mold with Pol-Ease Mold Rinse before pouring plaster in the mold reduces air bubbles in the plaster and aids release. When casting resins, lightly spray the mold with Pol-Ease 2300 Release Agent. When casting concrete, Pol-Ease 2650 or 2601 Release Agents offer outstanding performance.

Poly 81 Series molds will last many years if stored undistorted on a flat surface in a cool, dry location out of direct sunlight.

CLEAN UP: Tools should be wiped clean before the rubber cures. Denatured ethanol is a good cleaning solvent, but is highly flammable and must be handled with extreme caution. Work surfaces can be waxed or coated with Pol-Ease 2300 Release Agent so that cured rubber can be removed.

PHYSICAL PROPERTIES

	<u>81-90</u>	<u>81-D45</u>
Mix Ratio, By Weight	100A:40B	100A:20B
Hardness (Shore A/D)	A90	D45
Pour Time (min)	23	19
Demold Time (hr)	16	16
Color	Yellow	Varies
Mixed Viscosity (cP)	2,000	1,600
Specific Volume (in ³ /lb)	26.6	26.4

PACKAGING

Product	Unit Weight (lb)	Net Weight (lb)	
		A	B
Poly 81-90 (100A:40B)	11.2	8.0	3.2
	56.0	40.0	16.0
	280.0	200.0	80.0
	630	450	180
Poly 81-D45 (100A:20B)	9.6	8.0	1.6
	48.0	40.0	8.0
	192.0	160.0	32.0
	540	450	90

SAFETY: Before use, read product labels and Material Safety Safety Sheets. Follow safety precautions and directions. Contact with uncured products may cause eye, skin and respiratory irritation and dermal and/or respiratory sensitization. Avoid contact with skin and eyes. Use with adequate ventilation. Poly 81-Series rubbers are not to be used where food or body contact may occur. Poly 81-Series mold rubbers burn readily when ignited.

STORAGE LIFE: At least twelve months stored in unopened containers at room temperature (60-90°F).

DISCLAIMER: The information in this bulletin and otherwise provided by Polytek® is considered accurate. However, no warranty is expressed or implied regarding the accuracy of the data, the results to be obtained by the use thereof, or that any such use will not infringe any patent. Before using, the user shall determine the suitability of the product for the intended use and user assumes all risk and liability whatsoever in connection therewith.

ACCESSORIES

PolyColors

Red, Blue, Green, Yellow, Brown & Black
4 oz (0.25 lb), 1 pt (1.0 lb)

Pol-Ease® 2300 Release Agent

12-oz can, case of 12 cans

Pol-Ease® 2500 Release Agent

13-oz can, case of 12 cans

Pol-Ease® 2601 Release Agent

1 qt (2 lb), 5 gal (40 lb), Drum (450 lb)

Pol-Ease® 2650 Release Agent

1 qt (1.5 lb), 5 gal (35 lb), Drum (375 lb)

Pol-Ease® Mold Rinse

5 gal (40 lb)

Poly PVA Solution (Green or Clear)

1 qt (2 lb), 5 gal (40 lb)

Poly Purge™ Aerosol Dry Gas

10-oz can, case of 12 cans