PoYo™ Putty 30 & *40*

Mix & Apply-By-Hand Mold Putty

PRODUCT OVERVIEW

PoYo™ Putty 30 & 40 are new two-component mold making silicone (tin catalyst) that can be mixed and applied "on site" – directly to almost any model. PoYo™ Putty will hold any vertical surface and capture even the finest detail - perfect for making strong rubber molds that can be used within minutes. **Use Less – Do More:** Because PoYo™ is applied as a thin layer, less material is used, saving you money. Molds are also lightweight, making them easier to handle.

Pot life and cure time can be adjusted (faster or slower) by varying the amount of Part B catalyst.
User Friendly - PoYo™ Putty can be measured and mixed by volume (no scale necessary). It will stick to itself and other silicone rubbers, giving the user many application options or for using as a silicone rubber repair material.

PoYo™ Putty has been used to make molds of valuable antiques and archeological models and can be used to make fast molds of sculpture, prototypes, candles, picture frames, coins, etc. You can cast wax, gypsum and a variety of resins into PoYo™ Putty molds.

TECHNICAL OVERVIEW

Key Values: ***~Mixing Ratio:*** 100A : 6 B by weight or 20A : 1B by volume ***~Shore A Hardness:*** 30 or 40 respectively
~ Pot Life: 3-5 minutes ***~Cure Time/Demold:*** 30 minutes ***~Color:*** Light Pink

Properties	Viscosity	G/CC	Cu. In./Lb.	Tensile Strength	Mix Ratio	
Part A	-	-	-	-	100 pbw	20 pbv
Part B	-	-	-	-	6 pbw	1 pbv
Mixed	Putty	1.30	21.25	450 psi	-	

Elongation At Break . . . 250%
Die B Tear Strength . . . 85 pli
100 % Modulus . . . 120 psi
Shrinkage . . . . . 0.003in./in.
Useful temperature range: -65°F to 400°F (-19°C to 205°C)

PREPARATION TIPS

Applying A Sealer . . . PoYo™ Putty silicone rubber may be inhibited by sulfur-based clays resulting in tackiness at the pattern interface. If compatibility between the rubber and the surface is a concern, a small-scale test is recommended. Apply a small amount of rubber onto a non-critical area of the pattern. Inhibition has occurred if the rubber is gummy or uncured after the recommended cure time has passed. To prevent inhibition, a "barrier coat" of clear acrylic lacquer sprayed directly onto the pattern is usually effective.

Wear Gloves - This product is mixed by hand and wearing gloves is required. Wear either vinyl or non-powdered latex gloves. PoYo™ Putty will stick to powdered latex gloves.

Measuring . . . Materials should be stored and used at room temperature (72° F / 23°C).
PoYo Putty comes as two parts. Part A is thick putty and Part B has the consistency of toothpaste.

Hint: Pre-kneading Part A (working in your hands for one minute prior to mixing with Part B) will make the two components easier to mix.

Measuring By Weight: Using an accurate gram scale, weight out 100 parts A – level by hand into bottom of container. Squeeze 6 parts B into center of flattened Part A. Follow mixing directions below.

Measuring By Volume ***Mixing***

Measuring By Volume – The by volume mix ratio is about 20A:1B.
Visual Approach: Measure an amount of Part A approximately equal to the size of a golf ball. Flatten out into the palm of your hand, creating an indentation. Squeeze an amount approximately equal to the size of a small marble into the center of the Part A indentation. (Hint: It is better to start out with less Part B and add more if needed, rather than too much Part B).

Mixing

Fold the Part A around the Part B and knead aggressively with thumb and forefinger. Continue folding until a uniform light-pink color is attained. Make sure that all color streaks have been eliminated.

Applying ***Curing*** ***Applying Support Shell*** ***Casting***

Applying the Rubber . . . PoYo$_{tm}$ can be applied directly onto almost any model surface (see preparation above) except skin. After mixing Parts A & B as directed above, flatten mixture and gently press into model detail. Spread evenly over model surface, maintaining about a 3/8" (1 cm) thickness. Mix and apply more as needed, connecting and smoothing seams of different batches together.

Be Careful - If your original is made of modeling clay or other soft material, pressing putty onto model surface may affect model detail. You may want to first apply a thin "print coat" using Mold Max silicone and back up using PoYo$_{tm}$ Putty.

Curing . . . Allow the mold to cure 20 minutes at room temperature (77°F/25°C) before removing from model surface. Adding more Part B can reduce cure time. Adding less Part B will give you a longer working time and lengthen demold time. If applying a support shell, apply the shell before removing the rubber mold from the model.

Applying A Support Shell – Usually, PoYo$_{tm}$ Putty molds will be too thin to support themselves during casting. A support shell made of Plasti-Paste$_{tm}$ or Matrix NEO$_{tm}$ and chopped fiber can be applied over the mold surface.

Using The Mold . . . When first made, silicone rubber molds exhibit natural release characteristics. Depending on what is being cast into the mold, mold lubricity may be depleted over time and parts will begin to stick. No release agent is necessary when casting wax or gypsum. Applying a release agent such as Universal Mold Release (available from Smooth-On) prior to casting polyester, polyurethane and epoxy resins is recommended to prevent mold degradation.

Note: Part B (packaged in the toothpaste tubes) will expand causing the tubes to swell somewhat. This is normal and has no affect on product performance.

The Material Safety Data Sheet (MSDS) for this or any Smooth-On product should be read prior to use and is available upon request from Smooth-On. All Smooth-On products are safe to use if directions are read and followed carefully. **Be careful.** Use only with adequate ventilation. Contact with skin and eyes may cause irritation. Flush eyes with water for 15 minutes and seek immediate medical attention. Remove from skin with waterless hand cleaner followed by soap and water. **Important:** The information contained in this bulletin is considered accurate. However, no warranty is expressed or implied regarding the accuracy of the data, the results to be obtained from the use thereof, or that any such use will not infringe upon a patent. User shall determine the suitability of the product for the intended application and assume all risk and liability whatsoever in connection therewith. 06/02

Tel. (800) 762-0744 Fax: (610) 252-6200 Website: www.smooth-on.com