

PlatSil® Gel-OO & Gel-10

Soft, Translucent, RTV Liquid Silicone Rubbers

For Theatrical Prosthetics, Lifecasting & Mold Making Applications

DESCRIPTION: PlatSil® Gel-OO and Gel-10 are 1A:1B (by weight or volume) platinum-cured silicone systems with 6-minute working and 30-minute demold time. PlatSil Gel-OO cures to a Shore OO hardness of 30; while Gel-10 cures to a Shore A10 hardness. Use PlatSil Gels as mold rubbers, to create prosthetic appliances, or for lifecasting. Polytek offers an array of accessory products that can be used independently or in concert to increase working time; accelerate cure time; thicken the mix for brushing/layering; thin the mix for easier pouring or for softening; or “deaden” the rubber to soften and eliminate the snappy, synthetic look and feel of ordinary silicone rubbers. Deadened PlatSil Gels can be made to look, feel and move like all types of living tissue. Unlike silicone fluid, Smith’s Theatrical Prosthetic Deadener does not leach from the cured rubber/appliance, so bonding and use are far easier.

MIXING AND CURING: Carefully weigh equal amounts of Parts A and B into a clean container. Mix thoroughly, scraping sides and bottom of the container. Normal mixes gel in approximately 6 minutes at room temperature; faster if warm, slower if cold. The mix should be quickly placed over the model or in the mold. Normally, there is not adequate time for vacuum (unless retarder is used), but pressure casting can be used to eliminate bubbles.

MOLD MAKING: Seal porous models (i.e., wood or plaster) with wax, petroleum jelly, lacquer or paint to prevent penetration of the rubber into the pores of the material. The model and other surfaces that contact the liquid rubber should be coated lightly with Pol-Ease® 2350 Release Agent or sprayed with Pol-Ease 2500 Release Agent. Pol-Ease 2350 is both a sealer and release

FEATURES

- Soft, translucent, silicone rubbers
- Add “Deadener” to create ultra-realistic prosthetic appliances
- Fast 30-minute demold with 6-minute working time
- PlatSil® 71R Retarder slows the cure
- PlatSil® 71/73X Accelerator speeds the cure
- PlatThix thickens the mix to a brushable paste
- Bonds to Poly Plastics

agent and must be allowed to dry before applying liquid rubber. Pol-Ease 2500 is an aerosol spray and does not need to dry before applying liquid rubber. *Do not use silicone-based release agents (i.e., Pol-Ease 2300) on surfaces that contact liquid PlatSil rubbers since inhibition and/or adhesion may occur. In addition, modeling clays containing sulfur may inhibit curing.* Contamination with soaps, amines, sulfur, tin compounds, polyester resins and some silicone rubbers can inhibit surface cure. PlatSil rubber usually bonds to cured silicone rubbers unless a parting agent (i.e., Pol-Ease 2350 or 2500 Release Agent) is used. If in doubt, perform a test cure on a similar surface.

Porous models should be vented from beneath to prevent trapped air from causing bubbles in the rubber.

For best results, the PlatSil Gel mold should be allowed to cure for at least 1 hour before it is put into use. No release agent is necessary for casting most materials in properly cured PlatSil Gels. For longer mold life when casting epoxy, polyurethane or polyester resins, a barrier coat or release agent is recommended.

MAKING THEATRICAL PROSTHETIC APPLIANCES: For the purpose of prosthetic and simulated tissue/skin applications, use Gel-OO, Gel-10, or mix the two products for varied hardnesses. If even softer rubber is required, add Smith’s Theatrical Prosthetic Deadener. Adding 30% by weight of Deadener typically results in a non-paintable, sticky cured gel. The stickiness can be eliminated with powder (once powdered, the stickiness cannot be brought back) or by painting a thin barrier coat of straight PlatSil Gel over the sticky surface. PlatSil Gel applied as a barrier mimics the surface tension of skin. Up to 250% by weight Deadener can be added to the mixed weight of Gel-10 to create a super-gel. Less Deadener is required when using Gel-OO.

PlatSil Gels can be painted or pigmented with a variety of silicone-based pigments such as SiliColors. Flocking can also be used to achieve tissue-like appearances.

PHYSICAL PROPERTIES	Gel-OO	Gel-10
Mix Ratio, By Weight or Volume	1A:1B	1A:1B
Hardness (Shore)	OO-30	A-10
Pour Time (minimum)	6 min	6 min
Demold time @ 25°C (77°F)	30 min	30 min
Color	milky white	milky white
Mixed Viscosity (cP)	15,000 cP	15,000 cP
Specific Volume (in³/lb)	25	25
Specific Gravity @ 25°C (77°F)	1.1	1.1
Shrinkage Upon Cure	Nil	Nil

PlatSil Gels can be stippled lightly onto a prepared mold surface (i.e., released with Pol-Ease 2350 allowed to dry, or Pol-Ease 2500), and then layered with deadened PlatSil Gel. The deadened mix can be injected by syringe into the mold cavity. Using injection, one can create ultra-thin edges that are easily feathered away when applied to the subject.

The sticky back surface of the prosthetic appliance permits direct, adhesive-free application to the subject. The appliance can be carefully removed, covered with clear, clean plastic wrap and reused. These prosthetics can also be adhered to the skin using uncured PlatSil Gel as a glue (e.g., apply directly to the skin or back of the prosthetic).

LIFECASTING: PlatSil Gels can be used to make molds of hands, feet, faces and other body parts. Avoid PlatSil Gel contact with eyes, nose, mouth or mucous membranes. Perform small-scale patch testing on the subject prior to starting the project to determine that the subject is not unusually sensitive or allergic to any of the components. PlatSil Gels can be mixed with PlatThix and 71/73X Accelerator to achieve a brushable mix with a suitable demold time. Addition of 4-5% by weight 71/73X results in a demold time of ~10 minutes.

ACCELERATING CURE SPEED: Mix PlatSil 71/73X into Part B before adding Part A to accelerate gel and cure times. Adding 4 to 5% 71/73X to the total mix weight reduces working time to 3 minutes with a ~10-minute demold. Experiment to determine the best level of 71/73X for the application.

RETARDING CURE SPEED: Add PlatSil 71R to Part A prior to mixing with Part B to slow the cure yielding longer working time and longer demold time. Add 71R at 1% of the weight of the total mix (A+B) to roughly double the working time. Add 2% to triple the working time. Add 5% to yield a 60-minute working time with a fast, 120-minute demold time. Never use more than 5%, since the system may not cure at all.

THICKENING FOR BRUSH ON: Thicken PlatSil Gel by adding PlatThix liquid thickener to the mixed Parts A and B. Add 1% PlatThix to the total mix (by weight) for a light-bodied, non-sag gel. Add up to 5% for a thicker mix.

THINNING AND SOFTENING: Add 50 cSt Silicone Fluid to the mixed rubber to thin the mix. Use the fluid sparingly since it leads to some loss of strength, hardness and cure speed. More than 10% fluid addition may exude from the cured rubber. To soften without oil leaching, use Smith's Prosthetic Deadener (see above).

BONDING TO PLASTICS: PlatSil Gel bonds to clean, cured Poly 15-Series Plastics that are less than 24-hours old. Poly 15 Series Plastics bond to PlatSil Gel if poured into the PlatSil Gel while it is still tacky (less than 30-minutes old). Each bonding procedure should be tested to the user's satisfaction prior to actual use in production scale. Remember, release agents on any surface may interfere with good bond development.

SAFETY: Before use, read product labels and Material Safety Safety Sheets. Follow safety precautions and directions. Avoid contact with mucous membranes and eyes. Best method of cleanup is by wiping with disposable paper towels and washing

PACKAGING				
Mix Ratio: 1A:1B (By Volume)				
Total Unit Weight	Containers			
	Volume		Net Weight	
	A	B	A	B
2.0 lb	1 pt	1 pt	1.0 lb	1.0 lb
16.0 lb	1 gal	1 gal	8.0 lb	8.0 lb
80 lb	5 gal	5 gal	40 lb	40 lb

ACCESSORIES
<p>PlatSil® 71R Retarder 4 oz, 1 pt (1 lb), 1 gal (8 lb), 5 gal (40 lb)</p> <p>PlatSil® 71/73X Accelerator 4 oz, 1 pt (1 lb), 1 gal (8 lb)</p> <p>PlatThix For Thickening PlatSil® Rubbers 4 oz, 1 pt (1 lb)</p> <p>Pol-Ease® 2300 Release Agent 12-oz aerosol can, case of 12 cans</p> <p>Pol-Ease® 2350 Release Agent 1 qt (1.5 lb), 5 gal (26 lb)</p> <p>Pol-Ease® 2500 Release Agent 12-oz aerosol can, case of 12 cans</p> <p>SiliColor Silicone Pigments (Black, Blue, Fleshtone, Green, Red, White, Yellow) 4 oz (0.25 lb)</p> <p>Silicone Fluid 50 cSt Grade For Thinning PlatSil® Rubbers 1 qt (2 lb), 1 gal (8 lb), 5 gal (40 lb)</p> <p>Smith's Theatrical Prosthetic Deadener 1 qt (2 lb), 1 gal (8 lb), 5 gal (40 lb)</p>

with waterless hand cleaner, then soap and water. If solvents must be used, denatured ethyl alcohol is best, but should be handled with respect for health and flammability hazards. PlatSil Gels conforms to ASTM D4236.

STORAGE LIFE: At least six months in unopened containers stored at room temperature (60-90°F). Tightly reseal opened containers after use.

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