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TECHNICAL INFORMATION SHEET - PlatSil® 73 SERIES -- RTV SILICONE RUBBERS

Description: PlatSil® 73 Series RTV silicone rubbers are two component, addition-cure, platinum-catalyzed, high tear strength, flexible mold compounds. The 73 Series rubbers are recommended for evaluation as mold materials for polyester, epoxy and polyurethane resins, as well as for waxes and many other materials. PlatSil® 73 Series silicones offer advantages over tin-catalyzed systems in certain applications because on curing they don't shrink, they don't produce alcohol (like tin-catalyzed silicones) which can inhibit urethane castings, and they can be heat accelerated to speed the cure.

PlatSil® 73 Series Highlights:

FEATURES:	BENEFITS:
• Low viscosity	• Excellent detail reproduction. Easy degassing
• Room temperature cured or heat accelerated	• Easy to use, can be cured quickly
• 10A:100B mix ratio	• Can be hand or meter mixed with equipment
• Easy release properties	• Save on release agents
• High tear strength	• Fewer prematurely torn molds
• Good chemical resistance	• Longer mold life
• Low or zero shrinkage	• Better dimensional reproduction
• Range of hardness A60 to A30	• Match hardness to flexibility required

PHYSICAL PROPERTIES:

	PlatSil® 73-29	PlatSil® 73-45	PlatSil® 73-60
Mix ratio, by weight	100B to 10A	100B to 10A	100B to 10A
Hardness, Shore A	30	45	60
Pour time, minimum	45 min.	60 min.	45 min.
Demold time @ 25oC (77oF)	16 hrs.	16 hrs.	16 hrs.
Color	White	Green	Blue
Viscosity, mixed	15,000 cP	35,000 cP	40,000 cP
Cu. inches/pound	25.0	21.3	21.3
Specific gravity	1.10	1.30	1.30
Shrinkage during cure	Nil	Nil	Nil

Mixing Instructions: Weigh Part B and Part A in proper ratio into a clean mixing container. Accurate weighing is very important to obtain the optimum physical properties from the cured rubber. Mix thoroughly, scraping sides and bottom of the container. To assure a bubble-free mold, deaerate the liquid rubber under vacuum at 28 to 29 inches of mercury until the mass of rubber rises and then collapses. Deaerate for additional 2 minutes. When vacuuming, use a mixing container 3 to 4 times larger than the volume of rubber.

CAUTION: PlatSil® 73 Series cure faster at higher temperatures. To reach full hardness in the specified demold time, temperature should be above 77oF. At lower temperatures, more time may be needed to reach full hardness. Curing below 65oF is not recommended. Contamination from amines, sulfur, tin compounds or some RTV silicone rubbers may inhibit surface cure. If in doubt, test compatability by pouring a small quantity of catalyzed material on the surface to be reproduced, allow to cure and observe for proper cure and release.

MODEL PREPARATION: Porous models such as wood or plaster should be sealed to prevent penetration of the rubber into the pores of the material. Wax, petroleum jelly, lacquer, paint and most other coatings are suitable sealers. The sealed or non-porous model and other materials that will contact the rubber should be sprayed or coated with a very light coat of Pol-Ease® 2350 release. Silicone-based release agents (such as Pol-Ease® 2300) are not to be used on surfaces which will contact the liquid PlatSil® product since inhibition and/or adhesion may occur. Porous models should be vented from beneath to prevent trapped air from causing bubbles in the rubber. PlatSil® 73 Series rubbers will bond to cured silicone rubbers unless a parting agent is used. In every case where there is any question about the compatibility between the rubber and the prepared model surface, a test cure should be made on an identical surface to determine that complete curing and good release are obtained.

Molds may be reinforced with a stretchy, open mesh nylon or dacron cloth. The fabric should not be too close to the mold surface or the weave of the cloth may show through to the face of the mold.

USING THE MOLD: No release agent is necessary for casting most materials in PlatSil® 73 Series molds, but for longer mold life with epoxy, polyurethane or polyester resins, a barrier coat or release agent is recommended (such as Pol-Ease® 2300). Properly cured PlatSil® 73 Series molds will last many years without deterioration. PlatSil® 73 Series molds are recommended for casting polyurethane foam such as PolyFoam™R-8. Refer to the PolyFoam™ Technical Bulletin for more information.

SAFETY AND CLEANUP: The Material Safety Data Sheets for each product should be read before use. PlatSil® 73 Series rubbers are safe to use if directions are followed. Best method of cleanup is by wiping with disposable paper towels. If solvents must be used, xylene, toluene, trichloroethane, naptha and denatured alcohol are suitable, but should be handled with respect for volatility and flammability hazards.

Accelerating Cure Speed: PlatSil® 73X can be mixed into Part B prior to adding Part A to accelerate gel time and cure. Weigh and add 73X to Part B and mix. Weigh and add Part A to the Part B/73X mixture and mix thoroughly. Pour over a properly prepared model as soon after mixing as possible. Tightly close containers after use. Demold when tack free. The addition of 1 part 73X per 100 parts of Part B decreases the gel time to ~35 min. The addition of 2 parts decreases the gel time to ~30 min. The addition of 3 parts decreases the gel time to ~25 min. The addition of 73X will soften the cured rubber slightly. Remember, heat accelerates the cure; low temperatures slow the cure.

Thickening for Brush On: All PlatSil® 73 Series rubbers can be thickened with PlatThix liquid thickener or with Cab-O-Sil® for brushing on a skin mold.

Thinning and softening with Silicone Fluid: The very low viscosity 50 cs. Silicone Fluid can be sparingly added to the mixed rubber to thin the mix with some loss of strength, hardness and cure speed as well. More than 10% fluid addition may exude from the cured rubber.

Barrier Coats: A barrier coat (such as Barrier PF) is a fast drying primer sprayed into a silicone mold prior to pouring plastic. When dry, the liquid plastic cures against the barrier coat which comes out of the mold on the plastic resulting in a pre-primed part.Using a barrier coat may extend mold life.

STORAGE LIFE: Six months from date of shipment in unopened containers.

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