

PlatSil® 73 Series Performance Firmly Up Like Never Before

PlatSil® 71 and 73 Series platinum-catalyzed RTV silicone mold rubbers are widely used for model making and prototyping applications because they offer superb release coupled with excellent chemical resistance during repeated urethane casting. In addition, the 71 and 73 Series rubbers do not shrink upon curing, making them suitable for producing the most dimensionally stable castings. Many model-making and prototyping shops have come to rely upon the consistently high performance inherent in the PlatSil® rubbers. The 73 Series silicones are well known for their low viscosities, making them easy to mix, degas, and pour, as well as for their excellent physical properties in the cured state. Since our last newsletter, we have expanded the PlatSil® 73 line to include 73-55, a Shore A-55 silicone mold rubber which extends the upper hardness available in this series.

PlatSil® 73-45, a Shore A-45 platinum silicone, will still be the better choice for casting complex or undercut objects. The tear strength of 73-45 is tremendous, making it ideal for molds with thin rubber edges or a deep draft. Unquestionably, certain prototyping applications require a harder rubber, as when larger, thin-walled parts are to be replicated. PlatSil® 73-55, a Shore A-55 hardness silicone, is practically the perfect product for these instances. The extra rigidity helps keep the mold in shape so that tight tolerances can be uniformly achieved, but the material is not so hard as to



A two-piece poured block mold made of either PlatSil® 73-45 or 73-55 is ideal for most model-making or prototyping applications where thin-walled, dimensionally stable castings are required. Multiple EasyFlo™ 60 castings were made from a die-cast car model.

make demolding unnecessarily strenuous. Most competitive silicone mold rubbers in this hardness range lack tear strength: not so for PlatSil® 73-55, which offers hardness and durability without compromising on tear.

Attention Prototypers and Model Makers!

Order any size PlatSil® or TinSil® Silicone Mold Rubber Trial Unit plus any size Trial Unit of Poly 1512 or 1512X Liquid Plastic and receive an additional 10% off the already low trial prices—with free freight!

See why so many users have come to rely on Polytek® silicone rubbers and why so many consider Poly 1512 to be the highest-performance, toughest plastic available.

As many moldmakers have come to find, there is no one hardness of rubber suitable for all jobs that come through their door. PlatSil® 73-45 and 73-55 have been conveniently designed to share the same Part B (the base component), so just by using a different Part A, the two most-popular-hardness silicone rubbers used by prototype manufacturers can be created. Like all other PlatSil® systems, these rubbers can be heat-accelerated for a rapid demold or accelerated at room temperature with 71/73 Part X, as well as thickened with PlatThix™ for brushed-mold applications.

Mold-life testing has shown that 73-45 and 73-55 stand the test of time by outlasting competitive silicone rubbers, ultimately saving time and money. Don't just take our word for it; call Polytek® at (800) 858-5990 to order your low-cost, freight-free Trial Unit and put these systems to the test!

New Poly 76 Series Polyurethane Mold Rubbers

Polytek®, the first liquid mold rubber manufacturer to offer mercury-free polyurethane rubbers for the moldmaking and casting industry, has made yet another advance. We introduce the Poly 76 Series: a completely new line of polyurethane mold rubbers that contain no mercury, MOCA, MDI, or free isocyanates.

Although more expensive than our best-selling Poly 74 Series products, these new systems may be useful to the small percentage of users who experience respiratory, eye, or skin irritation when working with polyurethane Part As.

Remember, personal protective equipment such as safety glasses and gloves should be worn when using **any polyurethane liquid mold rubber, including products in the Poly 76 Series.**

The 76 Series rubbers range in hardness from Shore A-30 to A-55, with the same mix ratios as the 74 Series of the same hardness. Just like our 74 and 75 Series polyurethane products, Poly 76 Series rubbers can be used for casting all commonly encountered materials such as concrete, plaster, polyurethane, epoxy, and polyester resins, as well as wax. Molds made with 76 Series products can be poured as supplied or brushed using Cab-O-Sil® as a thickener.

**MORE
New Poly 74-45
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ness and flexibility for casting concrete, plaster, and wax. Resins can also be cast with care using the appropriate release agents. For demanding applications, as in high-volume concrete casting, Poly 74-45 provides very good abrasion resistance, resulting in excellent detail reproduction after numerous castings, and at the same time provides ample flexibility, making demolding less strenuous than with lower-elongation rubbers. There will be no mistaking Poly 74-45 molds. We made the color as bright as its performance. The brilliant yellow molds not only are a pleasure to the eye but also provide a background color that allows colorants brushed or sprayed into the mold prior to casting to be clearly visible. Please call us today to learn more about Polytek®'s 1:1 rubbers and plastics and how we can help make your next job a bit easier. Order your low-cost Trial Units today—available on initial orders with free freight!

**MORE
Faster 74/75 Cures
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the same day. This is quite valuable when working on a site mold, especially one that may be outside!

Poly 74/75X can also be used in conjunction with a poured blanket mold technique to eliminate trapped air when pouring around a highly detailed or undercut master. In a recent customer application, 74/75X was used to accelerate Poly 74-30 mixed with Cab-O-Sil® for brushing a single thin coat over one part of a model with difficult detail that consistently trapped air bubbles when poured directly. After the brushed coat gelled (in about 6 to 8

New Poly-Optic® 14R Retarder Extends Pot Life of Poly-Optic® Products

Poly-Optic® 14 Series products are high-performance, water-clear polyurethanes designed for use where optical clarity is needed. Poly-Optic® 1410 and 1420 are nonyellowing, crystal-clear casting plastics used for numerous artistic and industrial applications. Poly-Optic® 14-70 is a Shore A-70 polyurethane rubber used for creating clear, flexible molds or castings.

Through the use of new Poly-Optic® 14R Retarder, the pot life of each of these products can be increased, giving the user more working time to mix, degas, and/or pressure-cast parts.

The extended pot life also creates a lower exotherm upon curing, allowing larger castings to be made without distortion. Depending on the size and mass of the part, post-curing Poly-Optic® 14-70 and 1410 parts in the mold at a minimum of 140°F for 12 to 16 hours may be required. Demolding the part before ultimate properties are reached may cause the part to sag or distort. Poly-Optic® 1420 is a

heat-cured product, and therefore does not require post-curing. The effects of Poly-Optic® 14R, shown in the table below, vary depend-

POT LIFE (IN MINUTES) OF POLY-OPTIC® 14-70, 1410, AND 1420 WITH NEW POLY-OPTIC® 14R

Poly-Optic® 14R as a percentage of Total A/B Mix	0.0%	0.5%	1.0%	1.5%	2.0%	2.5%	3.0%
Poly-Optic® 14-70	15	35 ¹	90 ^{1,2}	180 ^{1,2}	NR ⁴	NR ⁴	NR ⁴
Poly-Optic® 1410	15	20	40 ¹	70 ^{1,2}	100 ^{1,3}	150 ^{1,3}	180 ^{1,3}
Poly-Optic® 1420	15	20	30	40	50	65	90

¹ Castings less than 1/2 inch require post-curing at 140°F or higher for 12 to 16 hours.

² Castings between 1/2 inch and 1 1/2 inches require post-curing at 140°F for 12 to 16 hours or 7 days at room temperature to reach ultimate properties.

³ Castings between 1/2 inch and 4 inches require post-curing at 140°F for 12 to 16 hours or 7 days at room temperature to reach ultimate properties.

⁴ Not recommended.

minutes), the mother mold was assembled around the master. The mold was completed by pouring 74-30 into the shell, taking care not to delaminate the brushed layer. The poured 74-30 bonded perfectly to the brushed portion, and the result was a perfect, bubble-free mold. By using 74/75X in this manner, a high-quality poured mold was created from a most difficult model in just 10 more minutes than normally needed for pouring alone.

So whether it's important to meet a deadline or just to satisfy your need for immediate gratification, Poly 74/75X could be the answer. Poly 74/75X is available in 1-pound and 8-pound units. For additional information, please contact Polytek®'s Technical Support Department at (800) 858-5990.

Moldmaking & Casting Methods & Materials Manual & Catalog

Sixty pages packed with "how to" information, case histories, product data, and hard-to-find accessories.

Latest edition FREE with Trial Unit order. See order form on page 8.

To obtain your copy without a trial order, send a check for \$10 or call and use your credit card.

