



**A LEADING MANUFACTURER OF:**

- Polyurethane Mold Making & Casting Rubbers
- Silicone Mold Making & Casting Rubbers
- Polyurethane Liquid Casting Plastics
- Epoxy Systems
- Latex
- Release Agents & Sealers
- Adhesives

**Our Brands**



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for the most up-to-date  
product offerings and  
specifications.

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## PRIMARY INDUSTRIES



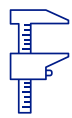
CONCRETE



SCULPTURE &amp; FOUNDRY



SPECIAL EFFECTS



PROTOTYPING



MARINE



POTTING



MILLWORK &amp; ORNAMENTATION



THEMING &amp; DISPLAY



COMPOSITES &amp; TOOLING



SPORTS &amp; RECREATION



CURED IN PLACE PIPE

MEDICAL  
MODELING  
& SIMULATION

AEROSPACE



AUTOMOTIVE

## ABOUT US

Started in 1984, the Industrial Division of Polytek Development Corp. is dedicated to formulating high-performing polymer systems for industrial, construction, entertainment, fine arts and technology sectors. Product lines include: polyurethane elastomers and casting resins, silicones, epoxies, latex, thermoplastic elastomers, and complementary ancillary products. Polytek has many brands offering a variety of standard product options and custom solutions. Our industrial polymer products are marketed under the following brands: Polytek, AeroMarine, Silpak and CPD.



Polytek®'s collective mission is to design and manufacture the highest-performance line of liquid rubbers and related casting products and to provide our customers with unmatched, industry-setting technical support and customer service. In doing so, we are committed to helping our customers realize the greatest value from the use of our products and resources. In the end, our success is defined by yours.

### LOCATION

55 Hilton Street  
Easton, PA 18042

### PHONE

(800) 858-5990  
(610) 559-8620

### EMAIL

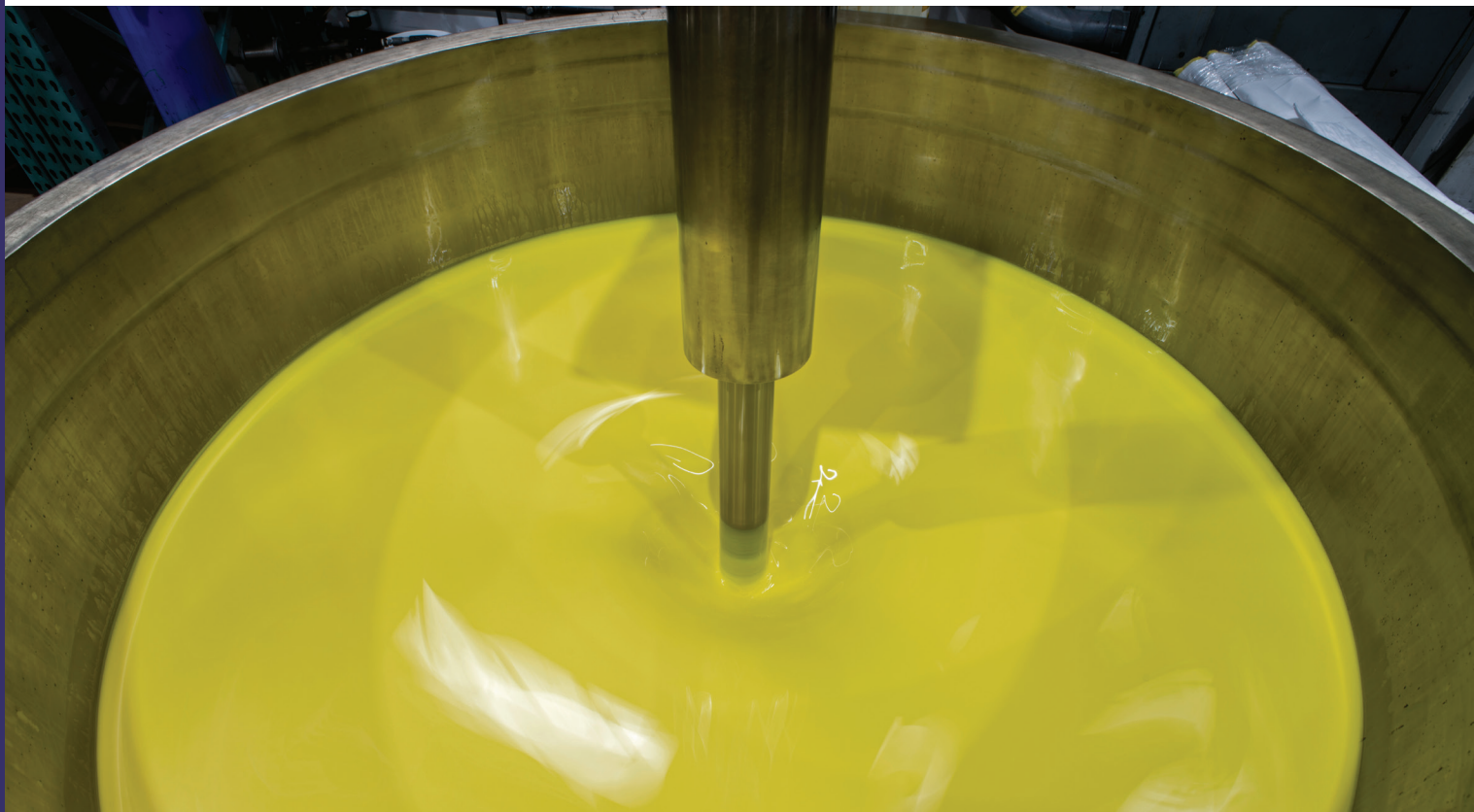
[sales@polytek.com](mailto:sales@polytek.com)

### WEBSITE

[www.polytek.com](http://www.polytek.com)  
[www.aeromarineproducts.com](http://www.aeromarineproducts.com)  
[www.silpak.com](http://www.silpak.com)

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# POLYURETHANE MOLD MAKING & CASTING RUBBERS



## POLYURETHANE RUBBERS: INTRODUCTION

POLYTEK® MANUFACTURES A HIGH-QUALITY LINE OF TWO-PART, LIQUID POLYURETHANE RUBBERS THAT CAN BE POURED, BRUSHED OR SPRAYED TO MAKE MOLDS OR CASTINGS THAT CURE AT ROOM TEMPERATURE.

Polytek®'s polyurethane rubbers consist of a Part A and a Part B that, after mixing, cure at room temperature to flexible, high-strength rubbers. Polyurethane rubbers make durable molds for casting a variety of materials, including plaster, wax, concrete and resins. Release Agent is required for some casting media.

These systems are used across a wide variety of industries, including Precast Concrete, Prop Making & Special Effects, Sculpture & Foundry, Plaster Millwork and Ornamentation, Industrial

Applications, Theming & Scenic Design, Prototyping, various Craft & Hobby projects, and many more.

Polytek® Polyurethane Rubbers are divided into the following series:

- Poly 74-Series Liquid Mold Rubbers
- Poly 75-Series Liquid Mold Rubbers
- Polygel® Series Liquid Mold Rubbers
- FormRub Series Liquid Mold Rubbers
- Poly 81-Series Liquid Mold Rubbers
- PT Flex Series Liquid Casting Rubbers
- Polyurethane Rubber Accessories - Page 9

# Poly 74-Series Liquid Mold Rubbers | Soft to Medium Hardness

Poly 74-Series polyurethane liquid mold rubbers are soft to mid-range hardness, high-performance, room-temperature curing systems. They offer superior flexibility and toughness allowing durable molds to be made from relatively simple to highly detailed, complex models.

These 74-Series liquid mold rubbers are supplied as pourable liquids but can be easily thickened to make brush-on molds.

Plaster and wax can generally be cast in polyurethane molds without any release agent, but most concrete mixes and casting resins require a suitable release agent (e.g., Pol-Ease® 2300 Release Agent).

## PRODUCT LINE FEATURES

- Type: Two-part polyurethane rubbers
- Room temperature curing (RTV)
- Shore A20 to A55 hardness options
- High-strength, abrasion-resistant, long lasting molds
- Reproduces fine details and textures
- Pourable or brushable (use PolyFiber II or Fumed Silica to thicken for brush-on application)
- Can be accelerated for rapid cure
- Economical & versatile

## Product Options

| BRAND                                                                                                         | PRODUCT           | MIX RATIO BY WEIGHT | SHORE HARDNESS | MIXED VISCOSITY | POUR TIME  | DEMOLD TIME | CURED COLOR       |
|---------------------------------------------------------------------------------------------------------------|-------------------|---------------------|----------------|-----------------|------------|-------------|-------------------|
|  Polytek Development Corp. | Poly 74-20^       | 1A:2B               | A20            | 800 cP          | 20 min.    | 16 hr.      | Yellow            |
|  Polytek Development Corp. | Poly 74-29^       | 1A:1B               | A30            | 2,800 cP        | 30 min.    | 16 hr.      | Black or White    |
|  Polytek Development Corp. | Poly 74-30^       | 1A:1B               | A30            | 2,000 cP        | 25–30 min. | 16 hr.      | Amber/Varies      |
|  Polytek Development Corp. | Poly 74-30 HT^    | 1A:1B               | A30            | 2,000 cP        | 25–30 min. | 16 hr.      | Amber/Varies      |
|  Polytek Development Corp. | Poly 74-30 Clear^ | 1A:1B               | A30            | 2,000 cP        | 25–30 min. | 16 hr.      | Transparent Amber |
|  Polytek Development Corp. | Poly 74-40^       | 2A:1B               | A40            | 3,400 cP        | 20 min.    | 16 hr.      | Varies            |
|  Polytek Development Corp. | Poly 74-41^       | 1A:1B               | A40            | 2,000 cP        | 20 min.    | 16 hr.      | Amber/Varies      |
|  Polytek Development Corp. | Poly 74-44^       | 2A:1B               | A45            | 3,500 cP        | 20 min.    | 16 hr.      | Gray              |
|  Polytek Development Corp. | Poly 74-45^       | 1A:1B               | A45            | 2,000 cP        | 30 min.    | 16 hr.      | Yellow            |
|  Polytek Development Corp. | Poly 74-55^       | 4A:1B               | A55            | 4,000 cP        | 15 min.    | 16 hr.      | Amber             |

## CASTING MATERIALS

Poly 74-Series molds are most often used to cast:

- Concrete (release agent required)
- Plaster
- Wax
- Resin (release agent required)

## POPULAR APPLICATIONS

- Concrete Casting - Cast Stone Veneer, Form Liners, Texture Mats, Countertops, Site Furnishings & Décor, Hardscape, Architectural Precast
- Sculpture & Foundry
- Architectural Reproduction & Restoration
- Millwork & Ornamentation
- Candle Making
- Industrial Uses
- Crafts & Hobby
- Theming & Display

^  **WARNING:** This product can expose you to chemicals including Toluene diisocyanate (TDI), which is known to the State of California to cause cancer. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## Poly 75-Series Liquid Mold Rubbers | Medium to Hard Rubbers

Poly 75-Series polyurethane liquid mold rubbers are mid-range to firm hardness, high-performance, room-temperature curing systems. They offer superior strength, toughness and abrasion-resistance that result in durable molds that capture and reproduce exact textures and fine detail. Poly 75-Series rubbers offer an optimum blend of economy and performance.

Plaster and wax can generally be cast in polyurethane molds without any release agent, but most concrete mixes and casting resins require a suitable release agent (e.g., Pol-Ease® 2300 Release Agent).

### PRODUCT LINE FEATURES

- Type: Two-part polyurethane rubbers
- Room temperature curing (RTV)
- Shore A60 to A90 hardness options
- High-strength, abrasion-resistant, super-tough rubbers
- Reproduces fine details and textures

- Pourable or brushable (use PolyFiber II or Fumed Silica to thicken for brush-on application)
- Can be accelerated for rapid cure
- Economical & versatile

### CASTING MATERIALS

Poly 75-Series molds are most often used to cast:

- Concrete (release agent required)
- Plaster
- Wax
- Resin (release agent required)

### POPULAR APPLICATIONS

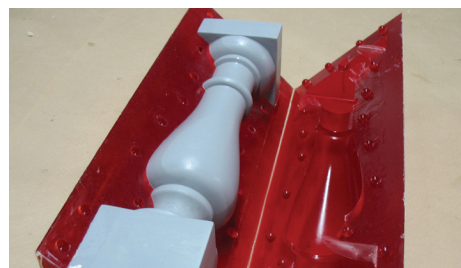
- Concrete Casting – Stamps & Texture Mats, Form Liners, Hardscape, Countertops, Architectural Precast
- Architectural Reproduction & Restoration
- Industrial Uses
- Theming & Display

### Product Options

| BRAND                                                                                                         | PRODUCT      | MIX RATIO BY WEIGHT | SHORE HARDNESS | MIXED VISCOSITY | POUR TIME  | DEMOLD TIME | CURED COLOR |
|---------------------------------------------------------------------------------------------------------------|--------------|---------------------|----------------|-----------------|------------|-------------|-------------|
|  Polytek Development Corp. | Poly 75-59^  | 1A:1B               | A60            | 2,500 cP        | 10 min.    | 16 hr.      | Amber       |
|  Polytek Development Corp. | Poly 75-60^  | 1A:1B               | A60            | 1,200 cP        | 10 min.    | 16 hr.      | Amber       |
|  Polytek Development Corp. | Poly 75-65^^ | 1A:1B               | A65            | 3,000 cP        | 35 min.    | 16 hr.      | Yellow      |
|  Polytek Development Corp. | Poly 75-70^  | 1A:1B               | A70            | 3,000 cP        | 40 min.    | 16 hr.      | Gray        |
|  Polytek Development Corp. | Poly 75-75^^ | 2A:1B               | A75            | 4,000 cP        | 20 min.    | 16 hr.      | Amber       |
|  Polytek Development Corp. | Poly 75-79^^ | 2A:1B               | A80            | 2,000 cP        | 20 min.    | 16 hr.      | Yellow      |
|  Polytek Development Corp. | Poly 75-80^^ | 2A:1B               | A80            | 4,000 cP        | 45 min.    | 16 hr.      | Yellow      |
|  Polytek Development Corp. | Poly 75-90^  | 2A:1B               | A90            | 6,000 cP        | 10–15 min. | 16 hr.      | Tan         |

^  **WARNING:** This product can expose you to chemicals including Toluene diisocyanate (TDI), which is known to the State of California to cause cancer. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

^^  **WARNING:** This product can expose you to chemicals including 4,4'-Methylene bis(2-chloroaniline) (MOCA) and toluene diisocyanate (TDI), which are known to the State of California to cause cancer. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



# Polygel® Series Mold Rubbers | Brushable & Sprayable Rubbers

Polygel® Series mold rubbers are designed for brush-on and spray-on blanket molds as they self-thicken to a thixotropic consistency when low viscosity Parts A & B are mixed. These room-temperature curing rubbers are non-sag and therefore especially useful for applications on vertical or overhead surfaces.

Sprayable Polygel® rubbers are ideal for large surface area applications where brushing is impractical.

Thin blanket molds should be backed with rigid, supportive mold shells. Mold shells can be made with several materials, including plaster, polyester resin, fiberglass, and thickened polyurethane plastic. Poly 1512X with PolyFiber II and Poly 1511, a slower-setting option, with PolyFiber II are popular brush-on polyurethane plastic options for making mold shells, while EasyFlo Spray FR is a popular sprayable option.

## PRODUCT LINE FEATURES

- Type: Two-part polyurethane rubbers
- Room temperature curing (RTV)
- Self-thickening formulas
- Brushable and sprayable versions
- Easy one-to-one mix ratios by weight
- Reproduces fine detail
- Can be accelerated for rapid cure

## CASTING MATERIALS

Polygel® Series molds are most often used to cast:

- Concrete (release agent required)
- Plaster
- Wax (some foundry waxes can cause oiling in Polygel® rubbers)
- Resin (release agent required)

## POPULAR APPLICATIONS

- Sculpture & Foundry
- Concrete Casting
- Millwork & Ornamentation
- Theming & Display
- Prop Making



| BRUSHABLE POLYGEL® OPTIONS*                                                                                                                                                         |                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Polygel® 35<br/>Brush-On Rubber^</b><br><br><small>*All polyurethane mold rubbers can be made "brushable" with the addition of a thickening agent, such as PolyFiber II.</small> | Polygel® 35 is a Shore A35, 1A:1B mix (by weight), self-thickening polyurethane liquid mold rubber designed for making thin, stretchy brush-on molds. This product has a 10 to 15-minute working time and a 16-hour demold time. |
| SPRAYABLE POLYGEL® OPTIONS                                                                                                                                                          |                                                                                                                                                                                                                                  |
| <b>Polygel® Spray 35^</b>                                                                                                                                                           | Sprayable version of Polygel® 35. Use with meter-mix spray equipment. This product has a 1A:1B mix ratio (by weight), Shore A35 hardness, 10-minute working time, and 16-hour demold time.                                       |

^  **WARNING:** This product can expose you to chemicals including Toluene diisocyanate (TDI), which is known to the State of California to cause cancer.

# FormRub Series Liquid Mold Rubbers | Low Viscosity, 1A:1B Rubbers

FormRub Series liquid polyurethane rubbers are designed to make high-performance molds that stand up to the rigors of high-production casting and forming of concrete.

All FormRub product options have simple, 1A:1B mix ratios and are low-viscosity mixes that flow easily across detailed surfaces and models.

In addition to concrete, FormRub molds are often used to cast plaster and wax. With use of an appropriate release agent, some resins can also be cast in FormRub molds.

### PRODUCT LINE FEATURES

- Type: Two-part polyurethane rubbers
- Room temperature curing (RTV)
- Shore A35 to A65 hardness options
- Low viscosity
- 1A:1B mix ratios
- High-strength, abrasion-resistant, long-lasting molds
- Reproduces fine details and textures
- Pourable or brushable (add PolyFiber II or Fumed Silica for brush-on application)
- Can be accelerated for rapid cure
- Economical & versatile

### CASTING MATERIALS

FormRub Series molds are most often used to cast:

- Concrete (release agent required)

### POPULAR APPLICATIONS

- Concrete Casting – Countertops, Site Furnishings & Décor, Hardscape, Architectural Precast



## Product Options

| BRAND                                                                                                         | PRODUCT     | MIX RATIO BY WEIGHT | SHORE HARDNESS | MIXED VISCOSITY | POUR TIME | DEMOLD TIME | CURED COLOR              |
|---------------------------------------------------------------------------------------------------------------|-------------|---------------------|----------------|-----------------|-----------|-------------|--------------------------|
|  Polytek Development Corp. | FormRub 35^ | 1A:1B               | A35            | 600 cP          | 15 min.   | 16 hr.      | Turquoise                |
|  Polytek Development Corp. | FormRub 50^ | 1A:1B               | A50            | 800 cP          | 15 min.   | 16 hr.      | Orange                   |
|  Polytek Development Corp. | FormRub 60^ | 1A:1B               | A60            | 2,000 cP        | 22 min.   | 16 hr.      | Off-White/Tan            |
|  Polytek Development Corp. | FormRub 65^ | 1A:1B               | A65            | 1,500 cP        | 35 min.   | 16 hr.      | Transparent Yellow/Amber |

^  **WARNING:** This product can expose you to chemicals including Toluene diisocyanate (TDI), which is known to the State of California to cause cancer. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

# Poly 81-Series Liquid Mold Rubbers | Very Hard Rubbers

Poly 81-Series polyurethane liquid rubbers are firm to very firm hardness, high-performance, room temperature curing systems offering superior strength and abrasion-resistance. They are the hardest polyurethane rubbers available from Polytek®.

## PRODUCT LINE FEATURES

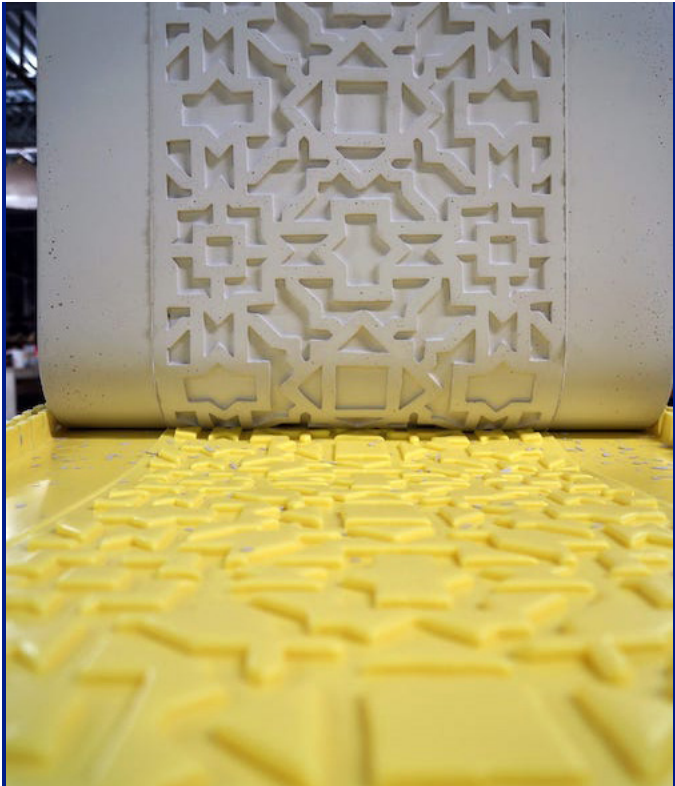
- Type: Two-part polyurethane rubbers
- Room temperature curing (RTV)
- Shore A90 and D45 hardness options
- Firm, high-strength, abrasion-resistant rubbers
- Low-viscosity
- Reproduces fine details and textures
- Long-lasting, economical

## POPULAR APPLICATIONS

- Stamping Tools
- Industrial Parts
- Rollers
- Gaskets
- Bumpers or Pads
- Mold Facings
- Very Firm Molds

## Product Options

| BRAND                                                                                     | PRODUCT     | MIX RATIO BY WEIGHT | SHORE HARDNESS | MIXED VISCOSITY | POUR TIME | DEMOLD TIME | CURED COLOR |
|-------------------------------------------------------------------------------------------|-------------|---------------------|----------------|-----------------|-----------|-------------|-------------|
|  Polytek | Poly 81-90  | 100A:40B            | A90            | 2,000 cP        | 23 min.   | 16 hr.      | Yellow      |
|  Polytek | Poly 81-D45 | 100A:20B            | D45            | 1,600 cP        | 19 min.   | 16 hr.      | Varies      |



^ **⚠️ WARNING:** This product can expose you to chemicals including Butyl benzyl phthalate (BBP), which is known to the State of California to cause reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

^^ **⚠️ WARNING:** This product can expose you to chemicals including Butyl benzyl phthalate (BBP) and Phenylmercuric compounds, which are known to the State of California to cause reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

# PT Flex Liquid Casting Rubbers | Fast-Setting Rubbers

PT Flex Series liquid rubbers are polyurethane casting rubbers specifically designed for making prototypes, models and functional rubber parts. Unlike many other Polytek® polyurethane rubber products, these casting rubbers are very low in viscosity and are fast-setting so they can be demolded rapidly.

PT Flex rubbers can be cast in PlatSil® silicone molds without any release agent and can be cast in polyurethane rubber molds, polyurethane plastic molds and latex molds with the proper release agent (e.g., Pol-Ease® 2300 Release Agent).

## PRODUCT LINE FEATURES

- Type: Two-part polyurethane rubbers
- Room temperature curing (RTV)
- Shore A20 to D60 hardness options
- Rapid demold times
- Low-viscosity
- Easy 1A:1B mix ratios
- Low shrinkage on cure
- Can be colored with PolyColor Dyes

## POPULAR APPLICATIONS

- Prototyping
- Model Making
- Craft & Hobby
- Industrial Parts
- Prop Making
- Theming & Display

## Product Options

| BRAND                                                                                                         | PRODUCT    | MIX RATIO BY WEIGHT | SHORE HARDNESS | MIXED VISCOSITY | POUR TIME | DEMOLD TIME | CURED COLOR  |
|---------------------------------------------------------------------------------------------------------------|------------|---------------------|----------------|-----------------|-----------|-------------|--------------|
|  Polytek Development Corp. | PT Flex 20 | 1A:1B               | A20            | 520 cP          | 4 min.    | 2 hr.       | Tan          |
|  Polytek Development Corp. | PT Flex 50 | 1A:1B               | A50            | 450 cP          | 4 min.    | 2 hr.       | Yellow/Amber |
|  Polytek Development Corp. | PT Flex 60 | 1A:1B               | A60            | 600 cP          | 4 min.    | 2 hr.       | Yellow/Amber |
|  Polytek Development Corp. | PT Flex 70 | 1A:1B               | A70            | 700 cP          | 4 min.    | 2 hr.       | Yellow/Amber |
|  Polytek Development Corp. | PT Flex 85 | 1A:1B               | A85            | 750 cP          | 4 min.    | 2 hr.       | Yellow/Amber |



# Polyurethane Mold Rubber Accessories

## ACCELERATOR

Poly 74/75  
Part X Accelerator

Add to liquid polyurethane rubbers to accelerate the pour time and demold time. Part X is most useful when making brush-on molds to decrease the time needed between coats. The amount of Part X needed varies from product to product and should be determined through experimentation.

**EXAMPLE:** By adding 3% Part X (by weight of the total mix) to Poly 74-30 or 74-29 Liquid Rubber, the working time is reduced to approximately 8 minutes. Demolding is possible in as little as 4 hours after the final layer is applied.

## SOFTENER

Poly 74/75  
Part C Softener

Add to liquid polyurethane rubbers for a lower-viscosity mix and softer cured rubber.

**EXAMPLE:** To soften Poly 74-30 Liquid Rubber (Shore A30) to a Shore A15, mix 1A:1B:1C by weight.

## MOLD CARE ACCESSORIES & PRODUCT LIFE EXTENDER

Pol-Ease®  
Mold Dressing

A thin liquid that protects and rejuvenates polyurethane rubber molds that have been exposed to solvents, petroleum-based form releases, or harsh casting materials such as those that are porous and absorptive.

Pol-Ease® Mold Rinse

A liquid concentrate that reduces surface air bubbles on plaster castings made in Polytek® rubber molds.

PolyPurge Dry  
Aerosol Gas

Spray PolyPurge into open polyurethane Part A and B containers just before resealing to displace moist air and extend the product life.

## COLOR DYES & UV ADDITIVE

PolyColor Dyes

Oil-based dyes for coloring Polytek®'s polyurethane rubbers and plastics. Available in black, brown, blue, green, red, yellow, white and fleshtone. Add up to 0.5% PolyColor Dye to the total mixed weight of the rubber being used (exception: up to 2% of PolyColor White and PolyColor Fleshtone can be added to polyurethane rubbers and resins).

UV Additive

Add this liquid additive to polyurethane liquid rubber or plastic to improve exterior durability and reduce surface degradation caused by sunlight or other UV light sources. Add up to 0.5% of the total mix weight of the rubber.

## FILLERS & THICKENERS

PolyFiber II  
Thickening Agent

Add PolyFiber II to Polytek® liquid polyurethane rubbers to thicken for brush-on application or to make mold shells.

Fumed Silica

A fine powder that can be added to polyurethane liquid rubbers to thicken them for brush-on applications.

## REINFORCEMENT MATERIALS

Tietex® Fabric

A strong, conformable, reinforcing fabric often used to reinforce the top of a seam in brushed or sprayed molds or laid into the back of a poured mold to increase durability.

Refer to the “Accessories & Tools” section of this catalog for additional accessories, including Tools & Mixing Equipment, Safety Equipment, Adhesives, Digital Scales, PlasPak Spray Equipment and Drum Handling Equipment. Refer to the “Release Agents & Sealers” section for release agents and sealers.

# SILICONE MOLD MAKING & CASTING RUBBERS



## SILICONE RUBBERS: INTRODUCTION

POLYTEK® MANUFACTURES A FULL RANGE OF TWO-PART, ROOM-TEMPERATURE CURING SILICONE RUBBERS THAT OFFER GREAT FLEXIBILITY, TEAR STRENGTH, CHEMICAL RESISTANCE AND RELEASE PROPERTIES.

Silicone molds can be used to cast a variety of materials, including polyurethane, polyester and epoxy resins, polyurethane foam, plaster, wax, concrete, low melting metals, and more.

Polytek® manufactures two different types of silicone rubbers: platinum-cured (PlatSil®) silicones and tin-cured (TinSil®) silicones.

Read about their differences below:

### PLATSIL® vs. TINSIL® SILICONE MOLD RUBBERS

- Cured TinSil® silicones have shorter library life (2 to 5 years total) compared to PlatSil® silicones.
- TinSil® silicones are slightly less expensive than PlatSil® silicones.
- Liquid PlatSil® silicones are more sensitive to

certain materials (e.g., sulfur, tin compounds, Bondo) and suffer from cure inhibition (uncured surface material) more often than TinSil® silicones.

- Cured TinSil® molds can inhibit some casting materials, including PlatSil® silicones, Poly-Optic® Clear Casting Resin and many polyurethane rubbers.
- TinSil® silicones are condensation-cure systems that shrink slightly on cure (~1%) compared to addition-cure PlatSil® silicones, which do not shrink on cure.
- There are skin-safe platinum-cured silicones available in the PlatSil® product line: PlatSil® Gels.
- Select silicone rubbers were tested by an independent laboratory and were found to comply with 21 CFR 177.2600 (as published in the Code of Federal Regulations) for rubber articles intended for repeated use food contact surfaces when accurately measured, thoroughly mixed, and fully cured. Contact us for food contact approved silicones.

*Silicone Rubber accessories can be found on page 16.*

## TinSil® Silicone Mold Rubbers | Condensation-Cure Silicones

TinSil® rubbers are tin-cured (also known as condensation cure), room-temperature curing silicones. Molds made from these rubbers exhibit high tear strength, good release properties, and resistance to high temperatures.

TinSil® molds can be used to cast a variety of materials, including wax, plaster and concrete, but the real advantage is obvious when casting polyurethane resins and foams, epoxy casting plastics, and polyester resins as release agents are not necessary.

### PRODUCT LINE FEATURES

- Type: Two part, tin-cured (condensation cure) silicone rubbers
- Room temperature curing (RTV)
- TinSil® molds do not require release agents when casting most materials
- Excellent chemical resistance
- Reproduces fine details and textures
- Cure can be accelerated or slowed with additives
- Ideal for the most demanding resin casting applications

- Pourable or brushable (thicken with TinThix/TinThix II Liquid Thickener or Fumed Silica for brush-on application)

## CASTING MATERIALS

TinSil® Series molds are most often used to cast:

- Resin (polyurethane, polyester, epoxy)
- Polyurethane foam
- Plaster
- Wax
- Concrete
- Low-Melt Metal

**NOTE:** TinSil® molds have a limited shelf-life when cured (library life) so they are not recommended for extended storage. TinSil liquid rubbers also shrink slightly on cure (~1%). For silicone rubber options with longer library life and no shrink on cure, consider PlatSil® platinum-cured silicone rubbers.

**CURE INHIBITION:** TinSil® molds may cause cure inhibition in the following casting materials: polyurethane rubbers and Poly-Optic® 14-Series Casting Resins. This is especially the case in new tin-cured molds. Do not cast platinum-cured silicone in TinSil® molds; they will not cure properly. Consider a PlatSil® platinum silicone rubber when using these casting materials.

## POPULAR APPLICATIONS

- Sculpture & Foundry
- Architectural Reproduction & Restoration
- Foam, Plaster & Plastic Millwork & Ornamentation
- Theming & Display
- Food Contact
- Prototyping
- Model Making
- Taxidermy
- Prop Making

## Product Options

### TINSIL® 80-SERIES SILICONE RUBBERS

80-Series rubber molds have longer library life and better high temperature stability compared to 70-Series rubbers.

| BRAND                                                                               | PRODUCT       | MIX RATIO BY WEIGHT | SHORE HARDNESS | MIXED VISCOSITY | POUR TIME | DEMOLD TIME | CURED COLOR |
|-------------------------------------------------------------------------------------|---------------|---------------------|----------------|-----------------|-----------|-------------|-------------|
|  | TinSil® 80-15 | 1A:10B              | A15            | 12,000 cP       | 30 min.   | 24 hr.      | Peach       |
|  | TinSil® 80-30 | 1A:10B              | A30            | 17,000 cP       | 45 min.   | 24 hr.      | Peach       |
|  | TinSil® 80-40 | 1A:10B              | A40            | 20,000 cP       | 45 min.   | 24 hr.      | Peach       |

### TINSIL® 90 SERIES SILICONE RUBBERS

90-Series is specially formulated for reduced skinning and excellent chemical resistance.

| BRAND                                                                               | PRODUCT       | CATALYST  | MIX RATIO BY WEIGHT | SHORE HARDNESS | MIXED VISCOSITY | POUR TIME | DEMOLD TIME | CURED COLOR |
|-------------------------------------------------------------------------------------|---------------|-----------|---------------------|----------------|-----------------|-----------|-------------|-------------|
|  | TinSil® 90-25 | Standard  | 1A:10B              | A25            | 25,000 cP       | 60 min.   | 16 hr.      | Blue        |
|  |               | Fast      | 1A:10B              | A25            | 25,000 cP       | 30 min.   | 6 hr.       | Red         |
|  |               | Very Fast | 1A:10B              | A25            | 25,000 cP       | 10 min.   | 3 hr.       | Green       |

### AEROMARINE TIN CONDENSATION CURE SILICONE RUBBERS

Excellent mechanical properties and good shelf-life stability.

| BRAND                                                                               | PRODUCT | MIX RATIO BY WEIGHT | SHORE HARDNESS | MIXED VISCOSITY | POUR TIME | DEMOLD TIME | CURED COLOR |
|-------------------------------------------------------------------------------------|---------|---------------------|----------------|-----------------|-----------|-------------|-------------|
|  | AM125   | 1A:1B               | A25            | 4,000 cP        | 15 min.   | 75 min..    | Blue-Green  |

## PlatSil® Silicone Mold Rubbers | Addition-Cure Silicones

PlatSil® rubbers are platinum-cured (also known as addition-cure), room temperature-curing silicones that cure to flexible, high-strength rubbers. PlatSil® molds offer excellent release properties and release agent is not necessary when casting most materials. Compared to tin-cured silicone rubbers, platinum-cured silicones exhibit long library life and low shrinkage on cure. *For skin-safe silicones, view PlatSil® Gels on page 14.*

### PRODUCT LINE FEATURES

- Type: Two-part platinum-cured (addition-cure) silicone rubbers
- Room temperature curing (RTV)
- Do not exhibit shrinkage upon curing so they are useful for casting dimensionally stable parts for highly accurate prototyping and model making applications
- PlatSil® molds do not require release agents when casting most materials
- Cured molds have a long library life
- Pourable or brushable (thicken with PlatThix liquid thickener or Fumed Silica)
- High-strength
- Excellent chemical resistance
- Reproduces fine details
- Cure can be accelerated or slowed with additives

### CASTING MATERIALS

PlatSil® Series molds are most often used to cast:

- Resin (polyurethane, polyester, epoxy)
- Polyurethane foam
- Plaster
- Wax
- Concrete

### POPULAR APPLICATIONS

- Sculpture & Foundry
- Architectural Reproduction & Restoration
- Foam, Plaster & Plastic Millwork & Ornamentation
- Theming & Display
- Prop Making
- Prototyping
- Model Making
- Taxidermy

**CURE INHIBITION:** Care should be taken to ensure objects that come in contact with PlatSil® liquid rubbers are not contaminated with amines, sulfur, tin compounds and others which may inhibit the cure of the system.

### PLATSIL® 71 & 73-SERIES SILICONE RUBBERS

Standard, platinum-cured mold making and casting silicones.

| BRAND                                                                                                         | PRODUCT        | MIX RATIO BY WEIGHT | SHORE HARDNESS | MIXED VISCOSITY | POUR TIME | DEMOLD TIME | CURED COLOR       |
|---------------------------------------------------------------------------------------------------------------|----------------|---------------------|----------------|-----------------|-----------|-------------|-------------------|
|  Polytek Development Corp. | PlatSil® 71-11 | 1A:1B               | A10            | 6,000 cP        | 20 min.   | 4 hr.       | Blue-Green        |
|  Polytek Development Corp. | PlatSil® 73-15 | 1A:1B               | A15            | 2,500 cP        | 20 min.   | 4–5 hr.     | White Translucent |
|  Polytek Development Corp. | PlatSil® 73-20 | 1A:1B               | A22            | 3,000 cP        | 5 min.    | 1 hr.       | Blue Translucent  |
|  Polytek Development Corp. | PlatSil® 71-25 | 1A:1B               | A25            | 3,500 cP        | 35 min.   | 16 hr.      | Milky White       |
|  Polytek Development Corp. | PlatSil® 73-25 | 1A:1B               | A25            | 6,000 cP        | 15 min.   | 4–5 hr.     | Green             |
|  Polytek Development Corp. | PlatSil® 73-29 | 1A:10B              | A30            | 15,000 cP       | 45 min.   | 16 hr.      | White             |
|  Polytek Development Corp. | PlatSil® 71-40 | 1A:10B              | A40            | 38,000 cP       | 90 min.   | 24 hr.      | Translucent       |
|  Polytek Development Corp. | PlatSil® 73-40 | 1A:10B              | A40            | 15,000 cP       | 45 min.   | 16 hr.      | Yellow            |
|  Polytek Development Corp. | PlatSil® 73-45 | 1A:10B              | A45            | 35,000 cP       | 60 min.   | 16 hr.      | Green             |
|  Polytek Development Corp. | PlatSil® 73-60 | 1A:10B              | A60            | 40,000 cP       | 45 min.   | 16 hr.      | Blue              |

## PLATSIL® FS-SERIES (FAST-SETTING) SILICONE RUBBERS

Fast-setting, high performance silicones.

| BRAND                                                                                                       | PRODUCT        | MIX RATIO BY WEIGHT | SHORE HARDNESS | MIXED VISCOSITY | POUR TIME | DEMOLD TIME | CURED COLOR |
|-------------------------------------------------------------------------------------------------------------|----------------|---------------------|----------------|-----------------|-----------|-------------|-------------|
|  Polytek Development Corp. | PlatSil® FS-00 | 1A:1B               | OO52/A5        | 5,000 cP        | 8 min.    | 30 min.     | Milky White |
|  Polytek Development Corp. | PlatSil® FS-10 | 1A:1B               | OO60/A13       | 4,200 cP        | 8 min.    | 25 min.     | Milky White |
|  Polytek Development Corp. | PlatSil® FS-20 | 1A:1B               | OO60/A20       | 3,800 cP        | 8 min.    | 25 min.     | Milky White |

## PLATSIL® HTS-SERIES SILICONE RUBBERS

High-performance silicones with excellent tear strength, tensile strength and elongation properties.

| BRAND                                                                                                       | PRODUCT              | MIX RATIO BY WEIGHT | SHORE HARDNESS | MIXED VISCOSITY | POUR TIME | DEMOLD TIME | CURED COLOR       |
|-------------------------------------------------------------------------------------------------------------|----------------------|---------------------|----------------|-----------------|-----------|-------------|-------------------|
|  Polytek Development Corp. | PlatSil® HTS-25      | 1A:10B              | A25            | 15,500 cP       | 70 min.   | 24 hr.      | Milky Translucent |
|  Polytek Development Corp. | PlatSil® HTS-25 FAST | 1A:10B              | A25            | 18,000 cP       | 15 min.   | 3 hr.       | Milky White       |
|  Polytek Development Corp. | PlatSil® HTS-40      | 1A:10B              | A40            | 17,000 cP       | 30 min.   | 24 hr.      | Milky White       |

## HIGH CLARITY SILICONE PRODUCTS

| BRAND                                                                                                         | PRODUCT            | MIX RATIO BY WEIGHT | SHORE HARDNESS | MIXED VISCOSITY | POUR TIME | DEMOLD TIME   | CURED COLOR |
|---------------------------------------------------------------------------------------------------------------|--------------------|---------------------|----------------|-----------------|-----------|---------------|-------------|
|  Polytek Development Corp. | PlatSil® SiliGlass | 1A:1B               | A40            | 200 cP          | 5 min.    | 30 min.–1 hr. | Clear       |



## Silputty | Kneadable Platinum Silicone Dough

Silpak's Silputty products are platinum based, two-component, food safe, quick curing silicone RTV that are excellent for capturing forensic detail.

### Product Options

| BRAND                                                                                           | PRODUCT     | MIX RATIO | SHORE HARDNESS | MIXED VISCOSITY | POUR TIME | DEMOLD TIME | CURED COLOR |
|-------------------------------------------------------------------------------------------------|-------------|-----------|----------------|-----------------|-----------|-------------|-------------|
|  <b>SILPAK</b> | Silputty 25 | 1A : 1B   | 25-30          | Kneadable Dough | 3-4 min.  | 15-20 min.  | Pink        |
|  <b>SILPAK</b> | Silputty 40 | 1A : 1B   | 40             | Kneadable Dough | 5 min.    | 10 min.     | Green       |

## PlatSil® Gels | Skin-Safe Silicone Rubbers

Polytek's PlatSil® two part Silicone Gels are used in the special effects industry for theatrical prosthetics designed for film, television, and theater; in the medical modeling and simulation industry to produce incredibly realistic surgical training aids, responsive suture pads, wound care simulation, and other medical simulation tools and models; for prop making, and for general silicone mold creation.

These versatile silicones are skin-safe, fast-setting and offer simple 1A:1B mix ratios by weight or volume.

An array of accessory products can be used independently or in concert to increase working time, accelerate cure time, thicken the mix for brushing/layering, increase Shore Hardness, thin the mix for easier pouring, or "deadend" the rubber to soften and eliminate the snappy, synthetic look and feel of ordinary silicone rubbers.

### Product Options

| BRAND                                                                                                                   | PRODUCT                 | MIX RATIO | SHORE HARDNESS | MIXED VISCOSITY | POUR TIME | DEMOLD TIME | CURED COLOR |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------|-----------|----------------|-----------------|-----------|-------------|-------------|
|  <b>Polytek</b><br>Development Corp. | PlatSil® Gel-OO20       | 1A:1B     | OO20           | 3,900 cP        | 40 min.   | 2 hr.       | Milky White |
|  <b>Polytek</b><br>Development Corp. | PlatSil® Gel-OO30       | 1A:1B     | OO30           | 6,200 cP        | 45 min.   | 4 hr.       | Milky White |
|  <b>Polytek</b><br>Development Corp. | PlatSil® Gel-OO         | 1A:1B     | OO30           | 22,000 cP       | 6 min.    | 30 min.     | Milky White |
|  <b>Polytek</b><br>Development Corp. | PlatSil® Gel-10         | 1A:1B     | A10            | 15,000 cP       | 6 min.    | 30 min.     | Milky White |
|  <b>Polytek</b><br>Development Corp. | PlatSil® Gel-25         | 1A:1B     | A25            | 3,500 cP        | 5 min.    | 30 min.     | Milky White |
|  <b>Polytek</b><br>Development Corp. | PlatSil® Gel-00-D (Dry) | 1A:1B     | 0040           | 9,000 cP        | 8 min     | 30 min.     | Milky White |
|  <b>Polytek</b><br>Development Corp. | PlatSil® Gel-10-D (Dry) | 1A:1B     | A10            | 10,000 cP       | 8 min     | 30 min.     | Milky White |



## ACCESSORIES FOR PLATSIL® GELS

|                         |                                                                                                                                                                                                                                  |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Deadener/Softener       | Add Smith's Theatrical Prosthetic Deadener or PlatSil® Deadener LV (Low-Viscosity) to soften, or "deaden" PlatSil® Gel rubber. <i>See details below in "Deadener &amp; Hardener" section.</i>                                    |
| Hardener                | Add PlatSil® Part H Hardener to increase the Shore hardness of any PlatSil® Gel. It also increases working and demold time. <i>See details below in "Deadener &amp; Hardener" section.</i>                                       |
| Color Pigments          | Use Silicone Color Pigments to create custom colors in silicone rubber. Available in fleshtone, red, blue, green, yellow, black and white.                                                                                       |
| Thickener               | Add PlatThix liquid thickener to PlatSil® Gels to thicken the mix to a light-bodied, non-sag gel. Add up to 5% PlatThix to the total mixed weight of the PlatSil® Gel.                                                           |
| Retarder                | Add PlatSil® 71/73 Part R Retarder to slow the cure of PlatSil® products. Add up to 4% Part R to the total mixed weight of the PlatSil® Gel.                                                                                     |
| Accelerator             | Add PlatSil® 71/73 Part X Accelerator to accelerate the cure of PlatSil® products. Add up to 3% Part X of the total mixed weight of the PlatSil® Gel."                                                                           |
| Thinning Agent/Softener | Add Silicone Fluid 50 cSt to the mixed rubber to thin the mix. More than 10% fluid addition may exude from the cured rubber. To soften without oil leaching, use Smith's Theatrical Prosthetic Deadener or PlatSil® Deadener LV. |

## DEADENER &amp; HARDENER

PlatSil® Deadener LV (Low-Viscosity) and Smith's Theatrical Prosthetic Deadener can be added 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 living tissue. Unlike silicone fluid, Deadener does not leach from the cured rubber/appliance, so bonding and use are far easier. Add PlatSil® Part H Hardener to increase the Shore hardness of any PlatSil® Gel. It also increases working and demold time.

## LIFECASTING WITH PLATSIL® GELS

Skin-safe PlatSil® Gels enable you to manufacture clinically accurate and durable medical models and body parts.



Artist: Jim Udenberg - Imaginarium FX



## Silicone Rubber Accessories

### COLOR DYES

Silicone Color Pigments

Pigments for coloring Polytek® PlatSil® and TinSil® silicone rubbers. Available in: fleshtone, red, blue, green, yellow, black and white<sup>^</sup>. Add up to 0.5% of the total mixed weight of the silicone mix.

### THICKENERS

PlatThix Liquid Thickener

Add PlatThix liquid thickener to thicken PlatSil® silicone rubbers for brush-on application. Add up to 5% PlatThix of the total mixed weight of the PlatSil® mix. Experiment to determine the best amount to add for your application.

TinThix/TinThix II Liquid Thickener

Add TinThix /TinThix II liquid thickener to thicken TinSil® silicone rubbers for brush-on application. Add up to 5% TinThix II of the total mixed weight of the silicone mix. Experiment to determine the best amount to add for your application.

Fumed Silica

A fine powder that can be added to liquid silicone rubbers to thicken them for brush-on applications.

### ACCELERATORS & RETARDERS

PlatSil® 71/73 Part X Accelerator

PlatSil® 71/73 Part X Accelerator accelerates the pour times and demold times of PlatSil® silicone products. Add up to 3% Part X to the total mixed weight of the PlatSil® mix.

**EXAMPLE:** The addition of 1% Part X to the total mixed weight decreases the pour time to ~ $\frac{1}{3}$  the normal pour time. The addition of 2% decreases the normal pour time to ~ $\frac{1}{4}$ . The addition of 3% decreases the normal pour time to ~ $\frac{1}{5}$ . The demold time will also be reduced. Experiment to determine the best amount to add for your application.

TinSil® FastCat Accelerator

Use TinSil® FastCat to accelerate the cure and shorten the demold time of TinSil® silicone products. FastCat can be added in a range of 1% to 4% of Part B by weight.

**EXAMPLE:** When using TinSil® 80-30, adding 2% FastCat will result in a ~15-minute pour time and ~4-hour demold time. Adding 3% FastCat will result in a ~10-minute pour time and ~3-hour demold time. Adding 4% FastCat will result in a ~5-minute pour time and ~2-hour demold time. Experiment to determine the best amount to add for your application.

PlatSil® 71/73 Part R Retarder

PlatSil® 71/73 Part R Retarder slows the pour times and demold times of PlatSil® silicone products. Add up to 4% Part R to the total mixed weight of the PlatSil® mix.

### SOFTENER

Silicone Fluid 50cSt

Add Silicone Fluid 50 cSt to TinSil® and PlatSil® products for a lower-viscosity mix and a softer rubber.

### REINFORCEMENT MATERIALS

Tietex® Fabric

A strong, conformable, reinforcing fabric often used to reinforce the top of a seam in brushed or sprayed molds or laid into the back of a poured mold to increase durability.

Refer to the “Accessories & Tools” section of this catalog for additional accessories, including Tools & Mixing Equipment, Safety Equipment, Adhesives, Digital Scales, PlasPak Spray Equipment and Drum Handling Equipment. Refer to the “Release Agents & Sealers” section for release agents and sealers.

<sup>^</sup>  **WARNING:** This product can expose you to chemicals including Titanium Dioxide which is known to the State of California to cause cancer. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

# POLYURETHANE LIQUID CASTING PLASTICS



## POLYURETHANE PLASTICS: INTRODUCTION

POLYTEK®'S TWO-PART, ROOM-TEMPERATURE CURING POLYURETHANE PLASTICS ARE AVAILABLE IN VARIETIES THAT CAN BE POURED, BRUSHED OR SPRAYED TO CREATE CASTINGS WITH UNLIMITED VERSATILITY.

These plastics are separated into five different series. From super low-viscosity, fast-setting resins to water-clear options, almost any color, size, shape, weight and appearance can be achieved by using these systems. Utilize available accessories to help achieve the desired look and feel.

Polyurethane casting plastics can be cast in silicone mold rubbers without any release agent, but require a release agent when cast in polyurethane rubber molds.

Polytek® polyurethane plastics are divided into the following series:

- EasyFlo Series Liquid Casting Plastics
- Kast Series Urethane Resins
- Poly 15-Series Liquid Casting Plastics
- Poly Plasti-Flex Liquid Casting Resin
- Clear Casting Polyurethane Resins
- Polyurethane Plastic Accessories - Page 26

## Polytek EasyFlo Series and Aeromarine Black Liquid Casting Plastics | Fast-Setting, Low-Viscosity

EasyFlo Series and AM Black Casting Resin products are easy-to-use, super-low viscosity polyurethane resins with simple, 1A:1B mix ratios by volume. These resins make for perfect detail penetration and bubble-free castings without the need for vacuum or pressure techniques. Rapid demold times make EasyFlo products ideal for high-volume, fast-cast applications.

These plastics are the fastest setting and lowest viscosity resins in our polyurethane resin product line, are very versatile and work well for countless commercial, industrial, hobby, craft, prop and display projects. These plastics can be colored with PolyColor Dyes, mixed with metal powders (e.g., bronze powder) and they can be filled with a variety of inexpensive fillers to conserve cost and reduce shrinkage in large masses.

These plastics can be cast in PlatSil® platinum-cured silicones and TinSil® tin-cured silicones without any release agent. Release agent (e.g., Pol-Ease® 2300 Release Agent) must be used when casting in polyurethane rubber molds.

### PRODUCT LINE FEATURES

- Type: Two-part polyurethane resins
- Room temperature curing (RTV)
- Super-low viscosity
- Easily colored with PolyColor Dyes
- Perfect cast detail
- Opaque and translucent options
- Fast demold times (as fast as 15 minutes)
- 1A:1B mix ratios by volume
- Options for pouring, rotocasting/slush casting, and spraying
- Bubble-free castings
- Tough, non-brittle
- Can be machined, drilled, sanded
- A variety of optional accessories

### POPULAR APPLICATIONS

- Sculpture Reproduction (e.g., cold cast bronze)
- Prototyping
- Theming, Display & Decor
- Prop Making
- Model Making
- Taxidermy
- Hobby & Craft Projects
- Plastic Millwork & Ornamentation

## Product Options

| PRODUCT                         | DESCRIPTION                                                                                                                                                                                   |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EasyFlo 60 Liquid Plastic       | The lowest-viscosity option in the EasyFlo Series. Pours like water, so making bubble-free parts is easy and fast.                                                                            |
| EasyFlo 90 Liquid Plastic       | Useful when a longer pot life of 5 minutes is needed to complete a pour.                                                                                                                      |
| EasyFlo 120 Liquid Plastic      | Best for rotocasting or slush casting to create nearly unbreakable, hollow parts – especially when backfilled with PolyFoams.                                                                 |
| EasyFlo Clear Liquid Plastic    | Cures to a pale amber color and is often used with PolyColor Dyes to make transparent, colored castings or with fillers (e.g., bronze powder) that are added for visual appeal.               |
| EasyFlo 100 FR Liquid Plastic   | A pourable, UL-94 (V-0) fire-retardant plastic.                                                                                                                                               |
| EasyFlo Spray FR Liquid Plastic | A sprayable, UL-94 (V-0) fire-retardant plastic. Designed to be sprayed using a low cost, portable PlasPak spray gun and cartridges or with higher output equipment for even larger projects. |
| AeroMarine Black Casting Resin  | Thin, very fast setting polymer that cures to a deep black color and is used for many applications such as cold casting bronze, metal finishes, and slush casting.                            |

## Product Specifications

| BRAND                                                                                                         | PRODUCT                                    | MIX RATIO                             | SHORE HARDNESS | MIXED VISCOSITY | POT LIFE   | DEMOLD TIME * | CURED COLOR       |
|---------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------------------------------------|----------------|-----------------|------------|---------------|-------------------|
|  Polytek Development Corp. | EasyFlo 60 Liquid Plastic                  | 1A:1B by volume<br>100A:90B by weight | D65            | 60 cP           | 2–2.5 min. | 15–30 min.    | White             |
|  Polytek Development Corp. | EasyFlo 90 <sup>^</sup> Liquid Plastic     | 1A:1B by volume<br>100A:90B by weight | D70            | 200 cP          | 5 min.     | 1–2 hr.       | White             |
|  Polytek Development Corp. | EasyFlo 120 <sup>^^</sup> Liquid Plastic   | 1A:1B by volume<br>100A:90B by weight | D65            | 120 cP          | 2–2.5 min. | 15–30 min.    | White             |
|  Polytek Development Corp. | EasyFlo Clear Liquid Plastic               | 1A:1B by volume<br>100A:85B by weight | D72            | 110 cP          | 2–2.5 min. | 15–30 min.    | Translucent Amber |
|  Polytek Development Corp. | EasyFlo 100 FR <sup>^</sup> Liquid Plastic | 1A:1B by volume<br>1A:1B by weight    | D65            | 120 cP          | 2–2.5 min. | 15–30 min.    | Off-White/<br>Tan |
|  Polytek Development Corp. | EasyFlo Spray FR Liquid Plastic            | 1A:1B by volume<br>100A:90B by weight | D75            | 250 cP          | N/A        | 5–10 min.     | Off-White         |
|  AeroMarine Products        | Black Casting Resin                        | 1A : 1B by volume                     | D75-80         | 100 cP          | 1 min      | 15 min.       | Black             |

\* Demold time varies with thickness of casting and the amount of accelerator used.

<sup>^</sup>  **WARNING:** This product can expose you to chemicals including Di-isodecyl phthalate (DIDP), which is known to the State of California to cause reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

<sup>^^</sup>  **WARNING:** This product can expose you to chemicals including Butyl benzyl phthalate (BBP), which is known to the State of California to cause reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## Kast Series Urethane Resins | High-Performance Tooling Resins

Kast Series products are high-performance, fast-cast tooling and casting urethane resins. These two-part, room-temperature curing (RTV) systems are designed for use in a variety of applications including foundry, special effects, prototyping, vacuum and thermo-forming, and many other industrial and commercial applications.

Kast products were developed to provide high moisture resistance, improved filler suspension, easier premixing of the components, and minimal shrinkage.

### PRODUCT LINE FEATURES

- Type: Two-part polyurethane resins
- Room temperature curing (RTV)
- 1A:1B mix ratios by weight or volume
- Tough, non-brittle
- Low-viscosity
- Reproduces fine detail
- Can be machined, drilled, sanded
- Low shrinkage on cure
- Fast demold times

### POPULAR APPLICATIONS

- Foundry
- Prototyping
- Special Effects
- Model Making

### Product Options

| PRODUCT                   | DESCRIPTION                                                                                                                                                         |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BC-8002 Kwik-Kast II Gray | High-performance urethane tooling and casting resin with a fast turnaround time.                                                                                    |
| BC-8655 Kwik-Kast II Blue | Similar to BC-8002, but blue in color and with a slightly longer pot life.                                                                                          |
| BC-8009 Slo-Kast Gray     | Features a longer pot life compared to BC-8655 and BC-8002 - ideal for filling larger closed mold cavities and casting large sections without having to stage pour. |

### Product Specifications

| BRAND                                                                               | PRODUCT                                    | MIX RATIO                 | SHORE HARDNESS | MIXED VISCOSITY | POT LIFE   | DEMOLD TIME * | CURED COLOR |
|-------------------------------------------------------------------------------------|--------------------------------------------|---------------------------|----------------|-----------------|------------|---------------|-------------|
|  | BC-8002 Kwik-Kast II Gray Urethane Resin^  | 1A:1B by weight or volume | D85            | 2,350 cP        | 5-6 min.   | 1-2 hr.       | Gray        |
|  | BC-8655 Kwik-Kast II Blue Urethane Resin^^ | 1A:1B by weight or volume | D83            | 2,120 cP        | 8-10 min.  | 1-2 hr.       | Blue        |
|  | BC-8009 Slo-Kast Gray Urethane Resin^      | 1A:1B by weight or volume | D85            | 2,250 cP        | 14-18 min. | 3-4 hr.       | Gray        |

\*Demold time varies with thickness of casting and the amount of accelerator used.

- ^  **WARNING:** This product can expose you to chemicals including Benzene, Cumene and Dibutyl Phthalate which are known to the State of California to cause cancer and/or reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).
- ^^  **WARNING:** This product can expose you to chemicals including Cumene and Benzene which are known to the State of California to cause cancer and/or reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

# Poly 15-Series Liquid Casting Plastics | High Strength Plastics

Poly 15-Series plastics are versatile, two-part polyurethane systems used for countless commercial, industrial, artistic, prototyping, hobby, craft, prop and display casting applications. Some of these room-temperature curing resins mimic the density of thermoplastics (e.g., ABS) or wood while others are great options for constructing lightweight mold shells.

These plastics can be colored with PolyColor Dyes, mixed with metal powders (e.g., bronze powder) and they can be filled with a variety of inexpensive fillers to conserve cost and reduce shrinkage in large masses.

These plastics can be cast in PlatSil® platinum-cured silicones and TinSil® tin-cured silicones without any release agent. Release agent (e.g., Pol-Ease® 2300 Release Agent) must be used when casting in polyurethane rubber molds.

## PRODUCT LINE FEATURES

- Type: Two-part polyurethane resins
- Room temperature curing (RTV)
- Shore D71 to D80 hardness options
- Tough, non-brittle
- 1A:1B mix ratios by weight
- Reduces fine detail
- Can be machined, drilled, sanded
- Lightweight options for mold shells
- Low shrinkage on cure
- Fast and slow working times/demold times available
- Castable in large masses
- A variety of optional accessories
- Add PolyFiber II thickener for brush-on application

## POPULAR APPLICATIONS

- Sculpture Reproduction (e.g., cold cast bronze)
- Prototyping
- Theming, Display & Decor
- Prop Making
- Model Making
- Taxidermy
- Hobby & Craft Projects
- Plastic Millwork & Ornamentation
- Mold Shells



Product Options

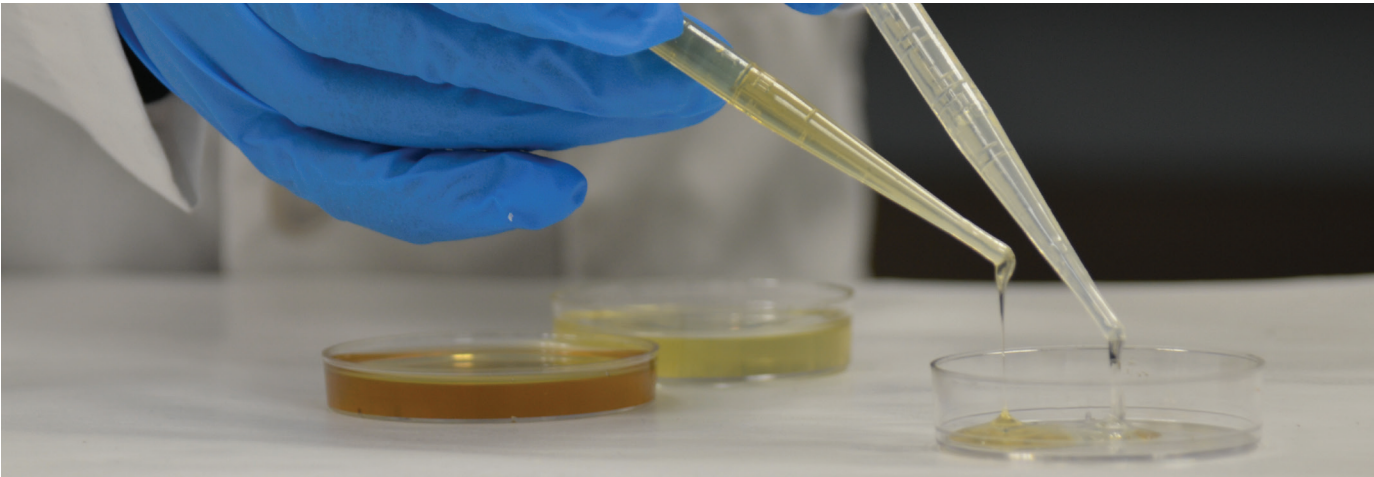
| PRODUCT                   | DESCRIPTION                                                                                                                                                                                        |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Poly 15-3 Liquid Plastic  | This highly filled plastic has a density similar to stone when cured and exhibits the least amount of shrinkage compared to other Polytek® plastics.                                               |
| Poly 15-3X Liquid Plastic | A fast-setting version of Poly 15-3 Liquid Plastic.                                                                                                                                                |
| Poly 1511 Liquid Plastic  | This plastic has the feel and density of hard wood or thermoplastics when cured. When mixed with PolyFiber II, a thickening agent, it is a great option for making tough, lightweight mold shells. |
| Poly 1512 Liquid Plastic  | This plastic has the feel and density of hard wood or thermoplastics when cured.                                                                                                                   |
| Poly 1512X Liquid Plastic | A fast version of Poly 1512 Liquid Plastic. When used with PolyFiber II thickener, this is a very popular option for the construction of mold shells.                                              |

Product Specifications

| BRAND                                                                               | PRODUCT                    | MIX RATIO BY WEIGHT | SHORE HARDNESS | POT LIFE | MIXED VISCOSITY | DEMOLD TIME * | CURED COLOR |
|-------------------------------------------------------------------------------------|----------------------------|---------------------|----------------|----------|-----------------|---------------|-------------|
|    | Poly 15-3 Liquid Plastic   | 1A:1B               | D80            | 15 min.  | 2,000 cP        | 12 hr.        | Tan         |
|  | Poly 15-3X Liquid Plastic  | 1A:1B               | D80            | 5 min.   | 2,000 cP        | 1 hr.         | Tan         |
|  | Poly 1511^ Liquid Plastic  | 1A:1B               | D71            | 10 min.  | 400 cP          | 30 min.–1 hr. | White       |
|  | Poly 1512^ Liquid Plastic  | 1A:1B               | D71            | 22 min.  | 400 cP          | 1–16 hr.      | White       |
|  | Poly 1512X^ Liquid Plastic | 1A:1B               | D71            | 5 min.   | 400 cP          | 30 min.       | White       |

\* Demold time varies with thickness of casting and the amount of accelerator used.

^  **WARNING:** This product can expose you to chemicals including Phenylmercuric compound, which is known to the State of California to cause reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).





## Clear Casting Polyurethane Resins | Water-Clear Plastics

Poly-Optic® 14-Series and CPD plastics are specifically designed for applications where optical clarity is a must. Castings will be water-clear; however, PolyColor Dyes can be added to obtain clear, colored castings. In addition, Poly-Optic® systems can be filled with metal, marble and many other fine powders to achieve myriad effects.

These plastics can be cast in PlatSil® platinum-cured silicone without release agent and can be cast in polyurethane rubber molds when a suitable release agent is used (e.g., Pol-Ease® 2300 Release Agent). TinSil® tin-cured molds are not recommended as cure inhibition can occur.

**NOTES:** Vacuum and/or pressure casting techniques are recommended for bubble-free Poly-Optic® parts.

### PRODUCT LINE FEATURES

- Type: Two-part polyurethane resins
- Room temperature curing (RTV)
- Shore A70 to D85 hardness options

- Water-clear color
- Easily accepts dyes and dry fillers
- Tough and hard
- Reproduces fine detail
- Low shrinkage upon cure
- Can be machined, drilled and sanded
- Optional accessories including accelerator and retarder
- Non-yellowing formulas (except Poly-Optic® 14-70); however, not recommended for long-term exterior use

### POPULAR APPLICATIONS

- Sculpture & Foundry
- Prototyping
- Theming & Display
- Prop Making
- Prototyping
- Hobby & Craft Projects

| BRAND                                                                               | PRODUCT                                   | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Poly-Optic® 1411 Casting Resin            | This casting resin cures to a super strong, water-clear, D80 plastic. Poly-Optic® 1411 develops hardness and can be demolded sooner than Poly-Optic® 1410. It also has a higher heat deflection temperature, which is useful in certain prototyping applications.                                                                                                                               |
|  | Poly-Optic® 1420 Casting Resin            | This casting resin cures to a tough, impact- and heat-resistant, water-clear plastic that can be polished and machined. For strong plastic, heat cure at 150°-180°F. For brittle, glass-like castings, cure at room temperature.                                                                                                                                                                |
|  | CPD 8003A Prepolymer / CPD 8085B Curative | CPD 8003A Prepolymer with CPD 8085B Curative is a two part, mercury-free, polyurethane system formulated to produce tough, crystal clear prototypes and parts. It offers a convenient 1 to 1 mix ratio by weight and a low mixed viscosity. The product also provides a combination of heat deflection temperature and Izod impact strength that rivals any product on the market today.        |
|  | CPD 8003A Prepolymer / CPD 8086B Curative | CPD 8003A Prepolymer with CPD 8086B Curative is a two part, mercury-free, polyurethane system formulated to produce tough, crystal clear prototypes and parts. It offers a convenient 1 to 1 mix ratio by weight and a low mixed viscosity. The product also provides a combination of heat deflection temperature and Izod impact strength that rivals any product on the market today.        |
|  | CPD 9135A Prepolymer / CPD 9135B Curative | CPD 9135A Prepolymer with CPD 9135B Curative is mercury-free, optically clear, very low viscosity, two component, tough, soft and flexible room temperature curing urethane elastomer. This product has excellent handling characteristics and very low sensitivity to moisture during processing and curing. Among its many uses are flexible cast parts, washers, gaskets, and flexible pads. |

## Product Specifications

| BRAND                                                                             | PRODUCT                                      | MIX RATIO           | SHORE HARDNESS | MIXED VISCOSITY | POT LIFE | DEMOLD TIME *                    | CURED COLOR     |
|-----------------------------------------------------------------------------------|----------------------------------------------|---------------------|----------------|-----------------|----------|----------------------------------|-----------------|
|  | Poly-Optic® 1411 Casting Resin <sup>^</sup>  | 1A:1B by volume     | D80            | 600 cP          | 9 min.   | 30 min.<br>(½-inch thick)        | Water-Clear     |
|  | Poly-Optic® 1420 Casting Resin <sup>^^</sup> | 2A:1B by weight     | D85            | 250 cP          | 15 min.  | 8 hr. @ 150°F<br>30 min. @ 175°F | Water-Clear     |
|  | CPD 8003A Pre-polymer / 8085B Curative       | 100A:100B by weight | 80             | 800             | 5 min.   | 50 min. at 25°C                  | Crystal Clear   |
|  | CPD 8003A Pre-polymer / 8086B Curative       | 100A:100B by weight | 80             | 800             | 15 min.  | 140 min. at 25°C                 | Crystal Clear   |
|  | CPD 9135A Pre-polymer / 9135B Curative       | 100A:10B by weight  | 35             | 520             | 14 min.  | 16-24 hours at 25°C              | Optically Clear |

\* Demold time varies with thickness of casting and the amount of accelerator used.

<sup>^</sup>  **WARNING:** This product can expose you to chemicals including Phenylmercuric compounds and Lead, which are known to the State of California to cause cancer and/or reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

<sup>^^</sup>  **WARNING:** This product can expose you to chemicals including Phenylmercuric compound, which is known to the State of California to cause reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

# Poly Plasti-Flex Liquid Casting Resin | Slightly Flexible Plastic

Poly Plasti-Flex is a flexible polyurethane casting material that is most often used for making slightly flexible and impact-resistant parts such as decorative trim, flex molding and millwork. Poly Plasti-Flex also works well for casting props and display items requiring high impact resistance.

## PRODUCT LINE FEATURES

- Type: Two-part polyurethane resin
- Room temperature curing (RTV)
- Slightly flexible, impact resistant
- Reproduces fine detail
- Can be machined, drilled, sanded (contains no silica)
- Can be colored with PolyColor Dyes
- Add PolyFiber II for brush-on or trowel application
- A variety of optional accessories

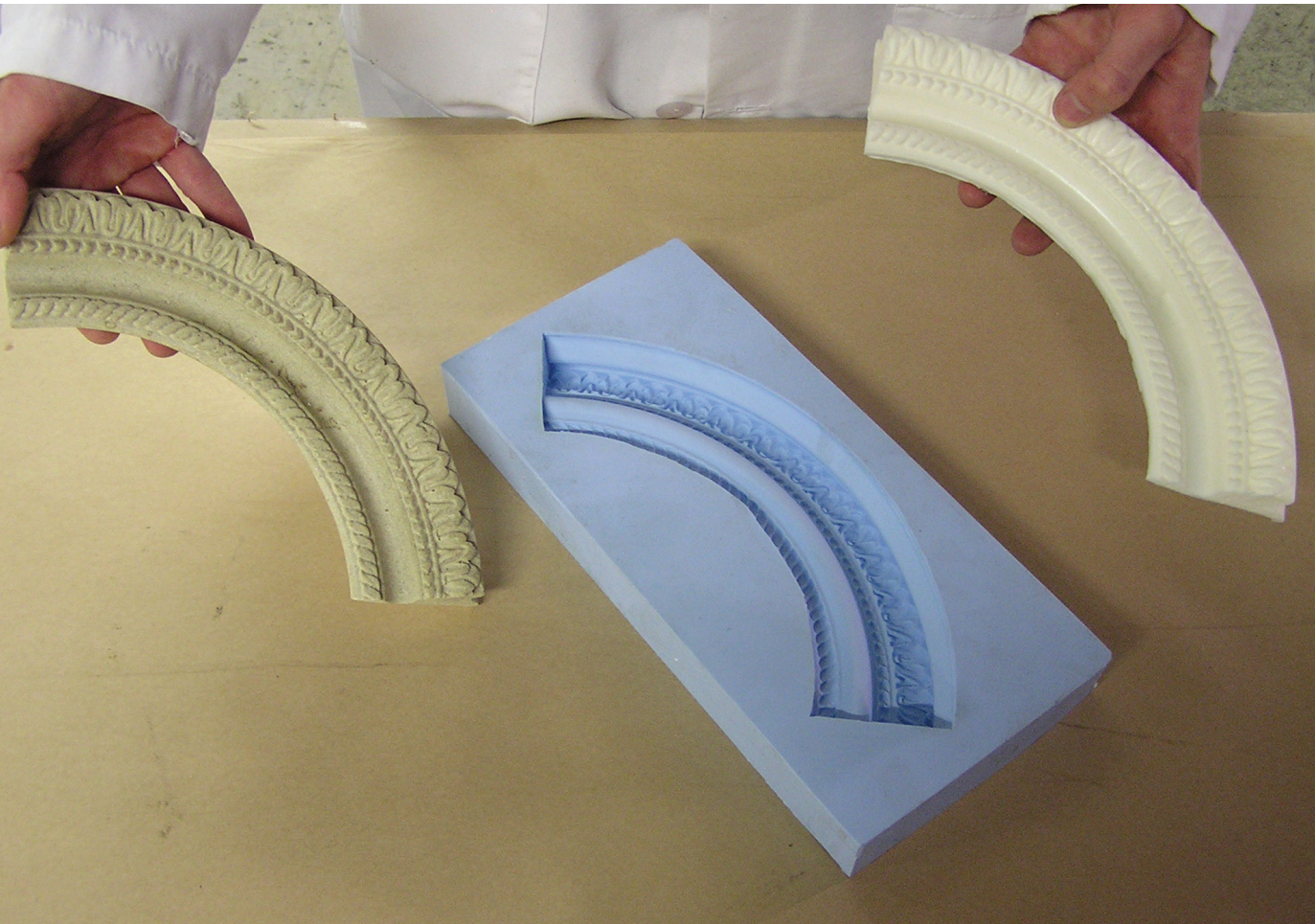
## POPULAR APPLICATIONS

- Decorative Molding, Millwork & Trim
- Prop Making

## Product Specifications

| BRAND                                                                             | PRODUCT                       | MIX RATIO BY WEIGHT | SHORE HARDNESS | MIXED VISCOSITY | POT LIFE | DEMOLD TIME | CURED COLOR |
|-----------------------------------------------------------------------------------|-------------------------------|---------------------|----------------|-----------------|----------|-------------|-------------|
|  | Poly Plasti-Flex <sup>^</sup> | 35A:100B            | A90            | 3,000 cP        | 3 min.   | 15 min.     | Tan         |

<sup>^</sup>  **WARNING:** This product can expose you to chemicals including Phenylmercuric compound, which is known to the State of California to cause reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



## Polyurethane Casting Plastic Accessories

| ACCELERATORS                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Poly 15<br>Part X Accelerator        | Poly 15 Part X Accelerator accelerates the pot life and demold times of Poly 15-Series & EasyFlo Series products. A few drops added to a one-pound mix speeds the cure significantly. Experiment to determine how much Part X is needed for your application. Do not exceed 1% of the total mixed weight as final physical properties may be affected.                                                                                          |
| Poly-Optic® 14<br>Part X Accelerator | <p>Poly-Optic® 14 Part X Accelerator speeds the cure of Poly-Optic® products (recommended for castings less than ½" thick). Experiment to determine how much Part X is needed for your application. Do not exceed 1% of the total mixed weight as final physical properties may be affected.</p> <p><b>EXAMPLE:</b> 0.5 grams of Part X in a 100 gram mix of Poly-Optic® 1410 Clear Casting Resin cuts the pot life and cure times in half.</p> |
| RETARDER                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Poly-Optic® 14<br>Part R Retarder    | <p>Poly-Optic® 14-Series Part R Retarder slows the cure of Poly-Optic® products. For every part of Part R added, an equal part of Part A must be added to the mix. Experiment to determine how much is needed for your application. Do not exceed 4% of the total mixed weight as the product may not cure properly.</p> <p><b>EXAMPLE:</b> Add 1% Part R to Poly-Optic® 1411 to double the working time from 9 to 18 minutes.</p>              |
| COLOR DYES & UV STABILIZER           |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| PolyColor Dyes                       | Oil-based dyes for coloring Polytek®'s polyurethane plastics. Available in black, brown, blue, green, red yellow, white and fleshtone. Add up to 0.5% of the total mixed weight of the plastic.                                                                                                                                                                                                                                                 |
| UV Additive                          | Add this liquid additive to polyurethane plastics to improve exterior durability and reduce surface degradation caused by sunlight or other UV light sources.                                                                                                                                                                                                                                                                                   |
| FILLERS & THICKENERS                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| PolyFiber II<br>Thickening Agent     | Add PolyFiber II to Polytek® liquid polyurethane plastics to thicken for brush-on application or to make mold shells.                                                                                                                                                                                                                                                                                                                           |
| Bronze Powder                        | Add Bronze Powder (325 Mesh) to EasyFlo Liquid Plastic to create cold cast bronze parts. This technique is most popular with EasyFlo 60 & EasyFlo Clear.                                                                                                                                                                                                                                                                                        |
| PRODUCT LIFE EXTENDER                |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| PolyPurge Dry<br>Aerosol Gas         | Spray PolyPurge into open polyurethane Part A and B containers just before resealing to displace moist air and extend the product life.                                                                                                                                                                                                                                                                                                         |
| REINFORCEMENT MATERIALS              |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Fiberglass Mat                       | A non-woven, 1.5 oz. per square foot, chopped strand mat to reinforce Polytek® resins.                                                                                                                                                                                                                                                                                                                                                          |

Refer to the "Accessories & Tools" section of this catalog for additional accessories, including Tools & Mixing Equipment, Safety Equipment, Adhesives, Digital Scales, PlasPak Spray Equipment and Drum Handling Equipment. Refer to the "Release Agents & Sealers" section for release agents and sealers.

# CASTING FOAMS



## Rigid & Flexible Polyurethane Foams

Polytek® manufactures two-part, closed-cell polyurethane systems that are used to cast lightweight rigid or flexible objects with densities in the range of 3 to 20 lb/ft<sup>3</sup>. These foams have numerous uses in commercial, industrial, hobby, craft, prop and display applications.

Since these products are self-skinning, cast parts will capture full surface detail of the mold used. Generally, these products can be poured into TinSil® or PlatSil® silicone molds. Barrier coats (e.g., primer paint) can be applied to silicone molds before casting foam in order to produce pre-primed parts right out of the mold. These foams can also be poured into Poly 74-Series & 75-Series polyurethane rubber molds that have been coated with PolyCoat Sealer & Release Agent.

In addition to producing finished parts, urethane foams are often used to backfill hollow rubber and plastic castings. Poly Series foams will chemically bond to polyurethane rubbers and plastics; for the best results, the foam should be poured into these castings before the plastic or rubber is fully cured. To bond urethane foam to silicone rubber, a mechanical bond (e.g., cotton fibers) must be used.

### PRODUCT LINE FEATURES

- Many easy 1A:1B mix ratios
- Closed cell & self-skinning
- Rigid & flexible systems
- Cast parts with 3 to 20 lb/ft<sup>3</sup> densities
- PolyFoams are practically odorless and do not contain toluene diisocyanate, MOCA, heavy metals or HCFCs
- Can be colored with PolyColor Dyes

### POPULAR APPLICATIONS

- Decorative Millwork & Ornamentation
- Prop Making
- Prototyping
- Taxidermy
- Theming, Display & Décor
- Lightweight Mold Shells
- General Tooling Use

## Rigid Polyurethane Foam Product Options

| BRAND                                                                                                        | PRODUCT               | MIX RATIO BY VOLUME | MIXED VISCOSITY | CREAM TIME | DEMOLD TIME | FREE-RISE DENSITY      | MOLDED DENSITY           |
|--------------------------------------------------------------------------------------------------------------|-----------------------|---------------------|-----------------|------------|-------------|------------------------|--------------------------|
|  <b>SILPAK</b>              | SP-328-4              | 1A:1B               | 1,000 cP        | 60 sec.    | 20 min.     | 4 lb/ft <sup>3</sup>   | 5-8 lb/ft <sup>3</sup>   |
|  <b>SILPAK</b>              | SP-328-8              | 1A:1B               | 1,100 cP        | 45 sec.    | 10-15 min.  | 8 lb/ft <sup>3</sup>   | 8-20 lb/ft <sup>3</sup>  |
|  <b>SILPAK</b>              | SP-328-12             | 1A:1B               | 635 cP          | 60 sec.    | 10-15 min.  | 12 lb/ft <sup>3</sup>  | 12-14 lb/ft <sup>3</sup> |
|  <b>AEROMARINE PRODUCTS</b> | Pour-In-place 2# Foam | 1A:1B               | 500 cP          | 1 min.     | 24 hours    | 2 lb / ft <sup>3</sup> | 2 lb / ft <sup>3</sup>   |

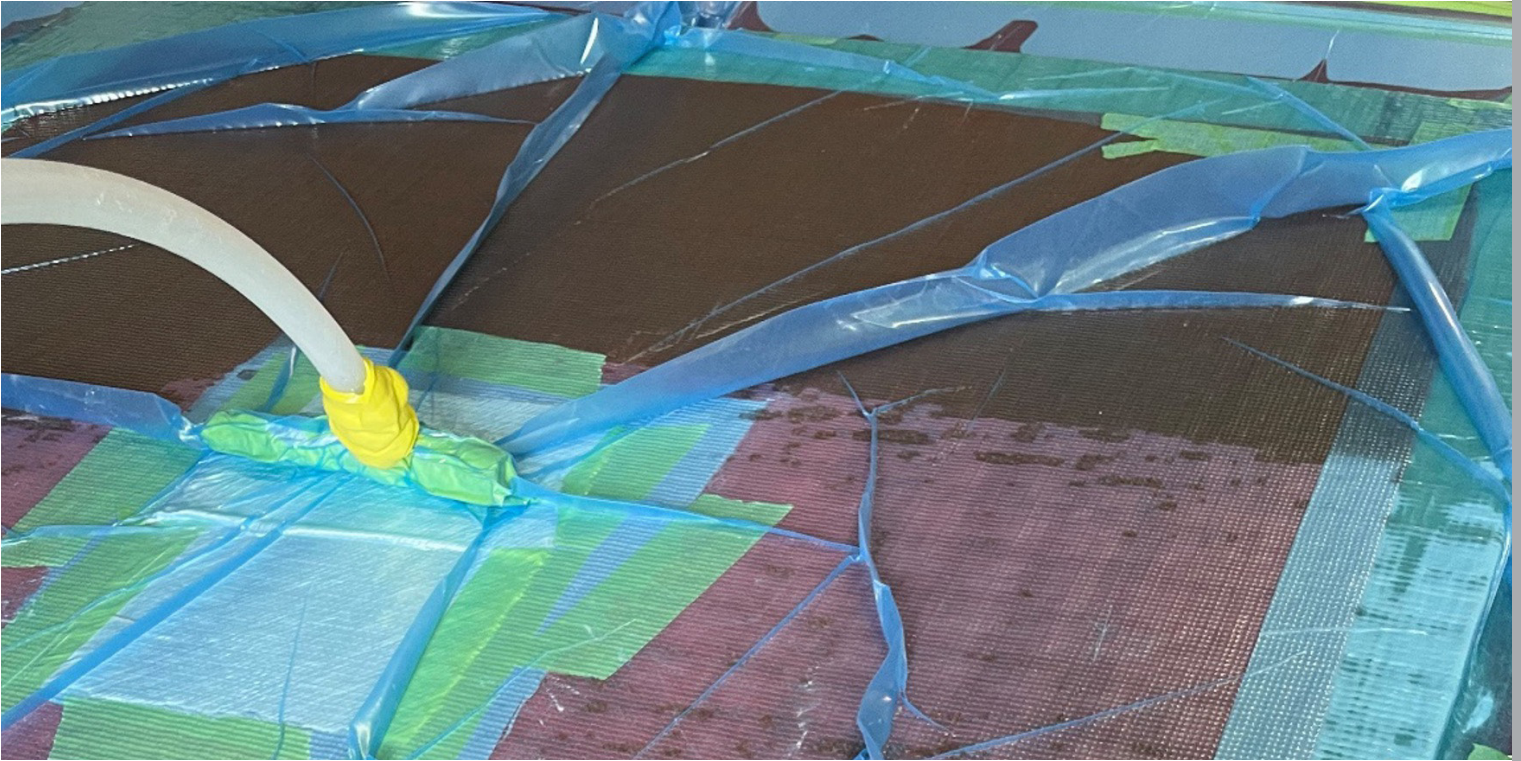
## Flexible Polyurethane Foam Product Options

| BRAND                                                                                                              | PRODUCT       | MIX RATIO BY WEIGHT | CREAM TIME SEC. | RISE TIME SEC. | DEMOLD TIME, MIN | EXPANSION RATE, VOL  | COLOR                   |
|--------------------------------------------------------------------------------------------------------------------|---------------|---------------------|-----------------|----------------|------------------|----------------------|-------------------------|
|  <b>Polytek Development Corp.</b> | PolyFoam F-3  | 1A:2B               | 2,000 cP        | 25 sec.        | 10 min.          | 3 lb/ft <sup>3</sup> | 5-8 lb/ft <sup>3</sup>  |
|  <b>Polytek Development Corp.</b> | PolyFoam F-5^ | 1A:1B               | 1,400 cP        | 45 sec.        | 30-60 min.       | 5 lb/ft <sup>3</sup> | 8-15 lb/ft <sup>3</sup> |
|  <b>SILPAK</b>                    | SP-100-8      | 34A:66B             | 60              | 90-120         | 15-25 min.       | < 8 times            | White                   |
|  <b>SILPAK</b>                    | SP-328-8      | 1A:1B               | 60              | 150-200.       | 20-40 min.       | 5 times              | White                   |

^  **WARNING:** This product can expose you to chemicals including Butyl benzyl phthalate (BBP), which is known to the State of California to cause reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



# EPOXY SYSTEMS



## EPOXY SYSTEMS: INTRODUCTION

Polytek manufactures a variety of CPD and Aeromarine brand epoxy resin systems that are well suited for many processes. Epoxy has many advantages over other resins. Epoxy adheres tenaciously to a broad range of substrates, particularly those that are frequently used as reinforcement in composite parts and structures. Epoxy resin systems can be formulated with various curing agents, diluents, fillers and other additives to produce an almost unlimited range of properties. Epoxy resin systems are resistant to acids, bases, and solvents which makes epoxy the ideal choice for long lasting parts. Epoxy resin systems formulated for the fabrication of structural composites are typically 100 percent solids. No byproducts, volatile or otherwise, are formed as these systems polymerize. The dimensional stability provided by an epoxy resin system generates structures exhibit low shrinkage with lower ingrained stress levels when fabricating composite parts. As a result, finished pieces are stronger and more durable than those produced using organic polymers that exhibit higher values of shrinkage.

### PRODUCT LINE FEATURES

- The advantage of epoxy is its **excellent adhesion** to almost any surface.
- The **tremendous versatility** of epoxy makes it possible to tailor the handling and mechanical properties of an epoxy resin system to meet your needs.
- Properly cured epoxy resin systems have **excellent chemical resistance** to acids, bases and solvents.
- There are **no VOC** (Volatile Organic Compound) issues associated with the handling of epoxy resin systems.
- Epoxy resin systems exhibit **low shrinkage** during cure and allow for the precise reproduction of mold surfaces.

### EPOXY SYSTEMS ARE CLASSIFIED INTO THE FOLLOWING CATEGORIES:

- Adhesive Systems
- Bio-Based Epoxy Systems
- Casting Systems
- Surface Coat Systems
- Filament Winding Systems
- Infusion/Injection/RTM Systems
- Laminating Systems
- Compression / Press Molding Systems
- Pultrusion / Systems

## Adhesive Epoxy Systems

Epoxy adhesives are two-component, room-temperature curing (RTV) systems designed to be used for general-purpose bonding. CPD Adhesive Epoxy Systems demonstrate a broad range of adherence to various materials, encompassing metals, composites, plastics, rubber, foams, ceramics, and wood. They possess substantial tensile strength, bond strength, high-temperature durability, and superior chemical resistance. Incorporating CPD or Polytek structural epoxy adhesives in your application can significantly enhance performance compared to conventional fastening methods.

### POPULAR APPLICATIONS

- Aerospace
- Automotive
- Marine
- NSF Certified
- Sports & Recreation
- Tooling

### PRODUCT OPTIONS

| Brand      | Resin   | Hardener | Description          | Mix Ratio by Volume | Mix Ratio by Weight | Initial Mixed Viscosity 25°C, cP | Gel Time at 25°C, 150 g mass, minutes | HDT, °F |
|------------|---------|----------|----------------------|---------------------|---------------------|----------------------------------|---------------------------------------|---------|
| <b>CPD</b> | 9315A   | 9315B    | Toughened            | 100A : 39B          | 100A : 33B          | 1,000                            | 60                                    | 175*    |
| <b>CPD</b> | 9490-7A | 9490B    | Chemically Resistant | 2A : 1B             | 100A : 44B          | 120,000                          | 15                                    | 210*    |
| <b>CPD</b> | 9491A   | 9491B    | Fire Resistant       | 2.88A : 1B          | 100A : 31.7B        | 200,000                          | 75                                    | 170*    |
| <b>CPD</b> | 9498A   | 9498B    | Flexible             | 1A : 1B             | 100A : 83B          | Thixotropic Paste                | 40                                    | 189*    |

\*Post Cure

## Casting Epoxy Systems

CPD Casting Epoxy Systems serve a multitude of purposes in various industries, primarily for creating robust, heat-resistant tooling or fixtures. Offerings are designed to allow a range of casting thicknesses, allowing you to choose the product best suited to your application. To enhance durability and performance, many systems are filled to allow enhanced durability or temperature tolerance needed for parts in the automotive, aerospace, and sports industries.

### POPULAR APPLICATIONS

- Aerospace
- Automotive
- Marine

### PRODUCT OPTIONS

| Brand      | Resin | Hardener | Description     | Initial Mixed Viscosity 25°C, cP | Gel Time at 25°C, 150 g mass, minutes | HDT °F | Max Casting Thickness, Wood/Plaster Molds, inches | Max Casting Thickness, Metal Molds, inches |
|------------|-------|----------|-----------------|----------------------------------|---------------------------------------|--------|---------------------------------------------------|--------------------------------------------|
| <b>CPD</b> | 301A  | 301B     | Aluminum Filled | 7,000                            | 45-50                                 | 170*   | ≤ 3/4                                             | ≤ 3/4                                      |
| <b>CPD</b> | 302A  | 302B     | Aluminum Filled | 6,200                            | 35-40                                 | 170*   | ≤ 1/2                                             | ≤ 3/4                                      |
| <b>CPD</b> | 9533A | 9286B    | Aluminum Filled | 18,000                           | 90                                    | 355*   | ≤ 1                                               | ≤ 2                                        |
| <b>CPD</b> | 9533A | 9255B    | Aluminum Filled | 18,000                           | 200                                   | 355*   | ≤ 3                                               | ≤ 3                                        |

\*Post Cure

# Surface Coat Resins

CPD Coating Epoxy Systems are widely recognized as the preferred solution in a multitude of industrial applications due to their superior protective characteristics. These properties, which include defense against abrasion, turbulence, oxidation, corrosion, temperature fluctuations, fire, moisture, impact, vibration, shock, and compression, make CPD epoxies an ideal choice. Industries such as aerospace, automotive, marine, and sporting equipment frequently experience such conditions, thereby favoring the usage of CPD epoxy systems for coating applications.

## POPULAR APPLICATIONS

- Aerospace
- Automotive
- Marine
- Sports & Recreation
- Tooling

## PRODUCT OPTIONS

| Brand | Resin | Hardener | Description     | Mix Ratio by Weight | Initial Mixed Viscosity 25°C, cP | Gel Time at 25°C, 150g mass, minutes | HDT, °F |
|-------|-------|----------|-----------------|---------------------|----------------------------------|--------------------------------------|---------|
| CPD   | 2102A | 9244B    | Aluminum Filled | 8A : 1B             | Thixotropic                      | 120                                  | 300*    |
|       |       | 9245B    |                 | 6A : 1B             | Thixotropic                      | 60                                   | 282*    |
| CPD   | 2132A | 9284B    | Aluminum Filled | 100A : 10B          | Thixotropic                      | 30                                   | 355*    |
|       |       | 9286B    |                 | 100A : 10B          | Thixotropic                      | 60                                   | 355*    |
| CPD   | 406A  | 406B     | General Purpose | 10A : 1B            | Thixotropic Paste                | 20                                   | 165*    |

\*Post Cure



## Laminating Epoxy Systems

CPD and AeroMarine Laminating Epoxy Systems are engineered to accommodate many wet-layup applications. These epoxy systems are instrumental in crafting lightweight, robust composite structures capable of enduring sustained stress, even under the most severe conditions. Their bonding capacity extends to a diverse range of materials and reinforcing fabrics, demonstrating exceptional resistance to moisture, heat, and fatigue. CPD and Polytek Laminating epoxies exhibit superb physical properties at room temperature with the option to post-cure to increase performance.

### POPULAR APPLICATIONS

- Aerospace
- Automotive
- Cured in Place Pipe
- Marine
- NSF Certified
- Sports & Recreation
- Tooling

### PRODUCT OPTIONS

| Brand                                                                                                          | Resin                         | Hardener | Description                                 | Mix Ratio by Volume | Initial Mixed Viscosity 25°C, cP | Gel Time at 25°C, 150g mass, minutes | HDT, °F |
|----------------------------------------------------------------------------------------------------------------|-------------------------------|----------|---------------------------------------------|---------------------|----------------------------------|--------------------------------------|---------|
| <b>CPD</b>                                                                                                     | 100A<br>107A<br>(thixotropic) | 9252B    | Wood Laminating                             | 5A : 1B             | 1,200 / 2,200                    | 13                                   | 202*    |
|                                                                                                                |                               | 9253B    |                                             | 5A : 1B             | 450 / 1,300                      | 23                                   | 132     |
|                                                                                                                |                               | 9292B    |                                             | 3A : 1B             | 460 / 590                        | 25                                   | 135     |
|                                                                                                                |                               | 4364B    |                                             | 3A : 1B             | 430 / 550                        | 120                                  | 135     |
|                                                                                                                |                               | 9287B    |                                             | 3A : 1B             | 440 / 570                        | 220.                                 | 135     |
| <b>CPD</b>                                                                                                     | 2134A                         | 4307B    | High Temp Tooling                           | 100A : 90B (by wt)  | 1,800                            | 1,440                                | 385*    |
|                                                                                                                |                               | 9286B    |                                             | 6A : 1B             | 1,800                            | 50                                   | 355*    |
| <b>CPD</b>                                                                                                     | 4215A                         | 9372B    | Hand Layup, Vacuum Bagging                  | 3A : 1B             | Thixotropic                      | 28                                   | 185*    |
|                                                                                                                |                               | 9373B    |                                             | 3A : 1B             | Thixotropic                      | 129                                  | 166*    |
| <b>CPD</b>                                                                                                     | 4217A                         | 9263B    | Thixotropic, Hand Layup, Vacuum Bagging     | 2.5A : 1B           | 2,100                            | 38                                   | 168*    |
|                                                                                                                |                               | 9283B    |                                             | 2.5A : 1B           | 1,400                            | 140                                  | 164*    |
|                                                                                                                |                               | 9292B    |                                             | 2.5A : 1B           | 1,800                            | 50                                   | 166*    |
|                                                                                                                |                               | 4364B    |                                             | 2.5A : 1B           | 1,200                            | 440                                  | 165*    |
|                                                                                                                |                               | 9287B    |                                             | 2.5A ; 1B           | 1,100                            | 600                                  | 165*    |
| <b>CPD</b>                                                                                                     | 4222A                         | 9372B    | General Purpose, Hand Layup, Vacuum Bagging | 3A : 1B             | 800                              | 60                                   | 185*    |
|                                                                                                                |                               | 9373B    |                                             | 3A : 1B             | 580                              | 215                                  | 181*    |
| <b>CPD</b>                                                                                                     | 4282A                         | 4302B    | High-Temp, Flame Retardant                  | 1.5A : 1B           | 3,200                            | 30                                   | 250*    |
| <b>CPD</b>                                                                                                     | 4358A                         | 4359B    | NSF Certified                               | 2A : 1B             | 900                              | 85                                   | 158*    |
| <b>CPD</b>                                                                                                     | 506A                          | 506B     | General Purpose, Filled                     | 4.3A : 1B           | 3,000                            | 30                                   | 200*    |
|  <b>AeroMarine Products</b> | 300/21 A                      | 300/21 B | General Purpose, Fille                      | 2A : 1B             | 600                              | 30                                   | 225     |

\*Post Cure

## Filament Winding Epoxy Systems

CPD Epoxy Systems are extensively used in filament winding processes due to their beneficial properties and exceptional structural integrity. Filament winding is a manufacturing process utilized in the production of cylinders, pipes, tanks, pressure vessels, structural tubing, and bushings. CPD epoxies are frequently employed by manufacturers seeking to fabricate advanced composite materials to yield products that are lightweight and durable.

### POPULAR APPLICATIONS

- Aerospace
- Automotive
- Marine
- NSF Certified

### PRODUCT OPTIONS

| Brand      | Resin | Hardener | Description      | Initial Mixed Viscosity 25°C, cP | Gel Time at 25°C, 150 g mass, minutes | HDT, °F | Flexural Strength | Tensile Strength |
|------------|-------|----------|------------------|----------------------------------|---------------------------------------|---------|-------------------|------------------|
| <b>CPD</b> | 3727A | 3950B    | High Performance | 2,800                            | 516                                   | 368*    | 13,700            | 9,300            |
|            |       | 3951B    |                  | 1,000                            | 200                                   | 240*    | 16,300            | 9,800            |
|            |       | 3954B    |                  | 1,500                            | 250                                   | 183*    | 14,600            | 9,100            |
|            |       | 3955B    |                  | 1,300                            | 160                                   | 315*    | 18,900            | 11,900           |
| <b>CPD</b> | 4358A | 4358B    | NSF Certified    | 550 - 850                        | 40-45                                 | 150*    | 12,500            | 9,500            |

\*Post Cure

## Infusion / Injection / RTM Epoxy Systems

CPD Infusion Epoxy Systems produce lightweight, high-strength composite parts with superior mechanical properties, resistance to corrosion, and dimensional stability. They have low viscosity and high reactivity and are ideal for impregnating reinforcing fibers such as carbon fiber or fiberglass when utilizing vacuum infusion processes. CPD epoxy infusion resins are employed in the aerospace, automotive, marine, wind energy, and sporting goods industries who rely heavily on lightweight, durable composite materials to meet their stringent requirements.

### POPULAR APPLICATIONS

- Aerospace
- Automotive
- Marine

### PRODUCT OPTIONS

| Brand      | Resin | Hardener | Description               | Mix Ratio by Volume | Initial Mixed Viscosity 25°C, cP | Gel Time at 25°C, 150g mass, minutes | HDT Post Cure, °F |
|------------|-------|----------|---------------------------|---------------------|----------------------------------|--------------------------------------|-------------------|
| <b>CPD</b> | 2110A | 9227B    | Color indicator available | 3A : 1B             | 300                              | 130                                  | 190*              |
|            |       | 9260B    |                           | 3A : 1B             | 300                              | 50                                   | 200*              |
|            |       | 9262B    |                           | 3A : 1B             | 300                              | 35                                   | 200*              |
| <b>CPD</b> | 4288A | 9239B    | Flame Retardant           | 4A : 1B             | 500                              | 50                                   | 197*              |
| <b>CPD</b> | 4281A | 4284B    | Low Viscosity             | 100A : 27B          | 150                              | 40                                   | 180               |
|            |       | 4286B    |                           | 100A : 27B          | 220                              | 70                                   | 210               |
|            |       | 9226B    |                           | 3A : 1B             | 275                              | 480                                  | 170               |
|            |       | 9227B    |                           | 3A : 1B             | 280                              | 130                                  | 180               |
| <b>CPD</b> | 4310A | 9226B    | High Temp                 | 2.5A : 1B           | 200                              | 450                                  | 185*              |
|            |       | 9234B    |                           | 3.2A : 1B           | 400-600                          | 110                                  | 312*              |
|            |       | 9239B    |                           | 4A : 1B             | 400-600                          | 60                                   | 259*              |

\*Post Cure

## Compression / Press Molding Epoxy Systems

CPD Epoxy Resin Systems are widely recognized for their superior mechanical properties, impressive heat resistance, and remarkable dimensional stability, making them a preferred choice in compression molding. Upon curing, your epoxy parts display exceptional strength and robustness, establishing their suitability for applications demanding sturdy molded components including, but not limited to, aerospace components, sports equipment, electrical insulation, and structural composites.

### POPULAR APPLICATIONS

- Aerospace
- Automotive
- Marine
- Sports & Recreation
- Tooling

### PRODUCT OPTIONS

| Brand | Resin | Hardener | Initial Mixed Viscosity 25°C, cP | Gel Time at 25°C, 150 g mass, minutes | HDT, °F | Flexural Strength, psi |
|-------|-------|----------|----------------------------------|---------------------------------------|---------|------------------------|
| CPD   | 3686A | 3800B    | 7,000                            | 14                                    | 230*    | 15,900                 |
|       |       | 3874B    | 2,000                            | 20-30                                 | 252*    | 18,600                 |
|       |       | 3875B    | 2,000                            | 50-60                                 | 260*    | 19,000                 |
| CPD   | 3612A | 3875B    | 1,300                            | 50-60                                 | 261*    | 19,500                 |

## Pultrusion Epoxy Systems

CPD Epoxy Systems for Pultrusion offer a cost-efficient method for producing highly rigid composites that are viable for alternatives to conventional construction materials. The CPD composite materials offer the flexibility of being engineered for varying degrees of flexural, impact, tensile, compressive strengths, and structural shape. The utility of pultruded composite profiles is underscored by their lightweight construction, superior strength, corrosion resistance, and ease of installation.

### POPULAR APPLICATIONS

- Aerospace

### PRODUCT OPTIONS

| Brand | Resin | Hardener | Description     | Initial Mixed Viscosity 25°C, cP | Gel Time at 25°C, 150 g mass, minutes | HDT, °F | Flexural Strength, psi |
|-------|-------|----------|-----------------|----------------------------------|---------------------------------------|---------|------------------------|
| CPD   | 2128A | 4302B    | General Purpose | 2,000                            | 30                                    | 260*    | 6,000                  |
| CPD   | 4282A | 4302B    | Flame Retardant | 3,200                            | 30                                    | 250*    | 6,600                  |
| CPD   | 4303A | 4303B    | High Temp       | 750                              | @170°F<br>120-240                     | 375*    | 20,500                 |

\*Post Cure

## Bio-Based Epoxy Resin Systems

By using our bio-based resin, you can produce durable composite parts while also making a positive impact on the environment. Traditional epoxy products are derived from crude oil, while our bio-based products are derived from agricultural by-products. Bio-Based Epoxy resins can be used for vacuum/resin infusion, resin transfer molding, wet compression molding and laminating.

### POPULAR APPLICATIONS

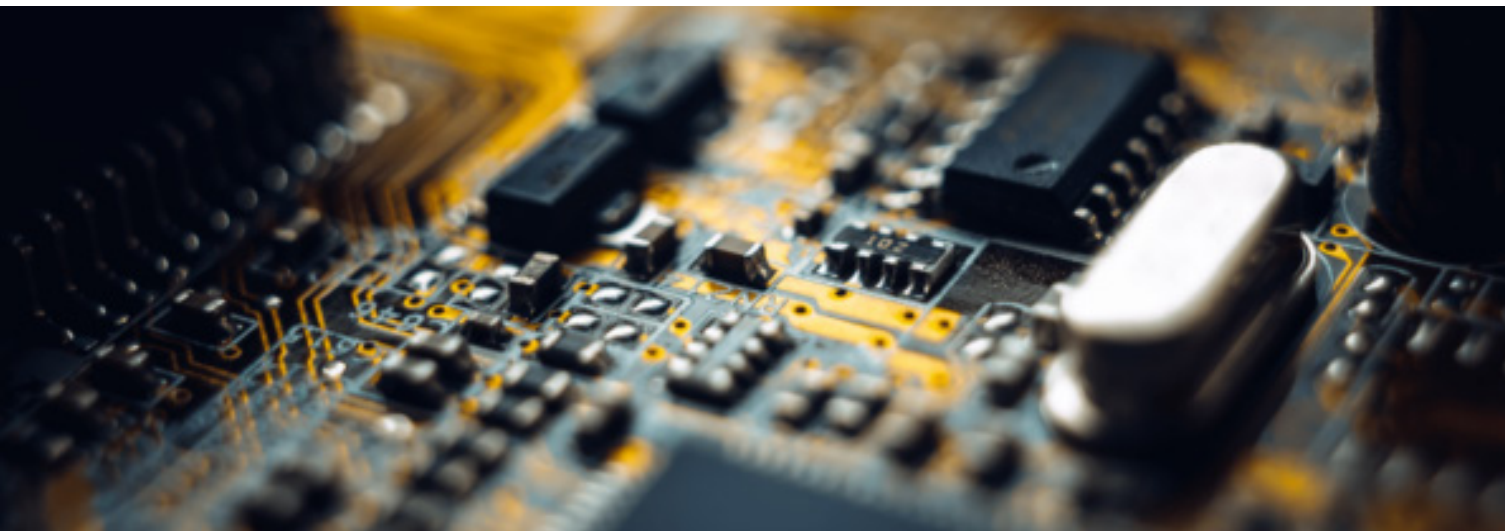
- Automotive
- Marine
- Sports & Recreation

### PRODUCT OPTIONS

| Brand | Resin | Hardener | Mix Ratio by Weight | Initial Mixed Viscosity 25°C, cP | Gel Time at 25°C, 150 g mass, minutes | HDT, °F |
|-------|-------|----------|---------------------|----------------------------------|---------------------------------------|---------|
| CPD   | 3686A | 3800B    | 100A :20B           | 7,000                            | 14 min                                | 230*    |
|       |       | 3874B    | 100A : 21B          | 2,000                            | 20-30                                 | 252*    |
|       |       | 3875B    | 100A : 21B          | 2,000                            | 50-60 min.                            | 260*    |
| CPD   | 3687A | 4286B    | 100A : 20B          | 300                              | 75 min.                               | 194*    |

\*Post Cure

# POTTING AND ENCAPSULATION



AeroMarine Potting and Encapsulating products are easy to use, low viscosity polymers with simple, 1A:1B mix ratios. A range of materials for potting and encapsulating are available from our easy to remove AM150 silicone used for testing new circuitry to our nearly indestructible 300/11 black epoxy potting compound used to prevent proprietary components from being disclosed. AeroMarine also offers an underwater polyurethane for encapsulating circuitry and splicing cables.

## POLYURETHANE POTTING COMPOUNDS | Underwater

Underwater polyurethane rubbers are used for encapsulating circuitry, splicing cables, and creating a protective and non-conductive dielectric layer against water, moisture, corrosive agents, chemicals, vibrations, and shock.

| BRAND                                                                                                   | PRODUCT | MIX RATIO BY WEIGHT | SHORE HARDNESS | MIXED VISCOSITY | POUR TIME | DEMOLD TIME | CURED COLOR |
|---------------------------------------------------------------------------------------------------------|---------|---------------------|----------------|-----------------|-----------|-------------|-------------|
|  AeroMarine Products | 75A     | 1A:1B               | A75            | 850 cP          | 5 min.    | 12 hr.      | Black       |

## SILICONE POTTING COMPOUNDS | High Temperature Encapsulation Rubber

High Temperature / Encapsulation Rubber that is flame resistant when cured. Use in testing applications where potting material may need to be removed.

| BRAND                                                                                                   | PRODUCT | MIX RATIO BY WEIGHT | SHORE HARDNESS | MIXED VISCOSITY | POUR TIME | DEMOLD TIME | CURED COLOR |
|---------------------------------------------------------------------------------------------------------|---------|---------------------|----------------|-----------------|-----------|-------------|-------------|
|  AeroMarine Products | AM150   | 1A:1B               | A50            | 2,000           | 45 mins   | 12 hr.      | Black       |

## EPOXY POTTING COMPOUNDS

The AeroMarine potting and encapsulating epoxy is a high-performance epoxy with a long work life, a room temperature cure, low viscosity, and can also be used as a coating to provide a dielectric barrier.

| Brand                                                                                                   | Resin    | Hardener | Mix Ratio by Volume | Initial Mixed Viscosity 25°C, cP | Gel Time at 25°C, 150g mass, minutes | HDT, °F |
|---------------------------------------------------------------------------------------------------------|----------|----------|---------------------|----------------------------------|--------------------------------------|---------|
|  AeroMarine Products | 300/11 A | 300/11 B | 1A : 1B             | 3,000                            | 45-60                                | 225     |

# LATEX



## NaturForm™ Series | Molding Latex Rubbers

The NaturForm Series offers high-performing, natural molding latex rubbers that are most often used to make molds for casting plaster, concrete (e.g., veneer stone manufacturing and statuary) and limited casting with some resins. NaturForm products offer excellent tear strength and elongation properties and are available in 60-64% solid content options and a high solids option (70-74%).NaturForm 60-R and NaturForm 74-R have an internal release agent that assists in the release of casting materials, like concrete. NaturForm Latex has better tear strength than most synthetic rubbers and is sometimes preferred for molds that are peeled off the casting like a sock. Since individual coats of latex must dry before further coats are applied, mold making may take days or longer to complete properly. For one-day brushed or sprayed molds, consider using Polygel® 35 Brush-On rubber (16-hour demold time).

**NOTE:** Exposure to temperatures <40°F and >80°F may damage latex, causing irreversible coagulation. Do not allow to freeze.

### Product Options

| PRODUCT           | PERCENT SOLIDS | VISCOSITY        | COLOR |
|-------------------|----------------|------------------|-------|
| NaturForm 60^     | 58-62%         | 9,500–10,500 cP  | White |
| NaturForm 60-R^   | 58-62%         | 5,000–6,000 cP   | Blue  |
| NaturForm 74^^    | 70-74%         | 9,000–15,000 cP  | White |
| NaturForm 74-R^^^ | 70-74%         | 17,000–20,000 cP | Blue  |

## NaturForm Series | Mask Making Latex Rubber

NaturForm 30^^^ Mask Making Latex Rubber is a one-part, pourable casting latex that can be used to make masks (Halloween, Special FX, Cosplay), props and animatronic skins. This natural latex is designed to be poured into a dry, unsealed Gypsum mold and air dries to form a high-strength, flexible casting.

**NOTE:** Exposure to temperatures <40°F and >80°F may damage latex, causing irreversible coagulation. Do not allow to freeze.

- ^ **⚠️ WARNING:** This product can expose you to chemicals including Cadmium, Diethanolamine and o-Phenylphenate, sodium which are known to the State of California to cause cancer and/or birth defects. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).
- ^^ **⚠️ WARNING:**This product can expose you to chemicals including o-phenylphenate, sodium which are known to the State of California to cause cancer. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).
- ^^^ **⚠️ WARNING:** This product can expose you to chemicals including o-phenylphenate, sodium and Benzene which are known to the State of California to cause cancer. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

# THERMOPLASTIC ELASTOMERS



## Dermasol

Dermasol is a series of soft, thermoplastic elastomers that feature high elongation properties. Thermoplastic elastomers, sometimes referred to as thermoplastic rubbers, are unique in that they combine the physical properties of rubber with the processing advantages of plastic. To mold Dermasol, it is heated to a molten temperature and then dispensed into a suitable, heat-resistant mold (e.g., 6061 aluminum, aluminum-filled epoxy molds, some platinum-cured silicone rubbers).

Dermasol feels remarkably like human flesh and is especially useful for simulating human/animal tissue and body parts for medical and surgical training.

### COMMON END PRODUCTS

- Medical Models & Surgical Training Aides
- Realistic Body Parts for Prop Making & Special Effects
- Soft Crown Protective Halos and other Protective Parts
- Specialty Casts

### CUSTOMIZABLE PROPERTIES

- Color (clear, opaque, translucent, glow-in-the-dark, fluorescent, custom color matching available, etc.)
- Durometer (Shore OO20-A25)
- Fragrance

| BRAND                                                                               | PRODUCT | DESCRIPTION  | SHORE HARDNESS | COLOR |
|-------------------------------------------------------------------------------------|---------|--------------|----------------|-------|
|  | DS-302  | Clear Medium | OO24 +/-2.     | Clear |
|  | DS-303  | Clear Hard   | OO36 +/-2      | Clear |
|  | DS-309  | Clear Soft   | OO16 +/-2      | Clear |

# RELEASE AGENTS & SEALERS



The careful selection of sealers and/or release agents is essential to successful mold making. There are many ways the following materials can be used separately or in conjunction with one another. The following descriptions are brief synopses of each product and do not include every possible scenario; please reach out to Polytek® if you are unsure of which sealer and/or release agent may be required for your unique application.

## Release Agents & Sealers for Mold Making

| PRODUCT                         | SEALER | RELEASE AGENT | DESCRIPTION                                                                                                                                                                                                                                                     |
|---------------------------------|--------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pol-Ease® 2300 Release Agent    |        | X             | Silicone-based, aerosol spray release agent for use on non-porous or sealed models. Should only be used with polyurethane rubber.                                                                                                                               |
| Pol-Ease® 2500 Release Agent    |        | X             | Aerosol spray release agent that can be washed off of models. Can be applied to models for use with liquid silicone rubbers, but is not recommended for use with liquid polyurethane rubber.                                                                    |
| Pol-Ease® 2350 Release Agent    | X      | X             | White petrolatum dissolved in mineral spirits. This semi-permanent option can serve as a sealer and/or release agent. Can be applied to models for use with liquid polyurethane and liquid silicone rubbers.                                                    |
| Pol-Ease® 2450 Release Agent    |        | X             | Solvent and silicone-based release agent for use on models before pouring liquid polyurethane rubber. Fast drying, but flammable.                                                                                                                               |
| Poly PVA Solution               | X      | X             | Water-soluble, alcohol-based sealer for porous models. Available in clear or green. Can be applied to models for use with liquid polyurethane and liquid silicone rubber. Must use additional release agent (Pol-Ease® 2300) when applying polyurethane rubber. |
| PolyCoat Sealer & Release Agent | X      | X             | Semi-permanent, silicone-based sealer and release agent. Can be applied to models for use with polyurethane and platinum-cured silicone rubbers (not recommended for use with tin-cured silicone rubbers).                                                      |

## Release Agents & Sealers for Casting

| PRODUCT                            | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pol-Ease® 2300 Release Agent       | Silicone-based, aerosol spray release agent. Apply to cured polyurethane molds when casting a variety of materials, including polyurethane liquid plastics, rubber or epoxies.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Pol-Ease® 2500 Release Agent       | <p>Aerosol spray release agent that can be washed off of castings. To extend mold life, apply to silicone molds when casting materials such as polyurethane plastics, polyurethane rubbers or epoxies (release agent is generally not necessary when casting these materials in silicone molds, but application will extend mold life). Use this release agent when casting liquid silicone into silicone molds.</p> <p>Can also be sprayed into polyurethane molds before casting polyurethane liquid plastics, but the molds will not last as long as they would if Pol-Ease® 2300 was used. The main reason for using Pol-Ease® 2500 in a polyurethane mold would be to cast a part that can be cleaned more easily – useful if the casting needs to be painted.</p> |
| Pol-Ease® 2601 Release Agent       | Water-based release agent designed for use when casting concrete or plaster. Works best when allowed to dry before casting. As with other releases containing silicone, castings may need washing before applying finishes. Should only be applied to cured polyurethane rubber molds.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Pol-Ease® 2650 Release Agent       | Silicone-free, oil-based release agent designed for use when casting concrete or plaster. After application, no drying time necessary prior to casting. Should only be applied to cured polyurethane rubber molds.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Poly PVA Solution                  | Water-soluble, alcohol-based sealer available in clear or green. Can be applied to cured polyurethane rubber molds as a “barrier coat” and is most often used (in conjunction with Pol-Ease® 2300) when casting polyester resin.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| PolyCoat Sealer & Release Agent    | <p>Semi-permanent, silicone-based sealer and release agent. Can be applied to aging silicone molds to improve performance and extend their useful life.</p> <p>Can also be applied to firm polyurethane rubber molds to give them a thin silicone skin on the mold face. This can allow materials such as polyurethane plastics or foams that would ordinarily require releases to be cast into dry polyurethane molds at a reduced cost.</p>                                                                                                                                                                                                                                                                                                                           |
| Pol-Ease® 2750 Latex Release Agent | A release agent designed specifically for use when casting concrete into latex rubber molds and will result in easier demolding of concrete parts and improved mold life. Should only be applied to latex molds.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |



# ADHESIVES



Polytek® offers epoxy and polyurethane adhesive options. Adhesives can be used to repair tears or damaged models and molds, adhere models to baseboards for mold making, adhere urethanes to various substrates, and more.

## **PolyBond Polyurethane Adhesive | Great Mold Repair Adhesive**

PolyBond is a polyurethane adhesive that's great for repairing torn polyurethane molds. PolyBond has a 1A:3B mix ratio (by weight), ~3 minute working time and ~15 minute cure.

## **EpoxyBond Adhesive | Bond Rubber to Porous Surfaces**

EpoxyBond Adhesive<sup>^</sup> is a low viscosity, epoxy adhesive most often used to bond rubber molds to porous materials such as plywood, concrete and plaster. EpoxyBond has a 1A:1B mix ratio, a long working time of 120 minutes and a cure time of 24 to 48 hours.

## **CPD 4501A / 4501B Polyurethane Adhesive | NSF Certified to NSF/ANSI/CAN61**

CPD 4501A Curative with CPD 4501B Prepolymer is an NSF/ANSI/CAN 61 Certified thixotropic two-part polyurethane adhesive intended for use in the assembly of reverse osmosis elements.

<sup>^</sup> **⚠️ WARNING:** This product can expose you to chemicals including Epichlorohydrin which is known to the State of California to cause cancer and/or reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



Polytek® Development Corp. is a leading manufacturer of specialty polymers including polyurethane elastomers and casting resins, silicone, latex, thermoplastic elastomers, and epoxies. These systems are used primarily in mold making and casting applications in industrial, construction, entertainment, fine arts and technology sectors.

Polytek®'s collective mission is to design and manufacture the highest-performance line of liquid rubbers and related casting products and to provide our customers with unmatched, industry-setting technical support and customer service. In doing so, we are committed to helping our customers realize the greatest value from the use of our products and resources.

**In the end, our success is defined by yours.**

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**LOCATION**

55 Hilton Street  
Easton, PA 18042

**PHONE**

(800) 858-5990  
(610) 559-8620

**EMAIL**

[sales@polytek.com](mailto:sales@polytek.com)

**WEBSITE**

[www.polytek.com](http://www.polytek.com)  
[www.aeromarineproducts.com](http://www.aeromarineproducts.com)  
[www.silpak.com](http://www.silpak.com)