

DESCRIPTION: Poly Plasti-Flex Liquid Plastic is a two part, room temperature curing (RTV) polyurethane plastic that is slightly flexible upon cure. The flexibility of this plastic makes it ideal for parts such as decorative trim molding, props, special effects castings, and impact-resistant items.

BEFORE USE: Thoroughly read Safety Data Sheets, product labels and the "SAFETY" section in this Technical Bulletin.

MOLD PREPARATION: This product reproduces minute detail from a mold or pattern but may stick or foam when poured on improperly prepared surfaces. A trial casting on a surface finish similar to the final mold should be made to avoid damaging a valuable mold. Polyethylene and silicone rubber molds (e.g., TinSil® and PlatSil® silicone rubber) do not require a release agent. Latex, polyurethane rubber (e.g., 74- and 75-Series rubbers) or metal molds must be dry and require a coat of a suitable release agent (i.e., Pol-Ease® 2300 Release Agent).

MIXING: Before use, be sure that Parts A and B are at room temperature and that all tools are ready. Surface and air temperatures should be above 60°F during application and for the entire curing period. For this product, only the Part B needs stirring. Weigh Parts A and B into a mixing container, such as a polyethylene pail. Mix thoroughly, scraping the sides and bottom of the mixing container. Pour mix into cavity as soon after mixing as possible.

If a paste-like consistency is needed for brush-on or trowel application, add PolyFiber II to the mixed A and B to thicken the mix.

PHYSICAL PROPERTIES

Product	Poly Plasti-Flex
Mix Ratio By Weight	35A:100B
Shore Hardness	A90
Pot Life (1-lb mix)	3 min.
Demold Time* @ 73°F	15 min.
Cured Color	Tan
Mixed Viscosity (cP)	3,000
Specific Volume (in ³ /lb)	34
Specific Gravity	0.81
Linear Shrinkage (in/in)	ND
Elongation (%)	81
Max Exotherm (°F)	190
Heat Deflection Temp. (°F)	N/A
Tensile Strength (psi)	1,330
Elastic Modulus (psi)	29,450
Flexural Modulus (psi)	N/A
Flexural Strength, 5% Strain (psi)	N/A

*Shrinkage is primarily caused by gelling while hot then cooling. Parts that cure with minimal temperature rise exhibit minimal shrinkage.

PRODUCT LINE FEATURES

- Make slightly flexible, impact-resistant parts
- Easy to machine
- Reproduces fine detail

Once the containers of Parts A and B are opened, they should be used or resealed tightly since atmospheric moisture contamination may cause foaming of the plastic. PolyPurge, a dry gas product, can be sprayed into opened containers to displace moist air before resealing containers to extend shelf life.

CURING: Castings should be allowed to remain in the mold until thoroughly cured. Parts demolded too soon may be subject to deformation. Use of pre-warmed molds will hasten curing. Low temperatures will slow the curing and extend demold time. Refer to the Physical Properties table for individual product pour and demold times. Thin castings or thin sections of castings will take longer to cure than thick castings or thick sections of castings.

ADDITIVES: Poly 15 Part X Accelerator can be added to accelerate the cure time. Stir Part X into Part B before adding Part A. When using Part X, exotherm (heat of reaction) and thus shrinkage is increased. Experiment to determine the best amount of Part X to use, but never use more than 1% of the total weight of the mix or the final physical properties may be affected.

COLORS: Add PolyColor Dyes to Poly Plasti-Flex Part B before mixing with Part A to create plastics of any color. Add up to 0.5% PolyColor Dye of the total mixed weight when using PolyColor Black, Brown, Blue, Green, Red and Yellow. Add up to 2% PolyColor Dye of the total mixed weight when using PolyColor White and Fleshtone.

FINISHING: Cured Poly Plasti-Flex Plastic will yellow and chalk when exposed to sunlight and should be painted or sealed for exterior use. The adhesion of this coating should be checked carefully over a period of time to determine that it is satisfactory for the intended use. If all mold release is removed by detergent washing, most oil paints work well. An auto body primer sprayed onto the clean casting and allowed to cure for at least 24 hours can help paint adhere better. Poly Plasti-Flex can be easily drilled, sanded and machined.

CLEAN UP: Tools should be scraped clean before the plastic is hard. Denatured alcohol is a good cleaning solvent, but must be handled with extreme caution owing to its flammability and health hazards. Work surfaces can be coated with wax or release agent so that cured plastic can be easily removed.

SAFETY: Before use, thoroughly read Safety Data Sheets and product labels. Follow safety precautions and directions.

Part A: Keep out of reach of children. Do not breathe fumes, vapors, or mists. Use with adequate general or local exhaust ventilation to minimize exposure levels. If needed, a NIOSH-approved respirator with organic vapor cartridge may be used. If inhaled and breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Wear impervious gloves, such as butyl rubber or nitrile

rubber. Wash skin thoroughly with soap and water after handling. Wear eye protection, such as chemical safety glasses/goggles. If in eyes, rinse cautiously with water for several minutes, removing contact lenses if present and easy to do. Store in a well-ventilated place and keep container tightly closed.

Part B: Keep out of reach of children. Do not eat, drink, or smoke when using this product. Do not breathe fumes, vapors, or mists. Use with adequate general or local exhaust ventilation to minimize exposure levels. If needed, a NIOSH-approved respirator with organic vapor cartridge may be used. If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. Wear impervious gloves, such as butyl rubber or nitrile rubber. Wash skin thoroughly with soap and water after handling. Wear eye protection, such as chemical safety glasses/goggles. If in eyes, rinse cautiously with water for several minutes, removing contact lenses if present and easy to do. Store in a well-ventilated place and keep container tightly closed. If swallowed, rinse mouth and get medical attention if you feel unwell. If spilled, avoid release to the environment.

STORAGE LIFE: For best results, store products in unopened containers at room temperature (60-90°F/15-32°C). Use product within six months from date of shipment.

DISCLAIMER: The information in this bulletin and otherwise provided by Polytek® Development Corp. is considered accurate. However, no warranty is expressed or implied regarding the accuracy of the data, the results to be obtained by the use thereof, or that any such use will not infringe any patent. Before using, the user shall determine the suitability of the product for the intended use and user assumes all risk and liability whatsoever in connection therewith.

ACCESSORIES

Accelerator:

Poly 15 Part X Accelerator

Thickeners:

PolyFiber II

Sealers & Release Agents:

Pol-Ease® 2300 Release Agent

Pol-Ease® 2500 Release Agent

PolyCoat Sealer & Release Agent

Poly PVA Solution (Green or Clear)

Product Life Extender:

Poly Purge Aerosol Dry Gas

Colors:

PolyColor Dyes

Black - Brown - Blue - Green - Red

- Yellow - White - Fleshtone