

**DESCRIPTION:** Poly LiteCast and Poly Plasti-Flex Liquid Plastics are used to produce decorative moldings, tools, models, patterns, fixtures, duplicate masters and more. Use **Poly LiteCast Liquid Plastic** when a rigid plastic with a wood-like density is required. Use **Poly Plasti-Flex** to produce slightly flexible parts such as decorative trim molding, props, special effects castings, and impact-resistant items.

**MOLD PREPARATION:** These products reproduce 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 Poly LiteCast, stir both Parts A and B before use. For Poly Plasti-Flex, 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.

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

## Rigid & Flexible Polyurethane Casting Resins That Feel Like Wood

### Why Choose Poly LiteCast & Poly Plasti-Flex Liquid Plastics?

- Safe and easy to machine (contains no silica)
- Reproduces fine detail
- Create rigid castings with a wood-like density (Poly LiteCast)
- Make slightly flexible, impact-resistant parts (Poly Plasti-Flex)

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 cure times. 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 LiteCast or 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 Flestone.

**FINISHING:** Poly LiteCast & Poly Plasti-Flex Plastics 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

### PHYSICAL PROPERTIES

	Poly LiteCast	Poly Plasti-Flex
Mix Ratio By Weight	1A:1B	35A:100B
Shore Hardness	D55	~A90
Pour Time (min) (1 lb mix)	5	3
Demold Time	30 min - 4 hr	~15 min
Specific Gravity	0.78	0.81
Cured Color	Tan	Tan
Mixed Viscosity (cP) (after 2 min)	2,480	3,000
Specific Volume (in <sup>3</sup> /lb)	35	34
Shrinkage Upon Cure (in/in)	Very Low*	Low*

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

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 LiteCast & 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, read product labels and Safety Data Sheets. Follow safety precautions and directions. Contact with uncured products may cause eye, skin and respiratory irritation and dermal and/or respiratory sensitization. Avoid contact with skin and eyes. If skin contact occurs, remove with waterless hand cleaner or alcohol then soap and water. In case of eye contact, flush with water for 15 minutes and call physician. Use only with adequate ventilation. Polytek plastics are not to be used where food or body contact may occur. Plastics burn readily when ignited. Care should be taken with sanding dust and other easily ignitable forms of these products.

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

**DISCLAIMER:** The information in this bulletin and otherwise provided by Polytek® 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 - 1 oz, 1 lb, 8 lb, 40 lb**

*Thickeners*

**PolyFiber II - 0.5 lb, 3 lb, 15 lb**

*Sealers & Release Agents*

**Pol-Ease® 2300 Release Agent - 12-oz can, case of 12**

**Pol-Ease® 2500 Release Agent - 12-oz can, case of 12**

**PolyCoat Semi-Permanent Sealer/Release - 1qt, 1 gal**

**Poly PVA Solution (Green or Clear) - 2 lb, 40 lb**

*Product Life Extender*

**Poly Purge Aerosol Dry Gas - 10-oz can, case of 12**

*Colors*

**PolyColor Dyes - 0.25 lb, 1 lb, 8 lb**

**Black - Brown - Blue - Green - Red - Yellow - White - Fleshtone**

POLY LITECAST - PACKAGING - 1A:1B MIX RATIO				
Kit Size (lb)	Part A		Part B	
	Weight (lb)	Volume*	Weight (lb)	Volume*
60	30.0	5 gal	30.0	5 gal

\*Volume measurements are approximate.

POLY PLASTI-FLEX- PACKAGING - 35A:100B MIX RATIO				
Kit Size (lb)	Part A		Part B	
	Weight (lb)	Volume*	Weight (lb)	Volume*
8.1	2.1	1 qt	6.0	1 gal
38.5	10.0	1 gal	28.5	5 gal
192.5	50	5 gal	142.5	25 gal

\*Volume measurements are approximate.