



# Feather Lite®

## Lightweight Urethane Casting Resin

### PRODUCT OVERVIEW

*Feather Lite*® is a new heavily filled low-density urethane casting resin. Cured plastic is lightweight (it floats in water!) and has a much lower density than other casting resins. *Feather Lite*® features a convenient 1A:1B by volume mix ratio and mixes easily (pre-mixing of parts A & B is necessary). Cured plastic is strong and can be carved, machined, drilled, sanded, etc. *Feather Lite*® can be pigmented with SO-Strong® color tints prior to casting and finished castings can be painted.

And because this product is low-density, it yields more plastic per pound/kg. than other casting resins, **the cost per casting is low.**

*Feather Lite*® can be used for a variety of art or industrial design related applications including reproducing sculpture, making fishing lures, prototype model making, casting doll heads and figures, etc.

### TECHNICAL OVERVIEW

**Key Values:** ~*Mixing Ratio:* One to One by volume or weight. ~*Color:* Beige ~*Durometer:* Shore 58D\*  
~*Pot Life:* 8.5 minutes ~*Demold Time:* 2 hours (depending on mass).

**Description:** *Feather Lite*® consists of two filled liquid components, Part A (Yellow Label) and Part B (Blue Label). When combined in a mixing ratio of one to one by volume, *Feather Lite*® cures to a solid, lightweight and durable plastic.

COMPONENTS	COLOR	VISCOSITY	S.G. g/cm <sup>3</sup>	S.V. cu. in./lb.
Mixed Part A + B*	Beige	410 cps	0.67	41
<i>Elongation @ Break:</i> 1.6%	<i>Ultimate Tensile Strength:</i> 2,160 PSI		<i>Modulus:</i> 156,000 PSI .	
	<i>Shrinkage:</i> 0.003 in./in.			

\* Ultimate Properties Attained After One Week

### Applying A Release Agent

### Mixing

**Preparation . . .** Materials should be stored and used in a warm environment (72° F / 22° C). This product has a limited shelf life and should be used as soon as possible. All liquid urethanes are **moisture sensitive** and will absorb atmospheric moisture. Mixing tools and containers should be clean and made of metal, glass or plastic. Mixing should be done in a well-ventilated area. Wear safety glasses, long sleeves and rubber gloves to minimize contamination risk. **Because no two applications are quite the same, a small test application to determine suitability for your project is recommended if performance of this material is in question.**

**Applying A Release Agent . . .** A release agent is necessary to facilitate demolding when casting into or over most surfaces. Use a release agent made specifically for mold making (Universal® Mold Release available from Smooth-On or your Smooth-On distributor). A liberal coat of release agent should be applied onto all surfaces that will contact the plastic. **~IMPORTANT:** To ensure thorough coverage, lightly brush the release agent with a soft brush over all surfaces. Follow with a light mist coating and let the release agent dry for 30 minutes.

Most silicone rubber molds usually do not require a release agent. Using a release agent, however, will prolong the life of the mold.

**Mixing . . .** Material is heavily filled and the filler will separate from the liquid during storage. When you first open containers, you will see powder on top that must be thoroughly pre-mixed with liquid on bottom. **You MUST stir both Part A & Part B well before using - Pre-mix both parts in their original containers before dispensing.** After dispensing equal amounts of Parts A and B into mixing container, **mix thoroughly.** Stir slowly and deliberately making sure that you scrape the sides and bottom of the mixing container several times. Be careful not to splash low viscosity material out of the container. **Remember, Feather Lite® sets up quickly.** Do not delay between mixing and pouring.

## *Pouring*

## *Curing*

## *Performance*

**IMPORTANT:** Shelf life of product is drastically reduced after opening. Remaining product should be used as soon as possible. Immediately replacing the lids on both containers after dispensing product will help prolong the shelf life of the unused product. **XTEND-IT® Dry Gas Blanket** (available from Smooth-On) will significantly prolong the shelf life (up to 4 times longer) of unused liquid urethane products.

***Pouring . . . Warning:*** Fumes, which may be visible as this product starts to “gel” and cure, will dissipate with adequate ventilation. Only use this product with room size ventilation and do not inhale/breathe fumes. Castings will be extremely hot immediately following cure and may burn the skin. Let cool to room temperature before handling. For best results, pour your mixture in a single spot at the lowest point of the containment field and let the mixture seek its level. This will help minimize air entrapment.

***Curing . . . Warning:*** Fumes, which may be visible as this product starts to “gel” and cure, will dissipate with adequate ventilation. Only use this product with room size ventilation and do not inhale/breathe fumes. Castings will be extremely hot immediately following cure and may burn the skin. Let cool to room temperature before handling. *Feather Lite®* is ready for demold in about two hours depending on mass and mold configuration. Post curing is not necessary but will increase physical properties and performance. Heat casting in mold to 150°F/65°C for 4 – 6 hours.

***Performance . . .*** Cured castings of *Feather Lite®* are lightweight, rigid and durable. They resist moisture, moderate heat, solvents, dilute acids and can be machined, primed/painted or bonded to other surfaces (any release agent must be removed). If machining cured *Feather Lite®*, wear dust mask or other apparatus to prevent inhalation of residual particles. Because no two applications are quite the same, a small test application to determine suitability is recommended if performance of this material is in question.

## *Safety First!*

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The material safety data sheet (MSDS) for this or any Smooth-On product should be read before using and is available on request. All Smooth-On products are safe to use if directions are read and followed carefully.

***Be careful.*** Part A (Yellow Label) contains methylene diphenyl diisocyanate. Vapors, which can be significant if prepolymer is heated or sprayed, may cause lung damage and sensitization. Use only with adequate ventilation. Contact with skin and eyes may cause severe irritation. Flush eyes with water for 15 minutes and get immediate medical attention. Remove from skin with soap and water. Part B (Blue Label) is irritating to the eyes and skin. Avoid prolonged or repeated skin contact. If contaminated, flush eyes with water for 15 minutes and get immediate medical attention. Remove from skin with soap and water. When mixing with Part A, follow precautions for handling isocyanates. If machining cured castings, wear dust mask or other apparatus to prevent inhalation of residual particles.

***Important*** - The information contained in this bulletin is considered accurate. However, no warranty is expressed or implied regarding the accuracy of the data, the results to be obtained from the use thereof, or that any such use will not infringe a copyright or patent. User shall determine suitability of the product for the intended application and assume all associated risks and liability.

***Call Us Anytime With Questions About Your Application.***

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