

# FOAM-iT!<sup>®</sup> Series

## Rigid Polyurethane Foams

3lb., 5 lb., 8 lb., 10 lb. or 15 lb.



www.smooth-on.com

### PRODUCT OVERVIEW

Smooth-On's FOAM-iT!<sup>®</sup> Series consists of two-component rigid foams that are versatile and easy to use. FOAM-iT!<sup>®</sup> products are available in 3lb., 5 lb., 8 lb., 10 lb. or 15 lb. per cubic foot densities. Parts A + B are mixed in equal amounts by volume (1A: 1B) and are poured into a mold or other form (apply release agent if necessary). Mixture will expand many times original volume (depending on which FOAM-iT!<sup>®</sup> product you are using) and develop a uniform cell structure. Foam-iT!<sup>®</sup> 3lb., 5 lb., 8 lb., 10 lb. or 15 lb becomes tack free in about 4 - 6.5 minutes, develops handling strength in 20 minutes and fully cures in 2 hours. Note: FOAM-iT!<sup>®</sup> 8 is measured and mixed 2A:1B by weight.

FOAM-iT!<sup>®</sup> 8 is a unique, self-skinning foam with a finer, more uniform cell structure than the other FOAM-iT!<sup>®</sup> products. FOAM-iT!<sup>®</sup> 8 or 15 can be cast in blocks as a machine-able prototype modeling board. FOAM-iT!<sup>®</sup> products can also be used as a straight casting material, backfill material for hollow castings (adds structural strength) or as an encapsulation material, etc. They can be color pigmented and are used for a variety of art/craft, industrial design and special effect applications.

### TECHNICAL OVERVIEW

	A:B Mix Ratio	Mixed Viscosity (ASTM D-23932)	Pot Life (Cream Time)	Tack-Free Time	Handling Strength	Cure Time	Specific Gravity (g/cc) (ASTM D-1475)	Specific Volume (cu. in./lb.) (ASTM D-1475)	Lbs. / Cu. Foot = Kgs. / Cu. Meter	Approx. Volumetric Expansion	Color
Foam-iT! <sup>®</sup> 3	1:1 pbv	200 cps	1 min	6.5 mins	20 mins	2 hrs	0.04 - 0.06	530 - 630	3 lb/ft <sup>3</sup> = 48 kg/m <sup>3</sup>	18 times	Beige
Foam-iT! <sup>®</sup> 5	1:1 pbv	300 cps	1.5 mins	5 mins	20 mins	2 hrs	0.08 - 0.10	300 - 350	5 lb/ft <sup>3</sup> = 80 kg/m <sup>3</sup>	10 times	Beige
Foam-iT! <sup>®</sup> 8	2:1 pbw	300 cps	1.5 mins	5 mins	20 mins	2 hrs	0.12 - 0.14	200 - 230	8 lb/ft <sup>3</sup> = 130 kg/m <sup>3</sup>	8 times	Beige-White
Foam-iT! <sup>®</sup> 10	1:1 pbv	400 cps	1.5 mins	5 mins	20 mins	2 hrs	0.15 - 0.17	150 - 175	10 lb/ft <sup>3</sup> = 160 kg/m <sup>3</sup>	6 times	Beige
Foam-iT! <sup>®</sup> 10 Slow	1:1 pbv	400 cps	3.5 mins	20 mins	1 hr	4 hrs	0.15 - 0.17	150 - 175	10 lb/ft <sup>3</sup> = 160 kg/m <sup>3</sup>	6 times	Beige
Foam-iT! <sup>®</sup> 15	1:1 pbv	500 cps	1.5 mins	4 mins	20 mins	2 hrs	0.22 - 0.26	105 - 125	15 lb/ft <sup>3</sup> = 240 kg/m <sup>3</sup>	4 times	Beige

**Pot Life:** Foam-iT!<sup>®</sup> 3: 1 minute  
Foam-iT!<sup>®</sup> 5, 8, 10, 15: 1.5 minutes  
Foam-iT!<sup>®</sup> 10 Slow: 3.5 minutes

**Cure Time:** Foam-iT!<sup>®</sup> 3lb., 5 lb., 8 lb., 10 lb. or 15 lb: 2 hours  
Foam-iT!<sup>®</sup> 10 Slow: 4 hours

\* Values measured at room temperature (73°F/23°C)

### PROCESSING RECOMMENDATIONS

#### START BY PREPARING YOUR MODEL...

**Preparation** - Materials should be stored and used in a warm environment (73° F / 23° C). These products have a limited shelf life and should be used as soon as possible. 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** - These foams will stick to just about anything. A release agent is necessary to facilitate demolding when casting into or over most surfaces and will extend mold life. Use a release agent made specifically for releasing urethane foams such as Ease Release<sup>®</sup> 2831 available from Smooth-On or your Smooth-On distributor – Do not use a silicone based release agent. A liberal coat of release agent should be applied onto all surfaces that will contact the foam. ~IMPORTANT: To ensure thorough coverage, lightly brush the release agent with a soft brush over all surfaces. Let the release agent dry for 30 minutes.

## Safety First!

The Material Safety Data Sheet (MSDS) for this or any Smooth-On product should be read prior to use and is available upon request from Smooth-On. All Smooth-On products are safe to use if directions are read and followed carefully.

### **Be careful.**

**Part A** contains methylene diphenyldiisocyanate. Vapors, which can be significant if 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** 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 Foam-iT 5, 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 upon a patent. User shall determine the suitability of the product for the intended application and assume all risk and liability whatsoever in connection therewith.

## MEASURING & MIXING...

Know the mix ratio for the FOAM-iT!® product you are using. After dispensing the correct amounts of Parts A and B into mixing container, mix thoroughly for 45 seconds. Stir quickly 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, foams cure quickly. Do not delay between mixing and pouring.

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

## POURING, CURING & PERFORMANCE...

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.

**Improve Surface Finish and Minimize Voids With Back Pressure** - Use a board that will completely cover the mold opening. Using a ¾" (2 cm) drill bit, drill 3 holes in the board spaced a few inches / cm apart. Make sure that, when the board is placed over the mold opening, the holes are over the mold cavity and rising foam will be able to make it through. Apply Ease Release® 2831 thoroughly too both sides of the board and into the drilled holes. Mix and pour FOAM-iT!® into mold cavity and place board over mold opening. Hold board firmly in place. As foam rises in the mold cavity, some foam will grow out of the drilled holes. After the foam stops growing, you can let go of the board. Do not handle for at least 20 minutes. After 20 minutes, you can then cut excess material that came through holes and gently remove board and casting.



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

**Toll-free: (800) 762-0744 Fax: (610) 252-6200**

The new [www.smooth-on.com](http://www.smooth-on.com) is loaded with information about mold making, casting and more.