



FlexFoam-iT!® Series

Flexible Polyurethane Foams

PRODUCT OVERVIEW

FlexFoam-iT!® III, FlexFoam-iT!® V, FlexFoam-iT!® X, and FlexFoam-iT!® 25 are two-component flexible foams that are versatile and easy to use. Parts A + B are mixed and poured into a mold or other form (apply release agent if necessary). **FlexFoam-iT!® III** is mixed 1A:2B by volume, expands 15 times its original volume and develops a uniform 3 lb./cu. ft. cell structure. **FlexFoam-iT!® V** is mixed one to one by volume and expands 10 times its original volume and develops a uniform 5 lb./cu. ft. cell structure. **FlexFoam-iT!® X** is mixed one to one by volume and expands 6 times its original volume and develops a uniform 10 lb./cu. ft. cell structure. **FlexFoam-iT!® 25** is “self-skinning” - develops a tough skin that will reproduce fine mold texture. It is mixed 1A:2B by weight and expands 2 times its original volume and develops a uniform 25 lb/cu. ft cell structure. **FlexFoam-iT!® Series** foams expand to full volume in 5 minutes, develop handling strength in 30 minutes and fully cure in two hours. Vibrant colors can be achieved by adding color pigments.

Flex-Foam -iT!® Products can be used for a variety of arts & crafts, industrial and special effects applications including padding/cushion material, gasket material and scenic design.

TECHNICAL OVERVIEW

Key Values: ~Mixing Ratios: **FlexFoam-iT!® III:** 1A:2B by volume (57.5A : 100B by weight)
FlexFoam-iT!® V & X: One to One by volume. (105A:100B by weight)
FlexFoam-iT!® 25: 1A:2B by weight
 ~Pot Life: **FlexFoam-iT!® III:** 35 seconds **FlexFoam-iT!® V, X and 25:** 50 second

COMPONENTS	COLOR	VISCOSITY	S.G. g/cm ³	S.V. cu. in./lb.	Lbs./Cu Ft=Kg/Cu Meter
Mixed Part A + B	White	1,000 cps			
FlexFoam-iT!® III			0.06	400-450	3 lb/ft ³ = 48 kg/m ³
FlexFoam-iT!® V			0.1	275-300	5 lb/ft ³ = 80 kg/m ³
FlexFoam-iT!® X			0.18	150-200	10 lb/ft ³ = 160 kg/m ³
FlexFoam-iT!® 25			0.4	50-75	25 lb/ft ³ = 400 kg/m ³

Applying A Release Agent

Mixing

Pouring

Preparation . . . Materials should be stored and used in a warm environment (72° F / 22° 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. Some surfaces must be sealed. **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 releasing urethane foams such as **Ease Release® 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.

Mixing . . . Mixing can be done by hand or using a drill and a mixer attachment, such as a “squirrel” mixer. After dispensing required amounts of Parts A and B into mixing container, mix thoroughly for 30 seconds. Stir quickly and deliberately, making sure you scrape the sides and bottom of the mixing container several times. Be careful not to splash low-viscosity material of the container. **Remember, these products cure quickly.** Do not delay between mixing and pouring.

Pouring . . . 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 demold for at least 20 minutes.

Demold; After 20 minutes, cut excess material that came through holes. Gently remove board and casting.

Is Your Foam Collapsing? – This is a common phenomenon associated with cold temperatures or inadequate mixing or both. **Environment or material too cold?** Warm it up. **Inadequate mixing?** You must thoroughly pre-mix both parts A & B. After combining A+B, mix thoroughly. If using a mechanical mixer, mix for 15 seconds and then hand mix for 15 seconds. When hand mixing, mix quickly and aggressively . . . almost whipping the material.

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.

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. **Keep Out Of Reach Of Children!**

Be careful. Part A (Yellow Label) 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 (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 FlexFoam-It!®, 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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