

FOAM-iT!™ Series

Rigid Polyurethane Foams

3lb., 4 lb., 5 lb., 8 lb., 10 lb., 15 lb. or 26 lb.



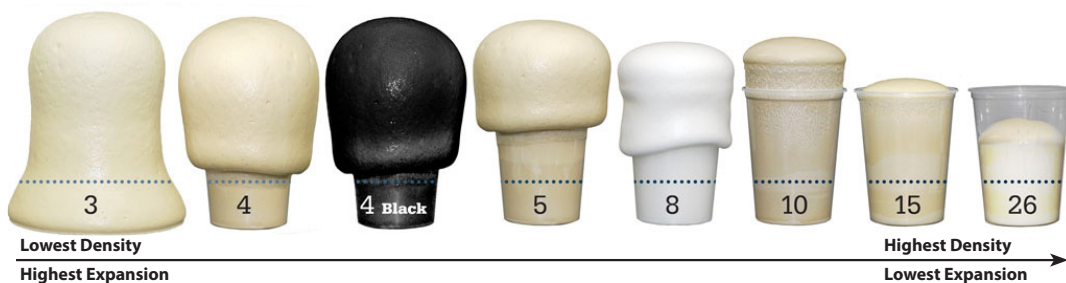
www.smooth-on.com

PRODUCT OVERVIEW

Smooth-On's FOAM-iT!™ Series are two-component water blown rigid foams that are versatile and easy to use. FOAM-iT!™ products are available in 3lb., 4 lb., 5 lb., 8 lb., 10 lb., 15 lb. or 26 lb. per cubic foot densities. Parts A and B are measured and mixed in equal amounts by volume (Note: FOAM-iT!™ 8 is measured and mixed 2A:1B by weight). The mixture is then poured into a mold or other form (apply release agent if necessary). The mixture will expand many times original volume (depending on which FOAM-iT!™ product you are using) and develop a uniform cell structure. FOAM-iT!™ 3, 4, 5, 10, 15 and 26 have a handling time of about 20 minutes and reach full cure in 2 hours.

FOAM-iT!™ 4 Black is pre-pigmented to a very deep black color.

FOAM-iT!™ 10 SLOW is a 10 lb. density foam with a long, 3.5 minute working time, taking 1 hour to reach handling strength and 4 hours to cure. FOAM-iT!™ 10 SLOW is designed for large-pour industrial, art-related and special effects applications.



FOAM-iT!™ 8 is a unique, self-skinning foam with a finer, more uniform cell structure than the other FOAM-iT!™ products

FOAM-iT!™ 8, 15 or 26 can be cast in blocks as a machinable prototype modeling board.

All FOAM-iT!™ products can 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 with SO-Strong™, UVO™ or IGNITE™ colorants and are used for a variety of art/craft, industrial design and special effects applications.

TECHNICAL OVERVIEW

	A:B Mix Ratio by Volume	A:B Mix Ratio by Weight	Mixed Viscosity (ASTM D-2393)	Specific Gravity (g/cc) (ASTM D-1475)	Specific Volume (cu. in./lb.)	Color	Pot Life (Cream Time) (ASTM D-2471)	Handling / Tack-Free Time	Cure Time	Approx. Volumetric Expansion	Approximate Lbs. / Cu. Foot = Kgs. / Cu. Meter
FOAM-iT!™ 3	1:1 pbv	100:87 pbw	200 cps	0.05	504	Beige	1 min.	20 min.	2 hrs	18 times	3 lb/ft ³ =48 kg/m ³
FOAM-iT!™ 4	1:1 pbv	100:87 pbw	300 cps	0.06	420	Beige	1.5 min.	20 min.	2 hrs	14 times	4 lb/ft ³ =64 kg/m ³
FOAM-iT!™ 4 Black	1:1 pbv	100:87 pbw	300 cps	0.06	420	Black	1.5 min.	20 min.	2 hrs	14 times	4 lb/ft ³ =64 kg/m ³
FOAM-iT!™ 5	1:1 pbv	100:87 pbw	300 cps	0.08	315	Beige	1.5 min.	20 min.	2 hrs	10 times	5 lb/ft ³ =80 kg/m ³
FOAM-iT!™ 8	N/A	2:1 pbw	300 cps	0.13	194	Off White	1.5 min.	20 min.	2 hrs	8 times	8 lb/ft ³ =128 kg/m ³
FOAM-iT!™ 10	1:1 pbv	100:87 pbw	400 cps	0.16	157	Beige	1.5 min.	20 min.	2 hrs	6 times	10 lb/ft ³ =160 kg/m ³
FOAM-iT!™ 10 SLOW	1:1 pbv	100:87 pbw	400 cps	0.16	157	Beige	3.5 min.	1 hr	4 hrs	6 times	10 lb/ft ³ =160 kg/m ³
FOAM-iT!™ 15	1:1 pbv	100:87 pbw	500 cps	0.24	105	Beige	1.5 min.	20 min.	2 hrs	4 times	15 lb/ft ³ =240 kg/m ³
FOAM-iT!™ 26	1:1 pbv	100:90 pbw	500 cps	0.42	60	White	1.5 min.	20 min.	2 hrs	2 times	26 lb/ft ³ =416 kg/m ³

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

PROCESSING RECOMMENDATIONS

PREPARATION...

Store and use at room temperature (73°F/23°C). Use in a low humidity environment (below 50% RH). Mixing containers should have straight sides and a flat bottom. Mixing sticks should be flat and stiff with defined edges for scraping the sides and bottom of your mixing container. Good ventilation (room size) is essential. This product has a limited shelf life and should be used as soon as possible. Wear safety glasses, long sleeves and rubber gloves to minimize contamination risk.

IMPORTANT: Shelf life of product is 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 of unused liquid urethane products.

Safety First!

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 diphenyl diisocyanate. 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.

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.

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...

Urethane foams are adhesive and will stick/bond to many surfaces. **We recommend Ease Release™ 2831 to release urethane foam from most surfaces.**

If the release application is particularly difficult (example; releasing urethane foam from urethane rubber), we recommend an application of Universal Mold Release™ followed by an application of Ease Release™ 2831. **WARNING;** Do not use Universal Mold Release™ by itself, or any other silicone based release agents. This will collapse the foam.

PRE-MIXING & MIXING...

Pre-mix Parts A & B – Stir or shake both Part A & Part B thoroughly before dispensing.

Measuring – Stop! Know the mix ratio of the foam product you are using. Some are by weight and some are by volume. Dispense the correct amounts of Part A and Part B into a large mixing container.

For Best Results - Pre-Mix Part B after measuring out material – although not necessary, pre-mixing Part B using a drill and mechanical mixer (such as a turbine mixer available from Smooth-On) after measuring out and before combining with Part A will yield best results.

For Best Results - Use a Mechanical Mixer – Mix for a minimum of 15 seconds and pour into mold or form.

Mixing by Hand – Stir quickly and deliberately for a minimum of 15 seconds. Make sure that you aggressively scrape the sides and bottom of your mixing container several times. Pour into mold or form.

Be careful not to splash low-viscosity liquid out of container. Remember, these materials cure quickly. Do not delay between mixing and pouring.

POURING, CURING & PERFORMANCE...

Pouring & Curing – 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. Allow space in the containment field for the foam to grow as it expands to its ultimate volume. Allow foam to cure for at least 20 minutes before handling (**FOAM-iT!™ 10 SLOW - 1 hour**). Cure time will be affected by mass and mold configuration.

Mass Concentration / Mold Configuration – Pouring large amounts at a time in certain mold configurations (i.e. cylinder) could cause excess heat to be generated and result in splitting (fissures). Step pouring in layers may resolve this problem.

Improving Surface Finish & Minimizing Voids With Back Pressure – Capping the mold cavity opening with a board that has predrilled holes will improve surface finish for some foams. For more information, watch the video at smooth-on.com/backpressure

Is Your Foam Collapsing? - This is a common phenomenon associated with cold temperatures, inadequate mixing or both. **Environment or material too cold?** Warm it up. **Inadequate mixing?** You must thoroughly pre-mix both parts A and B. After combining A and B, mix thoroughly. If using a mechanical mixer, mix for 30 seconds. When hand mixing, mix quickly and aggressively, almost whipping the material.

Fully Cured FOAM-iT!™ Foam can be sanded, machined, drilled, etc. (wear NIOSH approved respirator). Foam can also be primed and / or painted.



Call Us Anytime With Questions About Your Application

Toll-free: (800) 381-1733 Fax: (610) 252-6200

The new www.smooth-on.com is loaded with information about mold making, casting and more.