

FOMO FOAM OVERVIEW - Calculations, Product and Application

How to figure how much you need is on this page and general information about using the kits. Scroll down. First there are general basics about the kits. Then there is how to use and calculate the slow rise formula, then there is the fast rise calculations and formulas at the end. Please read the basics first. Crawl Spaces and Metal Buildings are at the end. Thank you.

Some basics:

Unless otherwise stated, the density of FOMO FOAM is 1.75 lbs. per cubic foot.

Fomo Foam 2 component foams are rated at R-7 per inch.

The size of the kit, i.e. II-105, II-605, II-205, is indicative of the board foot coverage or yield for that kit. Thus, a II-605 kit will cover 605 square feet at 1" thick. A board foot as it relates to this product is a square foot one inch thick. The kit size is be yield of the kit expanded.

CUBIC FEET: conversion to cubic foot yield for these kits is generally a: 600 or 605 = 50 cubic feet, a 200 or 205 yields 16 cubic feet and the 100 and 105 bd ft sizes yield 8 cubic feet of foam. Smaller than 8 cubic foot sizes are available at www.betterfoam.com (window and door low pressure foam and one component (can and gun) foams are also sold there)

Filling liquid tanks with foam for EPA mandates, flotation devices, etc.: to convert gallons to cubic feet, multiply gallons X 0.1337 i.e. a 500 gallon tank would be $500 \times 0.1337 = 66.85$ cu. ft. to fill this tank (or very close to it) you would need to use the Slow Rise (SR) formula. A II-600 SR is 50 cu. ft. and a II-200 is 16 cubic feet for a total of 66 cu. ft. yield, which should be close enough for government work.

Fomo Foam contains NO Penta-BDEs as a fire retardant.

The 4 formulas it comes in are:

- 1. Fast Rise:** Formulated for surface spraying.
- 2. E-84 Fire Rated:** Formulated as a fast rise product with additional self-extinguishing fire retardants. Used primarily where the foam is going to be exposed in commercial applications that require the E-84 rating be satisfied.
- 3. Slow Rise:** Formulated for safely injecting into closed cavities.

4. 2.5 lb density: Primarily used as a roofing foam, this foam is excellent for use as a roofing foam or for patching roofs or for redirecting water flow on a flat roof or resealing edges and penetrations.

Note that any polyurethane foam can be used in outdoor conditions, but it must be painted with any latex paint or other coating to protect it from UV or sunlight, which makes the foam turn bright yellow and brittle.

Optimal tank temperature for these 2 component kits is 70-80 degrees Fahrenheit. That means the metal tanks should be warm to the touch before and while you are spraying. If the tank temperature falls below 55 degrees F, they won't spray foam. The temperature of the surface you are spraying or the temperature of the air is not in question. Only the TANK TEMPERATURE is critical. You can warm them up by keeping them next to a heat source or in a warm place overnight. You can also blow hot air from forced air heater onto the tanks for a couple of hours or so before you start. Keep an eye on the tank temps if you are spraying in cold weather. You may have always wanted an infrared thermometer. They are \$50 at Sears. If you are spending 4 figures on foam, the infrared thermometer may be a good investment to insure you have the tanks at optimal temperature.

All of these kits come with extra tips. (II-605, II-600 & II-425 come with 8 tips, 4 cone and 4 fan spray patterns. All other kits come with 4 tips, 2 of each type.) The reason for this is because if you start to spray and stop spraying for more than 45 seconds, the foam inside the nozzle tip will cure and harden. This is not a problem unless you try to spray through a clogged tip. We give you plenty of extras. Use them and there's no problem. Don't use them and foam will back up into the gun and throw the pressure ratios off and you will spray flat foam if you can spray any at all. The tips snap on and off easy. You can order extra tips as a suggested item in the shopping cart when you order a kit. Generally, the tips included are all you need unless you anticipate stopping and starting a lot. These kits are very easy to use and effective if you just remember 2 things: Tank Temperature & Change Nozzle Tips.

YES, you can use part of a kit one day and the rest another day, etc... Say you spray a half a kit and your dog has a litter of pups and you have to play nursemaid and can't get back to it until a few days later. This isn't a problem. You can store a partially used kit for up to 5 or 6 days. Just make sure to take off the old tip, make sure there little cavity is full of petroleum jelly (included with kit) put the old tip back on until you are ready to use it again. When you are ready to start anew, just rock the tanks for a minute or so to mix the propellant well, snap a new tip on, and start spraying again.

One more thing that will help you get the most out of your kits is if you understand how the nozzle/gun delivery system works. You'll notice at the end of the gun, where the nozzle tip goes on, is 2 small metal jets. This is where the two component that are coming out of the tanks enter into the nozzle tip, where they spin around in a vortex before they shoot out. This is where the chemicals mix to make the foam.

Understanding that, you should also understand that the trigger on these guns is metered, which means the further you pull back on the trigger, the faster the foam comes out. These kits, especially the larger ones, are under pretty high pressure. When you first start spraying with them you don't want to just jerk back on the trigger. What you need to do is slowly increase your pull on the trigger to get the gun primed and the vortex in the tip right so the product mixes well or you end up spraying 'flat' foam that doesn't expand as much as it should because it isn't mixing right in the tip.

You really don't need to pull the trigger back any more than a quarter of the way for best control. To put an inch on, you'll just pull back a quarter of the way on the trigger and move your arm at a pretty good speed to get an inch. To put 2 inches on, just move your arm a bit slower. It takes a few feet to get the hang of it, but it's basically that the number of inches you put on is directly relational to how fast you are moving your arm in conjunction with how far back you have the trigger pulled.

Overall, these kits and guns are excellent and the best in the industry. We pride ourselves on support and our technical support is available 6 days a week at 1-800-339-3531 option 2. (can't get them to work Sundays...;o)

We have very few problems with this product. Just remember the simple 5 things:

1. The tank temperature needs to be optimally between 70 degrees F and 80 degrees F. A good rule of thumb is if the metal tank is warm to the touch, you are good to go.
2. Rock the tanks for a minute or so before you start spraying to mix the propellant well. Otherwise, you'll leave about 5% in the bottom of the tanks. If you rock the tanks before you start, they'll empty completely.
3. Change the tips when you need to. If you have started spraying and stop for more then 45 seconds before you start spraying again, you need to change the tip because it will be plugged up with cured foam. We give you extra tips with each kit for this purpose. Use them and your life will be a good one...

4. Start out slow and gradual with the trigger when you first start spraying out so you prime the gun and have a smooth flow and good mixing in the nozzle.

5. Cover up. This is very adhesive. It will stick to your hair. Sometimes, when spraying overhead especially, there may be a fine mist of back spray. Wear gloves, goggles and enough gear to protect yourself. It doesn't hurt you, it's just that nothing will take it off. It has to wear off.

Of course, we are available to answer any questions. We have thousands of satisfied customers and three who didn't believe me about making sure the tanks were warm. This product is really a boon to the do-it-yourselfer and builder or contractor.

Thank you for your consideration and if we may be of further service, please don't hesitate to give us a call. Please, read on for more valuable information.

Now for how to calculate how much you need...and some other useful information concerning different applications.

Note: Answers are contained in narrative overview of product applications by product formula. Please read entire narrative for the product you are considering to gain a general overview of the product's strengths and weaknesses to help you better make an informed decision regarding your project.

FRAMED HOUSES AND STRUCTURES (existing closed cavities):

Closed Wall Cavities: SLOW RISE (SR) Formula FAQs:

Fomo Foam's Slow Rise (SR) pour in place formula is a low-expansion foam that is made to expand slowly and fill existing plastered or drywall covered walls completely without the risk of creating too much pressure and blowing the drywall halfway across the room. This product is especially suited to insulating homes that were built without insulation in the outside walls or as a soundproofing for common walls in condominiums, apartments, and to isolate family rooms, bathrooms, laundry rooms from excess noise.

Common uses:

The common wall between apartments and condos for sound control.

Soundproofing offices and conference rooms.

The common wall between a unheated garage and the main house for thermal insulation. (Also good for soundproofing if it sounds like someone is landing a 747 in your kitchen every time someone pulls the car in the garage!)

Outside walls on older homes that lack insulation in the exterior walls. In a 2"x 4" wall you will get an R-24 and in a 2"x 6" wall, you will get an R-38. This may or may not be the right choice in a 2"x 6" wall if you are in Florida or Southern California, but if you are in Colorado or Montana in the mountains, this may be exactly what you need.

Boat hulls, pontoons and flotation devices. The SR product is approved as a flotation foam by the U.S. Coast Guard.

Anywhere injected foam can be used.

Calculating how much you need:

To calculate how much Handi-Foam Slow Rise Formula you will need, the formula is like so:

Length x Height of the wall to be filled = Gross Square Footage

Subtract the linear square footage of any doors or windows in that wall for the net sq. ft.

Take the Net Square footage and subtract 10% for the studs (which you won't be spraying)

Take that total and multiply it by 3.5" for a 2"x 4" wall or multiply by 5.5" if it is a 2"x 6" wall

The result is the number of board feet you need to install to complete your project.

For instance:

10' long x 8' tall wall is 80 square feet

It has one door 3' x 7', which is 21 sq. ft.

and a window that is 3' x 3' which is 9 sq. ft.

Take the 80 sq. ft. and subtract the 21 and the 9 for the window and door and you are left with 50 sq. ft.

Take the 50 sq. ft. and subtract 10%, which is 5 sq. ft. and you are left with 45 sq. ft. to insulate. Since the 2"x 4" cavity is really 3.5" wide, you multiply

45 times 3.5 which gives you 157.5 board feet to insulate. You would need to order a II-200 SR kit for this wall.

Note that this product is less expensive the more you buy. A 600 bd ft kit is almost the same price as 2 of the II-200s, so buying a large 600 kit is 30% free product over buying 2 of the 200 bd. ft. kits.

PONTOONS: Your average 17 foot pontoon set requires a II-600 and a II-200 to fill both pontoons.

Installation of the SR Product

There are full instructions and suggested tips for using the Slow Rise formula in the SOUNDPROOFING section of this site.

FRAMED HOUSES AND STRUCTURES (new construction open wall cavities):

Open Wall Cavities: FAST RISE Formula FAQs:

How do you figure how much you will need?

This depends a bit on your application. Let's take a common application whereby you are building a new house or have stripped the drywall or plaster and lathe off the walls in a remodel job. Commonly, you will be wanting to apply 1" of foam to the interior of the outside walls and add a batt to fill in the rest of the cavity.

To calculate how much you will need for this application, measure your outside walls length x height to get your raw sq. ft. Then measure the doors and windows and get the total sq. feet of the doors and windows and subtract that from the raw sq. ft. Then, take that number and subtract 10% for the studs.

Ex: You have a house that is 40'x 20' with 8' walls.

$40+40+20+20 = 120 \times 8' = 960$ total sq. ft. in the outside walls

Say there's 120 sq. ft. of windows and doors

That leaves 840 sq. ft.

subtract 10% of 840, which is 84 sq. ft. for the studs

which leaves 756 sq. ft. that you need to put an inch of foam on.

This job would require one II-605 kit and one II-205 kit.

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Crawl spaces and basement ceilings, including rim joists are calculated at simple board footage. For instance, if your crawlspace is 20'x 30', that equals 600 sq. ft. - one II-605 kit will do that job and you'll have warm floors and less or no draftiness from air infiltration coming up the walls from the crawlspace or basement.

Metal buildings are figured on gross sq. footage of wall and ceilings. A 20 x 30 metal building with 10 foot walls is 20+20+30+30, which is 100 linear feet times the 10 foot wall height is 1,000 sq. ft., and if you are doing the ceiling also, it's 20'x 30', which is 600 sq. ft. — add that to the 1,000 sq. ft of walls and you need to cover 1,600 sq. ft. - Three of the II-605 kits will do that, even allowing for a 3:1 pitch in the roof.

SPAS & HOT TUBS: Unless your Hot Tub or Spa is for more than 8 people, a II-205 kit will do it.

FILLING LIQUID TANKS: with foam for EPA mandates, buried gas and oil tanks , flotation devices, etc.: to convert gallons to cubic feet, multiply gallons X 0.1337 i.e. a 500 gallon tank would be $500 \times 0.1337 = 66.85$ cu. ft. to fill this tank (or very close to it) you would need to use the Slow Rise (SR) formula. A II-600 SR is 50 cu. ft. and a II-200 is 16 cubic feet for a total of 66 cu. ft. yield, which should be close enough for government work to filling the tank.

If it is below 65 degrees outside where you live, you really need to put a heat source on these tanks to get the full yield. A ceramic heater or electric heater with a fan works well. The warmer they are, the better the yield. If you don't keep the tanks warm, you will not get the yield out of the kits and will run out of foam.

It's a basic bell curve. Maximum yield is achieved when tanks are between 70 and 85 degrees. If you are doing a large project, it would pay to invest in a laser thermometer for \$50 at Sears or Home Depot. If a II-605 gets below 60 degrees, you can lose 30% of the yield, so the thermometer would be a good investment. If the tank temperature gets below 55 degrees F, the foam doesn't expand and will run.

We say leave them in the house or a heated space, but many folks don't realize that if it's fall weather or you keep your house at 68 to 70 degrees F, then the tank temperature is only going to be about 61 degrees if you set it on the floor in the house. **BEST BET:** Put a heat source on these kits an hour or two before you use them and remember they need to be warm to the touch to get the full yield.

This foam expands and adheres great within it's proscribed temperature ranges. **KEY WORDS: TANKS WARM TO THE TOUCH!** They also take a couple of hours to heat up with warm air blowing over them, but they also take time to cool down. You don't have to keep heat on them while you are spraying. Just get them warm just before you start and, unless it's below 20 degrees out, they won't cool down in the time it takes to spray a kit. A little common sense when using these kits really makes them work well.

Thank you for choosing Fomo Foam Products. www.fomofoam.com