



Low Pressure Professional Spray Foam Kit Operating Instructions

Congratulations on choosing the quickest and easiest way to a comfortable, healthy, money-saving home!

Getting started is as easy as 1,2,3:

1. Setting Up Your System (Page 3)
2. Using Your System (Page 4)
3. Getting the Best Foam (Pages 5-6)

Please read this instruction booklet from start to finish. You want the best value from your investment, and that means being certain you're on the right track.

You'll find many helpful videos at SprayFoamDirect.com

Please email us with any questions at: Help@GuardianEnergyTech.com or call us at your exclusive 24/7 Customer Support Phone

Things to Remember:

Take your time and stop periodically to make sure you're on track.

Spraying test patches is a great way to make sure everything is the way you want it.

Always make sure the foam is light green in color and tacky in 30 seconds and dry to the touch in 2 minutes. If it's not, stop right away. Read the green Troubleshooting page, or call us. We're here to help you do it right.

Take your time to get the best results. Pages 5-6 show you exactly how to do it.

Change the mixing nozzle when you notice the spray pattern slowing down or changing, or if you stop spraying for more than 30 seconds.

Use dropcloths or plastic to cover anything you don't want foam on.

Kits can be stored at temperatures between 40°F and 100°F (5°C – 38°C). Never store in temperatures above 100°F (38°C). Do not freeze.

Always store & use upright, in their boxes.

Shake each tank for 30-60 seconds before each use. You'll want to periodically shake the tanks during the project to get the most foam out of the tanks.

You may have some blue B chemical left over at the end of the kit. That's OK. Having some leftover B does not affect the yield of the kit nor the quality of the spray foam, so no worries. Section 7 below shows how to dispose of any remaining chemicals.

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1. Setting Up Your System

Always use your kit in the upright position with the tank valves on top. Keep the tanks in the boxes. Kits used on their sides will lose pressure and therefore yield.

Operator should always wear safety goggles, protective clothing, and nitrile gloves. Use a respirator for protection and adequate ventilation. Have no exposed skin.

IMPORTANT – FOLLOW ALL INSTRUCTIONS IN THIS MANUAL

Foam it Green kits are factory tested to meet rigid performance standards. Proper function of the product is totally dependent upon strict adherence to the operating instructions included in this manual. The coverage / yield of your Foam it Green kit will vary depending on factors outside of the kit, including but not limited to surface temperature, chemical temperature, spray techniques, and thickness of application.

System 202

COMPONENTS

The Foam it Green System 202 includes two chemical components.

“A” Component is in the green tank.

“B” Component is in the white tank.

A gun and two 10 foot hoses already attached to the tanks.

There is a packet including 10 mixing nozzles, 3 fan tips, petroleum jelly and a pair of nitrile gloves.

TO PREPARE FOR OPERATION:

Unwrap the gun and hose assembly.

Remove the nozzle packet.

Shake tanks for 30-60 seconds.

System 602 / 1202

Components:

The Foam it Green System 602 comes in two cartons. One carton contains:

The “A” Component (blue tank)

A gun attached to two 15-foot hoses

A packet including 10 mixing nozzles and 3 fan tips.

A wrench, petroleum jelly, and a pair of nitrile gloves.

The other carton contains the “B” Component (white tank).

To Prepare for Operation:

Shake tanks for 30-60 seconds.

Attach the hose labeled “A” to the “A” Component tank.

Turn the swivel nut down by hand and tighten with the wrench.

Attach the other hose to the “B” Component tank.

Turn the swivel nut down by hand and tighten with the wrench.

2. Operating All Systems

1. Check the liquid crystal temperature strip (on top of the white tank). Look to see which section is indicated.
 - If the blue section is indicated, the chemical is too cold, and can result in foam with a crunchy surface. Warm the kit prior to use.
 - If the red section is indicated, the chemical is too warm, and can result in darker (even blue) foam with a soft and spongy surface. Cool the kit prior to use.
 - If the green section is indicated, the kit is at the proper temperature and ready to use.

2. Leave the tanks in the boxes. This helps prevent the tanks from turning over and helps avoid wrapping the gun too tightly around the tank handles.

3. Use a small amount of petroleum jelly to lubricate the black "O-ring" that surrounds the face of the gun.
 - Install a mixing nozzle by lining up the locking arms with the slots in the gun body. Push in firmly until you hear a "click." The nozzle is firmly secured.
 - To remove the nozzle, squeeze locking arms and pull nozzle off.

4. Open valves slightly, making sure there are no leaks.
 - If a leak is detected, tighten the nut. If there are no leaks, open the valves completely.

5. Check operation of the kit by aiming the gun with mixing nozzle attached into a waste container.
 - Disengage the safety.
 - For the test patch, dispense foam at full pressure to make sure the foam is **light green in color and dry to the touch in 2 minutes**.
 - If dispensing is interrupted for 30 seconds or more, the nozzle must be removed and changed prior to the next spray. Watching your test patch rise would be a time to change the nozzle.

3. How to Get the Best Spray Foam

Temperature is a critical factor in getting your project done quickly and easily. Use test patches to make sure you're ready to start. Then keep track of how your foam is curing in case temperatures change while you're working.

Chemical Temperature:

Use the liquid crystal temperature strip to ensure the chemicals are at the proper temperature.

- For best performance, the temperature of the chemicals in the tanks must be between 65°F and 85°F (18°C – 29°C).
- Cooler or warmer ambient temperatures will affect the chemical temperatures even as the kit is being used. Periodically check the liquid crystal temperature strip to ensure the chemicals are at the proper temperature.

Surface Temperature:

Surface temperature affects the expansion, cure time and possibly the adhesion of the foam. The best results need the surface temperature between 65°F and 90°F (16°C-30°C) Cooler temperatures result in less expansion and slower cure times.

- Temperatures below 65°F may result in adhesion problems due to condensation. Raise the surface temperature artificially, or wait until the sun or interior temperatures warm the surface.
- Higher temperatures will result in faster cure times, less expansion and in some instances, adhesion problems.

Foam Set Up Times:

Foam it Green will be light green and sets up (tack free or dry to the touch) in less than one minute in temperatures between 70° F and 80°F (21°C – 27°C). Higher temperatures will result in faster setup times.

The Open Cell and Slow Rise foams will be light green and tack free in 2 minutes. The 3# High Density foam will be light tan and tack free in 30 to 45 seconds.

Spraying Techniques:

You control the flow of chemicals by how hard you pull the trigger. Pull the trigger back at least 25% for a good surface texture. Be careful not to pull the trigger 100% when the kit is new. The pressure in the tanks decreases as they empty. As you are dispensing, adjust the trigger pull to a position that gives you a desired spray pattern.

For spray applications, hold the gun 18 to 24 inches away from the surface you're foaming. If you wish to move closer to avoid splatter (or overhead projects), adjust the pressure applied to the trigger.

The mixing nozzle is where the two chemicals are actually blended and become foam. IMPORTANT... if spraying is interrupted for 30 seconds or more, the nozzle must be removed and replaced with a fresh nozzle prior to the next shot.

Even coverage is best obtained by moving the gun steadily back and forth and applying a constant trigger pressure. Attaching the fan tip (by screwing on the small green piece to the threaded end to the mixing nozzle) results in a wide, flat, fan pattern.

Foam It Green will expand approximately 2-3 times its sprayed volume during the cure process. The operator must take this into consideration when applying in a spray pattern or when filling a cavity.

Spray a 1 inch bead around the perimeter of the area you wish to cover. Then, with a back-and-forth motion, fill in the area from top to bottom.

The faster you move, the thinner the layer of foam. The more slowly you move, the thicker the layer of foam.

Once the foam is cured, and you see that you need heavier coverage, you can apply another layer of foam on top of the previous layer. Wait a minimum of 10 minutes between coats.

If your application requires a thickness in excess of 1 inch, we recommend you apply it in multiple passes. Applying too much foam in one pass can result in a very uneven surface. The foam can sag and may even drop off before it cures.

Filling a Large Void:

We strongly recommend that you do not dispense more than four inches of foam in one application. Allow each layer to cure, and add foam to the top of it. One layer of foam will bond completely to the next.

Polyurethane foam generates heat as it cures. If too much foam is dispensed into a large cavity, the foam around the outside of the cavity will insulate the heat generated from the core of the cavity, and combustion could occur.

The regular Foam It Green (Fast Rise) is NOT the product to use for filling existing (wall) cavities. Do not place the nozzle directly into holes because it will clog the gun.

Filling a Large Gap:

To caulk large gaps, simply run a bead of foam into the cavity.

Place the tip of the mixing nozzle at the edge of the cavity and slowly pull the trigger. Remember that the foam will expand two to three times its original volume. If the foam cures, and you have not filled the cavity to your satisfaction, you can always add more foam. One layer will bond to the other. If you dispense too much foam, you can trim away the excess with a sharp serrated knife.

4. Special Instructions

***Spraying Overhead:**

1) If you're doing a wall and ceiling, start with the overhead portion of the project. You'll have the most pressure at the beginning of a kit to help fight gravity.

2) Do not use the green fan spray tips on the ends of the nozzles.

3) The instructions say to stand between 18-24 inches from the area you are spraying. When spraying overhead, try reducing the distance to 12 inches. This will reduce "snow" and keep more of the foam on the ceiling.

4) Use a lighter touch with the trigger. Experiment with pulling on the trigger to minimize spraying so hard that it hits the ceiling and comes back "Overspray."

These 4 simple steps improve yield and the amount of time it takes to do your project. If you have any questions, call or email us.

***.75 lb Open Cell Class 1 Foam It Green Kits (Foam It 402 & 1202):**

The .75 lb formula expands differently than standard foam. For best results, spray a thicker coat than you would from 2 lb Foam It Green (minimum 1/3-1/2 inch). It will take 90 to 120 seconds to fully rise. One coat expands approximately double the size of a standard 2 lb Foam It Green coat. Foam will be green but less firm to the touch than the 2 lb formula.

***For Slow Rise Formula Foam It Green Kits (2lb foam):**

Watch the instructional Slow Rise video on our website:

<https://www.sprayfoamdirect.com/videos-a-how-tos/slow-rise-retrofilling>

For blind filling projects, don't stick the nozzle directly into holes. It won't fill the wall and will likely jam the gun. Purchase clear plastic hose that snugly fits over the end of the black nozzle. What we've found works best is 5/16" inner dimension, 7/16" outer dimension size clear tubing. Foam flowing through this tube will appear green. If it is not, stop spraying. Cut tubing into 2-3 ft lengths.

Drill holes every 2 to 3 ft up the wall. Use a new nozzle and length of clear plastic hose for each hole to avoid the curing foam in the line. Lower the line into the hole and pipe the foam into the hole. Slowly pull the hose back out so the foam is dispensed higher and higher. Let it cure and then proceed with the next hole up. Slow rise foam takes 2 minutes to rise. Allow each section cure for at least 20 minutes before adding more.

***Non-Standard Kits (High Density or Non-Class 1 Fast Rise):**

Neither of these formulas have a blue dye in the B tank, so the resulting foam will be light TAN. Cured foam will be tacky in 30 seconds and will be solid in 5-10 minutes. If it isn't, STOP IMMEDIATELY and Troubleshoot. (See green insert)

After 5 minutes, if foam is wet, spongy or shrinking, and is white or cream colored, this is B rich foam. If foam is crispy to the touch and caramel colored, this is A rich foam. Adjust according to the green Troubleshooting page or call the 24/7 help line.

***For High Density Formula (3lb foam):**

If spraying outside, coat foam exposed to sunlight with elastomeric rubber roof coat paint. This protects the foam from breaking down from UV rays. As long as the foam is covered, it will not deteriorate. Reapply the rubber roof coat paint as directed by that manufacturer.

5. Storing, Shutting Down, and Using Another Day

Unopened systems are guaranteed up to the expiration date stamped on the carton (13 months from the date of manufacture). Once the kit is opened, it is warranted for 30 days.

Once opened, use the kit a minimum of once per week to keep fresh chemicals in the lines. Otherwise you may need to purchase a new gun and hose assembly.

Store the kits in an environment of 40°F to 100°F (5°C-38°C) whether they are opened or unopened. Keep tanks stored upright and dry in their boxes. Do not freeze.

Never store in temperatures above 100°F (38°C). Nor should they be stored in direct sun, or near hot water pipes, furnaces, chimneys or heat ducts.

If they have been stored in cool temperatures, it is important that they are relocated to a warmer place until the chemicals reach a temperature between 65°F and 85°F (18°C-29°C). The temperature sensing strip located on the "B" Component tank will indicate when the chemical temperature is at the correct level to dispense good quality foam (See "Operating All Systems", above).

Shutdown

1. Make sure to immediately remove the used mixing nozzle and discard it. Coat the face of the gun with a GENEROUS amount of petroleum jelly. Also, add a dab of petroleum jelly at the base (in front and behind) of the trigger to prevent crystallized chemicals from jamming the trigger.
2. Apply petroleum jelly to the valve stems of the tanks and close the valves.
3. Keep the cartons in their upright position. Leave hoses attached to the tanks and do NOT drain the lines. Do not wrap hoses tightly around the handles on the tanks.
4. If the kit is used infrequently, use the kit briefly once a week. This ensures that fresh chemical is in the lines.

Open the tank valves, aim the gun – with a mixing nozzle attached– into a waste container and spray for 10-20 seconds. Make sure the foam is green and cures. Discard the mixing nozzle, and reapply a GENEROUS amount of petroleum to the face of the gun. Close the tank valves. The kit can be stored for another week.

Reusing Your Kit Another Day:

1. Shake each tank for 30-60 seconds before use.
2. Open the valves, making sure fittings are still secure and there are no leaks.
3. Aim the gun – with a mixing nozzle attached– into a waste container, spray for 10-20 seconds and make sure the foam is green and cures.
4. Do a test patch and review. If all's good, continue with your project.

6. WARNINGS

Individuals with chronic respiratory diseases, asthma, or bronchial disorders should not work with these materials, nor should those with allergic diseases.

The user is responsible for verifying that this material meets local building codes and/or any restrictions. It is also the user's responsibility to determine the fitness of this product for any intended application.

When this product is to be used in interior construction or in any confined area, it should be covered with another material to provide a fire rating of at least 15 minutes. A covering of a minimum of ½ inch cement, plaster or fire-rated gypsum wallboard or an equivalent fire barrier is advised. Do not use this urethane foam where it will come in contact with steam pipes, heat vents, or areas where surface temperature might exceed 250° F (121° C). No flame cutting or hot work should be conducted nearby.

Where urethane foam is continually exposed to sun or water, it is recommended that a protective coating be applied over the foam to retard possible deterioration, such as an elastomeric rubber roof coat paint.

7. Safety Precautions

Personal Protective Equipment for Low Pressure Systems

Foam it Green two component spray foam systems are professional systems that should be used under proper health and safety conditions. All Foam it Green systems are low pressure products with a dispensed pressure of below 250/psi.

The suggested Personal Protective Equipment (PPE) for Foam it Green systems is as follows:

- Chemical Resistant Safety Goggles
- Chemical resistant protective clothing to ensure there is no exposed skin
- Nitrile gloves (provided in all Foam it Green 202 and 602 kits)
- A NIOSH (National Institute of Safety and Health) Respirator.
- There are many respirator options and the correct respirator may be determined based on the project conditions (e.g. ventilation) and/or the applicator preference. Several options include:
 - Half-Mask Respirators with organic vapor cartridges and particulate filters (P100). Half Mask respirators require a fit test and cartridges/filters should be changed in accordance to a regular schedule.
 - Full Mask Respirators with organic vapor cartridges and particulate filters (P100) provide more protection than half-mask respirators. The face shield protects eyes and face from irritants and contaminants. Full Mask respirators require a fit test and cartridges/filters should be changed in accordance to a regular schedule.
 - Powered Air Purifying Respirator (PAPM) with an organic vapor cartridge. This type of respirator offers breathing comfort from a battery powered fan which pulls air through filters and circulates air throughout the helmet and hood.
 - For more Respirator information, please visit www.osha.gov (29 CFR 1910.134 Personal Protective Equipment)

Please refer to the Material Safety Data Sheet accompanying this shipment for safe use and handling of the individual liquid components.

- 1. OPERATOR SHOULD ALWAYS WEAR SAFETY GOGGLES, PROTECTIVE CLOTHING AND NITRILE GLOVES.** In case of skin contact, flush with water. For eyes, flush with water for 15 minutes and get immediate medical attention. If ingested, drink lots of water and contact physician immediately.
- 2. Use only with adequate ventilation and respiratory protection.** If inhaled, move to fresh air, give oxygen if necessary.
- 3. Smoking must not be allowed during application.** Open flame and/or the use of welding or electrical equipment in the vicinity of the application should be prohibited.
- 4. Do not store in temperatures above 100°F (38°C).** Do not store in direct sun, near hot water pipes, furnaces, chimneys or heat ducts.
- 5. Keep out of the reach of children.** Do not apply to things children would touch.

Tank Disposal and Chemical Spills

When you're done, you may have some blue B chemical left over at the end of the kit. That's OK. Having some leftover B does not affect the yield of the kit nor the quality of the spray foam, so no worries. Here's how to dispose of any remaining chemicals.

Foam It Green® is best disposed of as solid material as opposed to the individual liquids. To that end, we recommend the following:

EMPTY REMAINING CHEMICALS, if any, into a waste container. Make sure that the waste container contains both "A" and "B" chemicals. They do not have to be on ratio, but they both must be present to make a solid. Mix the waste chemical blend with a stick so that it becomes a solid substance. This substance can then be disposed of as solid industrial waste.

If you only have one of the chemicals left, it must be absorbed and possibly neutralized before disposal.

If you only have "A" chemical remaining or for "A" spills, follow this procedure:

Wear respiratory protection and suitable protective clothing. Remove to an outdoor or well-ventilated area. Contain spill and collect using absorbent material, such as sawdust or cat litter. Shovel into waste container, adding 10% to 20% solution (90% water, 7% ammonia, 3% liquid detergent). Leave uncovered for 24 hours prior to disposal.

If you only have "B" chemical remaining or for "B" spills, follow this procedure:

Wear respiratory protection and suitable protective clothing. Remove to an outdoor or well-ventilated area. Contain spill and collect using absorbent material, such as sawdust or cat litter. Shovel into waste container, and dispose of as ordinary industrial waste.

TANK DISPOSAL

DO NOT INCINERATE TANKS. Vent the tanks. First, drain any remaining chemical into a waste container. Turn the tanks upside down, valves down. Open the valves slowly and let the pressure escape. Leave in this position for a minimum of 24 hours. Once vented, tap out the pressure relief valve to prevent reuse. This is the round metal disk found on the top part of the tank on same end where the valve is, near the handle. Tap it out with a hammer or with a hammer and screwdriver. TANKS MUST BE VENTED BEFORE THIS IS DONE.

Dispose of vented empty tanks as ordinary industrial waste. Check with your City Department of Public Works or local Steel Recycling Plant for more information.

FOR CHEMICAL/MEDICAL EMERGENCIES , PHONE CHEM TREC 1-800-424-9300 or 703-527-3887 (collect)
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8. Legal

Guardian Energy Technologies, Inc. warrants that the goods sold hereunder conform to its standard applications.

This warranty does not apply to a product that is damaged or altered through misuse, abuse, accident, neglect, modification or mishandling.

The coverage / yield of your Foam it Green kit will vary depending on factors outside of the goods sold hereunder, including but not limited to surface temperature, chemical temperature, spray techniques, thickness of application, testing and troubleshooting.

Guardian Energy Technologies, Inc. is not liable for wasted chemicals.

NO REPRESENTATION OR WARRANTY OF ANY OTHER KIND, EXPRESS OR IMPLIED, IS MADE WITH RESPECT TO THE GOODS, WHETHER AS TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER MATTER.

NOTICE OF CLAIMS: Immediately upon receipt of this product, user should inspect it for any parts shortages or defects. Any claim for shortage of system components must be made with Guardian Energy Technologies, Inc. within 10 days after receipt of goods. All other claims, including claims for alleged defective goods, must be made to the distributor within 15 days after user learns of the facts upon which such claim is based, but in no event after the expiration date stamped on the carton. Otherwise, any claim is waived.

LIMITATION OF LIABILITY: GUARDIAN ENERGY TECHNOLOGIES, INC. NEITHER ASSUMES, NOR AUTHORIZES THE DISTRIBUTOR OR ANY OTHER PERSON TO ASSUME FOR IT, ANY OTHER LIABILITY IN CONNECTION WITH THIS PRODUCT. ANY LIABILITY FOR LOSS OR DAMAGE RESULTING FROM ANY CAUSE WHATSOEVER, INCLUDING NEGLIGENCE, ALLEGED DAMAGE OR DEFECTIVE GOODS, IRRESPECTIVE OF WHETHER SUCH DEFECTS ARE DISCOVERABLE OR LATENT, SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE PARTICULAR GOODS WITH RESPECT TO WHICH LOSSES OR DAMAGES ARE CLAIMED, OR, AT THE ELECTION OF THE DISTRIBUTOR, REPAIR OR REPLACEMENT OF DEFECTIVE OR DAMAGED GOODS. IN NO EVENT, INCLUDING IN THE CASE OF A CLAIM OF NEGLIGENCE, SHALL GUARDIAN ENERGY TECHNOLOGIES, INC. OR ANY DISTRIBUTOR OF THIS PRODUCT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

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