Follow this Instruction Manual

Do Test Patches

Check Your Work Often

Please read this instruction booklet from start to finish.

You'll find many helpful videos at SprayFoamKit.com
Please email us with any questions at: Help@GuardianEnergyTech.com or call us at your exclusive 24/7 Support Phone #:

Things to Remember:

1) **Always make sure the foam is light green in color and tacky in 30 seconds and dry to the touch in 2 minutes.** Use good lighting to determine color of foam.

2) Spraying test patches is how to make sure everything is working. Do a test patch to make sure the foam is green and curing. Stop if the foam is not green or tacky to the touch in 30 seconds. Do another test patch on the surface to make sure the foam bonds to the surface.

3) Slow down and check your work often.

If it's not green and curing, stop right away. Read Troubleshooting (Section 6), or call us. We're here to help.

Yield is determined by how the kit is used. Therefore, Guardian Energy Technologies, Inc. does not guarantee you a specific amount of foam from your kits.

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

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

Store kits 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. Keep the tanks dry.

Shake each tank for 30-60 seconds before each use. 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 8 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 dry and in the boxes. Kits used on their sides will lose pressure and yield.

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

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.

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 attached to two 10-foot hoses.
- A packet including 10 mixing nozzles and 3 fan tips.
- A wrench, petroleum jelly, and a pair of nitrile gloves.

TO PREPARE FOR OPERATION:

- Remove the gun and hose assembly and nozzle packet.
- Shake tanks for 30-60 seconds.
- Attach the two hoses to the two Component tanks.
- Turn both swivel nuts down by hand and tighten with the wrench provided.

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 provided.
- Attach the other hose to the "B" Component tank.
- Turn the swivel nut down by hand and tighten with the wrench provided.

2. Operating All Systems

1. Let the kit fully reach the temperature of 65°F to 85°F (18°C – 29°C) – **the ideal is 75°F** - before using. This may take up to 48 hours depending on where it was stored. Check the temperature strip (on top of the white tank). Look to see which section is indicated. Only use when the green section is indicated.

- If the blue section is indicated, the chemical is too cold. Warm the kit prior to use.

- If the red section is indicated, the chemical is too warm. Cool the kit prior to use.

2. Prepare the surface. Make sure the surface you spray to is clean, dry, and between 65°F - 85°F (18°C – 29°C). Cover anything you do not want foam to bond to.

3. Leave the tanks upright in their boxes.

4. 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.

5. 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.

6. Do Test Patches.

A. Aim the gun with mixing nozzle attached into a waste container. Disengage the safety and dispense foam at full pressure.

- Make sure the foam is ***light green in color and dry to the touch in 2 minutes***.

B. Do another test patch onto the surface you will be spraying.

- Make sure the foam is light green and dry to the touch in 2 minutes. Also, make sure the foam is bonding to the surface. If you hear loud popping noises or see the foam peeling away at the edges, your surface is not ready.

7. If spraying is interrupted for 30 seconds or more, change the nozzle prior to the next spray.

3. 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 give the 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 to make 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. Do not use fan tips when spraying overhead.

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.

If your application requires a thickness in excess of 1 inch, apply it in multiple passes. Applying too much foam in one pass can result in the foam sagging and dropping off before it cures.

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.

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.

Do not use Foam It Green Fast Rise for filling existing wall cavities. Do not place the nozzle directly into void holes because it will clog the spray 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) When spraying overhead, reduce the distance from gun to surface down 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."

For Slow Rise Formula Foam It Green Kits (2lb foam):
Watch the instructional Slow Rise video at:
https://www.sprayfoamkit.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 snuggly fits over the end of the black nozzle. What 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 3-4 ft lengths and attach to nozzles with electrical tape.

Drill holes every 3 to 4 feet 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.

Open Cell Class 1 Foam It Green Kits (Foam It 402 & 1202):
Open Cell foam expands differently than standard foam. It starts to rise after 45 seconds.

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 standard 2 lb Foam It Green. Foam will be green but less firm to the touch than the 2 lb formula.

For High Density Formula (3lb foam):
If spraying outside, coat foam exposed to sunlight with elastomeric rubber roof coat paint within 24 hours to protect 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 products' manufacturer. This formula is not ASTM E-84 Class 1.

5. Storing, Shutting Down, and Using Another Day

Unopened systems are warranted 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. Do not drain lines when shutting down for reuse.

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

Never store in temperatures above 100°F (38°C). Do not store in direct sun, 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).

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. Use the kit briefly a minimum of once a week. This ensures that fresh chemical is in the lines, and keeps the gun working.

> 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. Follow Shutdown steps 1-3.

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 on the surface and wait 5 minutes to review. If it cures and adheres, continue with your project.

6. Troubleshooting

Like all two component polyurethane foams, Foam It Green® needs both chemicals to mix in a one-to-one ratio. If it is not green and tacky to the touch in 30 seconds:

Remove the nozzle from the gun and point the gun into a waste container. Pull the trigger and observe the chemical streams. You should see two chemical streams crossing over each other and flowing at equal velocity.

The "A" component is yellowish in color and the "B" component is blue in color.

A. **If there's more "A" (Yellow) chemical flowing than "B" chemical**, your foam is probably lighter in color or yellow and may have a crunchy, glassy surface.

First check the temperature strip - is the indicator in the blue area? Cold chemicals will result in foam that is "A" component rich. If the temperature strip indicator is in the blue section, warm the tanks, shake them vigorously, and check the chemical flow again.

If the temperature strip indicates the mid-green section, meaning the temperature is right for dispensing, then check the "B" component tank. Be sure it is not empty. Be sure the valve is turned all the way on.

If all of these things seem to be right, contact us for further action.

B. **If there's more "B" (Blue) component than "A" component**, your foam is probably blue in color with a wet, spongy or a whipped-cream consistency.

First check the temperature sensing strip - is it indicating in the red section? Chemicals that are too warm often result in foam that is "B" component rich. Cool the tanks, then shake them vigorously, and check the chemical flow again.

If the temperature seems right, check the "A" component tank. Be sure that it is not empty. Be sure the valve is turned all the way on.

If all of these things seem to be right, contact us for further action.

If the foam seems to be rising, then "melts" or reverts to a liquid after a short period of time: This indicates there is no "A" component flow at all. The foam will be light blue and airy like whipped cream before reverting to a dark blue syrup.

C. **If there is no chemical flow from the face of the gun, the gun/hose assembly needs to be changed.**

D. **If neither component is reaching the gun:**

If neither chemical is reaching the gun, there's no longer enough pressure in the tanks to push out the chemical. This only happens when the kits are empty or were used when laying on their sides. The propellant escapes through the hose and then the pressure is gone. This is why it is crucial to use the kits upright in their boxes. There is no way to fix this once the pressure is gone.

7. 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.

8. Safety Precautions

Personal Protective Equipment for Low Pressure Systems

Foam it Green two component spray foam systems are professional systems that should be use 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 repsirators. 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)

9. Legal

Guardian Energy Technologies, Inc. warrants that the goods sold hereunder conform to its standard applications. Warranty claims must be confirmed by Guardian Energy Technologies, Inc. and may require return of product for inspection. There must be enough product left to test the system. Completely used kits are not eligible for warranty consideration.

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 depends 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. Therefore Guardian Energy Technologies, Inc. does not guarantee you a specific amount of foam from your kits.

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.

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