OPERATING INSTRUCTIONS

VersiFoam®

Polyurethane Spray Foam

Applicable for all low-pressure, disposable spray foam insulation kits. For professional use.

Scan to watch product videos

SETTING UP YOUR SYSTEM

IMPORTANT: Follow all of the instructions in this booklet.

VersiFoam® systems are factory-tested to meet rigid performance standards. For the product to function correctly, you must strictly adhere to the operating instructions included in this manual.

In all cases, kits should be operated upright, with the tank valves on top, and remain in the original cartons during operation. Failure to do so will result in loss of pressure.

Operators should always wear proper Personal Protective Equipment (PPE), including safety goggles, protective clothing, gloves, and respiratory equipment.

Setting Up Medium VersiFoam Systems

(Includes all varieties of Systems 9, 10, 15, and 31)

COMPONENTS

The medium VersiFoam® systems include two chemical components (Component A in the green tank and Component B in the white tank), a gun attached to two 10-foot hoses, and a packet that has 10 mixing nozzles, 3 fan tips, a pair of nitrile gloves, a wrench, petroleum jelly, an Operating Instructions booklet, and a Safety Data Sheet (SDS).

TO PREPARE FOR USE

Attach the hose labeled “A” to the green tank (Component A). Hand-tighten the collar nut on the end of the hose assembly to the tank, and secure it with the wrench. Do not over-tighten. Over-tightening could damage the valve threads or cause the valve stem to break. Repeat these steps to attach the other hose, labeled “B,” to the white tank (Component B).

Setting Up Large VersiFoam Systems

(Includes all varieties of Systems 33, 50, 100, 350, and 700)

COMPONENTS

The large VersiFoam® systems come in two separate cartons. One contains the first chemical component (Component A in the blue tank), a gun attached to two 15-foot hoses, and a packet containing 10 mixing nozzles, 3 fan tips, a pair of nitrile gloves, a wrench, petroleum jelly, an Operating Instructions booklet, and a Safety Data Sheet (SDS). The other carton contains the second chemical component (Component B in the white tank).

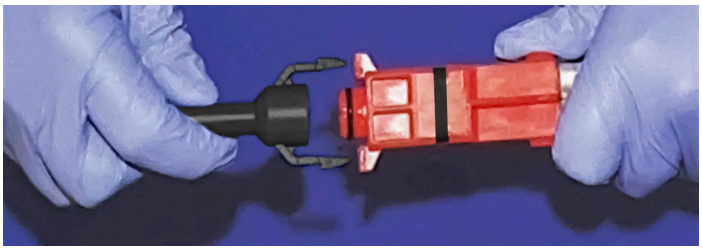
TO PREPARE FOR OPERATION

Attach the hose labeled “A” to the blue tank (Component A). Hand-tighten the collar nut on the end of the hose assembly to the tank, and secure it with the wrench. Do not over-tighten. Over-tightening could damage the valve threads or cause the valve stem to break. Repeat these steps to attach the other hose, labeled “B,” to the white tank (Component B).

OPERATING ALL SYSTEMS

1. Shake each kit vigorously.
2. Check the temperature strip on top of the white tank (Component B) to see which area is highlighted in red. If only the **blue** area is highlighted, the chemical is too cold; warm the kit before use. If the **red** area is highlighted, the chemical is too warm; cool the kit down before use. When the **green** area is highlighted, the kit is at the proper temperature and ready to use.
3. Open valves slightly. Make sure there are no leaks. If a leak is detected, tighten the nut. If there are no leaks, open the valves completely.
4. Before you begin, ensure the kit is dispensing properly by aiming the gun into a waste container. Disengage the safety. Dispense chemicals at full pressure to ensure that they feed equally from both tanks and react to make good quality foam.
5. Lubricate the O-ring around the face of the gun using a small amount of petroleum jelly. Install a mixing nozzle by lining up the locking arms with the slots in the gun body. Push firmly until you hear a click and the nozzle is firmly secured. Spray a test sample before continuing.

   To remove the nozzle, squeeze the locking arms, and pull the nozzle out.



Foam Set-Up Times

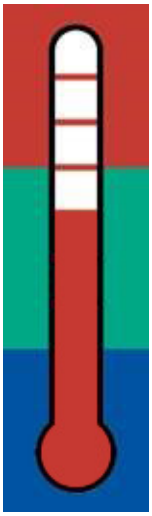
VersiFoam® sets up tack-free or dry to the touch in less than 1 minute in temperatures between 70-80°F (21-27°C). Higher temperatures will result in faster set-up times.

The chemicals combine in the mixing nozzle to create foam. If dispensing is paused for 30 seconds or longer, the nozzle must be removed and changed before continuing as foam will have cured in the nozzle.

Temperature

Temperature is highly important to producing good quality foam. Kits should be stored between 40-120°F (5-48°C).

At the time of application, chemical temperature must be between 65-90°F (18-32°C) for optimal performance. The temperature strip found on the white tank (Component B) reflects the chemical temperature. When the **green** area is highlighted in red, the chemicals are at the proper temperature.



If only the **blue** area is highlighted in red, the chemicals are too cold for proper use. Dispensing when the chemicals are too cold will result in foam that is darker in color and will have a crunchy surface. Place the tanks in a warmer area until the green part of the temperature strip is highlighted in red. This indicates that the chemicals are at the proper temperature for use.

If the **red** area is highlighted in red, the chemicals are too warm for proper use. Dispensing at this temperature will produce a lighter color foam with a soft and spongy surface. Place the tanks in a colder environment until the green portion of the temperature strip is highlighted in red. This indicates that the chemicals are at the proper temperature for use.

While using the kit, remember that ambient temperatures will affect the chemical temperatures. You must continuously monitor the temperature strip to ensure the chemicals are at the proper temperature.

Surface temperature will affect the expansion, cure time, and, in some cases, foam adhesion. The best results are obtained when the surface temperature is 65-90°F (18-32°C). Cooler temperatures will result in less expansion and slower cure times.

Low temperatures may result in adhesion problems, warm the surface temperature before continuing.

Higher temperatures will result in faster cure times, less expansion, and, in some instances, adhesion problems.

Spray Technique

The U-Control gun permits the user to meter the chemical flow, dispensing only the necessary amount of foam at a convenient speed. Hold the gun like a pistol, pull the trigger back completely, and then ease it forward until you find the position that gives you the best results.

For spray application, it is recommended that the gun be held 18-24 inches away from the surface where you are applying it. If you wish to move closer to avoid splatter, adjust the pressure applied to the trigger.

Even coverage is obtained by moving the gun steadily back and forth while applying constant trigger pressure. Screw the threaded end of the fan tip onto the end of the mixing nozzle if you prefer a wide/flat “fan” pattern.

VersiFoam® closed cell spray foam expands up to 6 times its original fluid volume when it cures. Open cell spray foam expands up to 12 times its original fluid volume. Keep this in mind when applying a spray pattern or filling a cavity.

Remember that published yields are theoretical when estimating the amount of foam needed for a specific project. They are based on foam density and the weight of the chemicals packaged in the kits.

Allow for variations in material requirements. Many factors will affect foam yield.

Chemical temperature and surface temperature cause variations. Other factors are surface irregularities; the number of layers needed to achieve the desired thickness; and free-rise, or enclosed, cavities. An estimating allowance of 10-25% is suggested.

STORAGE & REUSE

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 must be used entirely within 30 days. The kit must be used at least once per week to prevent irreversible gun blockage due to crystalization of the chemicals within the hose lines.

Store the kits in an environment of 40-120°F (5-48°C), whether opened or unopened. Keep the kits upright, dry, and in the original cartons. Do not store in direct sun or near hot water pipes, furnaces, chimneys, or heat ducts.

If stored in cool temperatures, the kit must be warmed until the chemicals reach a temperature between 65-90°F (18-32°C) before using. The temperature strip located on the white tank (Component B) will indicate when the chemical is at the correct temperature to dispense good quality foam. (See page 2: Operating All Systems.)

Storage

1. Remove the used nozzle and discard it. Coat the face of the gun with a generous amount of petroleum jelly.
2. Apply petroleum jelly to the valve stems and close the valves.
3. Keep the cartons in an upright position. Store in temperatures of 40-120°F (5-48°C).
4. In cases where the kit is used infrequently, it is required that the gun is sprayed briefly at minimum once per week. This helps to prevent irreversible gun blockage. Aim the gun (without a nozzle) into a waste container, and spray for several seconds. Make sure the streams dispense with equal velocity from both chemical tanks. Agitate the two chemicals in the waste container to form solid industrial waste. Repeat steps 1-3 to shut down the kit for another week.

Reuse

1. Open the valves, and make sure the fittings are still secure and there are no leaks.
2. Aim the gun (without a nozzle) into a waste container, and make sure there are two chemical streams dispensing with equal velocity. Agitate the two chemicals in the waste container to form solid industrial waste. Ensure that the chemicals are reacting properly to make good quality foam.
3. Attach a new nozzle, and dispense foam as usual.

PERSONAL PROTECTIVE EQUIPMENT (PPE) FOR LOW-PRESSURE FOAM SYSTEMS

VersiFoam® two-component spray foam systems are professional systems that should be used under proper health and safety conditions. All VersiFoam® systems are low-pressure products with a dispensed pressure below 250 psi.

The suggested PPE for all VersiFoam® systems is as follows:

- Chemical-resistant safety goggles
- Chemical-resistant protective clothing to ensure there is no exposed skin
- Nitrile gloves (provided in all medium and large VersiFoam® systems)
- A NIOSH-approved (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's preference.

These options include:

- Half-mask respirators with organic vapor cartridges and particulate filters (P100) cover the nose and mouth. These respirators require a fit test, and cartridges and filters should be changed in accordance with a regular schedule.

- Full-mask respirators with organic vapor cartridges and particulate filters provide more protection than half-mask respirators. The face shield protects the whole face and eyes from irritants and contaminants. These respirators require a fit test, and cartridges and filters should be changed in accordance with a regular schedule.
- Powered Air Purifying Respirators (PAPR) with organic vapor cartridges offer breathing comfort from a battery-powered fan, which pulls air through the filters and circulates it throughout the helmet or hood.

For more respirator information, please visit the Occupational Safety and Health Administration (OSHA) website, specifically OSHA Regulation 29 CFR 1910.134 on Personal Protective Equipment.

FIRST AID FOR LOW-PRESSURE SPRAY FOAM SYSTEMS

For all first aid cases, please consult a physician.

Eyes

- Flush with water for at least 15 minutes.
- Seek medical attention.

Skin

- Remove contaminated clothing.
- Wash your skin with plenty of soap and water.
- Cured foam must be removed mechanically.
- Seek medical attention if irritation develops or persists.

Inhalation

- Move to fresh air.
- If breathing is difficult, give oxygen.
- If breathing has stopped, administer CPR.
- Seek immediate medical attention.

Ingestion

- Drink large quantities of water.
- Do not induce vomiting.
- Seek immediate medical attention.

For more health and safety considerations when spraying polyurethane foams, visit www.spraypolyurethane.org, or refer to the Safety Data Sheet (SDS).

TROUBLESHOOTING

The foam you produce from your VersiFoam® system should be dispensed at a 1:1 mix ratio of the two chemical components. The foam's color and texture will help you determine if you are dispensing good quality foam.

Good quality (on-ratio) foam is light beige. Foam that is dispensed with a 1:1 mix ratio will have a set-up and tack-free time of 30-40 seconds. After 20 minutes, the foam will be firm to the touch with consistent skin.

Poor quality (off-ratio) foam is not dispensed at a 1:1 ratio. Foam dispensed with too much Component A will be darker brown and have a crunchy, glassy surface. Foam dispensed with too much Component B will be whiter in color and have a spongy surface.

The first step in diagnosing off-ratio foam is to remove the mixing nozzle from the gun. After removing the mixing nozzle, point the gun into a

Equal Stream Velocity

waste container, and pull the trigger completely back for several seconds. Observe the chemical flow. You should see two chemical streams of equal velocity.

If you see more of Component B than Component A, the foam you're dispensing is probably lighter in color and spongy to the touch. Check the temperature

strip to ensure the green area is highlighted in red. Chemical temperatures that are too warm will cause Component B to dispense with more pressure than it should.

If the temperature strip is in the red area, the chemicals are too warm, and you will need to cool them down. Place the tanks in an air-conditioned environment or cold water bath until the green portion of the temperature strip is highlighted in red. This means that the chemicals are at the proper temperature for use. Shake vigorously and perform another test shot.

If the chemicals were not too warm, check the valve on the Component A tank. Is it completely open? Is there chemical still in the tank? Be sure you didn't empty the Component A tank the last time you used the kit.

If the valve is open and there is still chemical in the tank, the problem may be the gun. Have you used the kit before? If so, how long ago was that? Moisture can cause tiny crystals to form in the Component A hoses. This can clog the Component A side of the gun, decreasing or completely blocking the flow. If the system is used a minimum of once per week, crystals will not have a chance to form. If the gun becomes blocked, purchasing another gun and hose assembly will be necessary to continue using the kit.

If you see more of Component A than Component B, the foam being dispensed is probably darker in color and crunchy to the touch. Check the temperature strip. The chemicals are too cold if the indicator is in the blue area. Place the tanks in a heated area or a warm water bath until the green part of the temperature strip is highlighted in red. This means that the chemicals are at the proper temperature for use. Shake vigorously and perform another test shot. If the temperature strip indicates that the chemicals are at the right temperature, check the valve on the Component B tank to be sure it is entirely open. You should also check to ensure there is still chemical in the tank.
If the product is liquified, melted, or foamed up, you are probably dispensing only one of the chemicals, most likely Component B, due to blockage on the Component A side. Re-read and follow the instructions on this page, or review the video in the Troubleshooting area on our website, versifoam.com.

On-Ratio

Liquified Foam

Off-Ratio, more "A" chemical is being dispensed

Off-Ratio, more "B" chemical is being dispensed

SAFETY PRECAUTIONS

Please refer to the Safety Data Sheet (SDS) to learn more about the safe use and handling of the individual components in your spray foam kit.

1. Operators should always wear proper personal protective equipment. Spray foam kits should only be used with adequate ventilation and respiratory protection.
2. Smoking, open flames, and using welding or electrical equipment nearby must be prohibited during spray foam application.
3. Do not store spray foam kits above 120°F (48°C). Keep the kits dry. Do not store them in direct sun or near hot water pipes, furnaces, chimneys, or heat ducts.
4. Keep out of the reach of children, and do not apply spray foam to materials or objects that children can or will touch.

Chemical Spills

A-COMPONENT (Isocyanate):

Provide adequate ventilation. Wear suitable personal protective clothing and equipment.

Contain spill and collect using suitable absorbent material, such as sawdust. Shovel into a waste container, adding 10-20% decontaminate solution (90% water, 7% ammonia, and 3% liquid detergent).

Leave uncovered for 24 hours before disposing. Dispose of as ordinary industrial waste in compliance with pertinent regulations.

B-COMPONENT (Polyols):

Provide adequate ventilation. Wear suitable protective clothing and equipment.

Contain spill and collect using a suitable absorbent material, such as sawdust.

Dispose of as ordinary industrial waste in compliance with pertinent regulations. Wash any areas containing residue with warm water and soap.

Tank Disposal

DO NOT PUNCTURE OR INCINERATE TANKS. Drain any remaining chemical into a waste container. Preferably, both chemicals should be drained into a waste container, mixed to create a solid, and disposed of as ordinary industrial waste.

If only one chemical remains, it must be absorbed and disposed of. Component A must also be neutralized prior to disposal.

When the tanks are empty, they must be vented before disposal. To vent, turn the tanks upside down (i.e. with the valves facing down). Open the valves slowly and let the pressure escape. Let the tanks vent for a minimum of 24 hours. Puncture the burst plug to prevent reuse.

Chemical tanks are disposed of as ordinary industrial waste in compliance with pertinent regulations. A sanitary landfill is recommended.

For chemical and/or medical emergencies, please call.

ChemTel: (Contract #MIS2000665)
Within North America: +1 (800) 255-3924
All other countries: 001 (813) 248-0585

WARNINGS: Individuals with chronic respiratory diseases, asthma, allergic diseases, or bronchial disorders should not work with these materials. The user must verify 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 used in interior construction or 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 a half-inch of cement, plaster, 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 the 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.

RHH Foam System, Inc. ("RHH") warrants product to be free of material defects until the "Use By" date stamped on the carton. Product must be applied in accordance with the proper application procedures, and for the intended use as stated on the label. **To the fullest extent allowed by applicable law, the foregoing limited warranty is the purchaser's exclusive remedy and supersedes and is expressly in lieu of any other warranties, express or implied, including any implied warranty of merchantability or fitness for a particular purpose. In no event shall RHH be liable for any special, incidental, indirect, or consequential damages whatsoever no matter how caused, and whether or not for negligence or otherwise.** Any liability for loss or 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. The Product is further subject to RHH's standard terms and conditions which can be found at versifoam.com and are hereby incorporated herein by this reference.

VersiFoam® Systems

Phone (262) 754-8088

Toll-Free Phone +1 (800) 657-0702

Email sales@versifoam.com

5500 S. Westridge Dr.
New Berlin, WI 53151

LOW GWP FORMULA

Made in USA

VERSIFOAM.COM