TIGER FOAM INSULATION

www.tigerfoam.com

Revised 1/11

Operating Instructions

Instructions for Use

Make sure the kits are warmed up to between 75-85°F (24-29°C) prior to application. In winter months make sure to warm tanks up 1-2 days prior to the application to assure the core temperature of tanks have warmed to 75-85°F (24-29°C).

Clean grease, oil, dirt and water off surfaces to be foamed.

Always wear respirator, protective eyewear, impervious gloves, suitable work clothes or Tyvek suit, during use. You do not want the foam to get on your skin. It is helpful to apply a moisturizing lotion to face prior to spraying, as the lotion will help keep the foam from sticking to any exposed skin the goggles and respirator won't cover. Use with adequate ventilation, with certified respiratory equipment (Consult Material Safety Data Sheet). Tiger Foam Insulation is low-pressure spray foam using chemical temperatures close to room temperature, which significantly reduces any overspray or airborne contaminant level. The installer should provide adequate ventilation to maintain exposure levels below ACGIH, OSHA, or other applicable limits. In poorly ventilated areas or temperatures above 85°F, additional proper respiratory protection may be required. Use an approved air purifying respirator equipped with an organic vapor cartridge with particle pre-filters, or a supplied air respirator. Cover and protect all surrounding surfaces.

If you want to reuse the nozzle tips be sure to acquire the acetone solvent.

Set Up

1. Kit should be pre-warmed between 75-85°F (24-29°C). In winter months warm kit 1-2 days prior to the application. Take tanks out of the box (TF600 kits will be in 2 separate boxes) and shake them before using. To shake, roll tanks on their side and rock back and forth vigorously for 3 minutes each. Tanks can be placed back in box during the application as this will help keep them upright and will be easier to move around during the application.
Remove nozzle packet (TF600 kits the nozzles are in the "A" box) and read enclosed instruction booklet.

SAFETY: Always have trigger safety lock "On" when setting the kit up.

2. Attach the hoses to the tanks using the wrench provided. The hose and gun of the TF600 kits are in the "A" box. The wrench can be found in the nozzle pack. Attach Red hose to the "A" tank, and black hose to the" "B tank. Hand tighten with wrench, but do not over tighten. The TF200 kits have the hoses pre- attached.

Apply thin layer of the enclosed petroleum jelly on the face of the gun and then attach nozzle tip. This thin layer of petroleum jelly helps keep the seating ports and gun face clean.

To Attach Nozzles

- Insert bottom tab of nozzle into bottom slot on gun face
- Attach top latch by pushing towards back of unit until an audible "snap" is heard.

www.tigerfoam.com

Cone Tip Nozzle (Round Tip End)
- Conical spray pattern
- Directed, high-velocity flow
- Clear and solvent cleanable
- Easily adapted for pour-in-place applications
- Better tip choice for overhead applications

Fan Tip Nozzle (Flat Tip end)
- Wide vertical spray pattern for large area coverage
- Improved uniformity and surface appearance
- Speeds application and productivity
- Clear and solvent cleanable

3. All nozzle tips are easily cleaned and solvent resistant. To reuse nozzles, have a container of acetone ready to drop the dirty tip in at the time of the tip change. The dirty tip must be placed in the acetone prior to its completely curing or the tip will not clean well. **Cleaning nozzle tips more than twice is not recommended**. Gun face can be kept clean by applying a thin layer of petroleum jelly to the face of the gun. This area can be cleaned with a soft cloth to remove any residue that may accumulate.

4. With tanks upright, open both tank A & B valves completely. Tanks must be upright during use.

5. When spraying for the first time and with each new kit, dispense foam by squeezing the trigger only 1/4 to 3/4 open until desired output and spray pattern is achieved. This controllable metering is an advantage of the gun assembly, allowing the user complete control of the flow rate and spray pattern that best suits the application.

6. **Once the trigger is squeezed it must be reactivated within 30 seconds or a new nozzle must be installed. Tips need to be changed every 8 minutes of continuous spray time and also if you stop spraying for more than 30 seconds. Failure to do this could result in getting off ratio between the A and B tanks. It can also result in chemical leakage that can ruin the gun and hoses.**

7. **IMPORTANT**: After releasing trigger, you can activate the trigger safety lock to prevent accidental discharge.

8. Do not remove hoses from tanks. Do not flush or clean hoses with air, water or solvent as this may compromise gun assembly, which might affect foam quality.

Test Spray

Now you are ready to spray a test area on a piece of cardboard or into receptacle to ensure proper mixing. ¾" of wet foam will cure to 1" of cured foam. If a thicker application is desired always layer the foam to achieve the depth of foam needed. When spraying foam, allow a minimum of 1 minute before applying more foam over freshly sprayed foam. Spray in layers 1-2" thick (2.5-5.1 cm) with each application. Trying to apply more than 2" (5.1 cm) in a single spray will pack the foam and may result in lower expansion and lower yields.

www.tigerfoam.com

IMPORTANT APPLICATION NOTES:

1. Product item numbers are designed to approximate the theoretical yields obtainable from each product. For example, TF600FR refers to 600 board feet optimum foam yield, (a board foot is a measurement term equal to 12”x12”x 1”). Actual yields will vary depending on factors such as ambient conditions, application technique, foam density, etc. See Technical Data Sheet for additional theoretical yield information.
2. Various U.S. and foreign patents cover the dispensing system.
3. Suitability of this product for any particular purpose, such as achieving desired structural properties, performance specifications or application requirements must be determined by the end user, prior to use. Verification that product is properly applied and installed is also the responsibility of the end user.
4. If you have any questions about this product, please contact your Sales Rep.

WARNINGS:

Follow safety precautions and wear protective equipment as recommended.
This equipment includes respirator, goggles, and impervious gloves, and protective clothing such as a tyvek suit. Consult Material Safety Data Sheet (MSDS) for specific information.
Use only with adequate ventilation or certified respiratory equipment. NIOSH approved positive pressure supplied air respirator or a negative pressure half mask with organic vapor cartridge with particle pre-filters are recommended if exposure guidelines may be exceeded. Foam is very sticky and may be irritating to skin and eyes: therefore, wear impervious gloves, protective eyewear and suitable work clothes during use. It is helpful to apply a moisturizing lotion to face prior to spraying, as the lotion will help keep the foam from sticking to your skin. If liquid chemical comes in contact with skin, first wipe thoroughly with dry cloth, then rinse affected area with water. Wash with soap and water afterwards. Apply lotion if desired. If liquid comes in contact with eyes, immediately flush with large volume of clean water for at least 15 minutes and get medical help at once. If liquid chemical is swallowed, drink one to three glasses of water or milk and obtain immediate medical attention.
KEEP OUT OF REACH OF CHILDREN.

STORAGE OF KIT

1. Close tank valves.
2. Do not store at temperatures above 120°F (490C) or below 50°F (10°C). Kits stored below 75°F must be given sufficient time (1-2 days) for the chemical to warm up to 75-85°F (24-29°C). Optimal storage temperatures are between 60°-80° (15-26°C).
3. Cover the prongs of the gun with petroleum jelly and a nozzle tip. This protects gun assembly from air exposure during storage. The nozzle tip should be left on during storage to keep the gun face clean.

SAFETY: Always have trigger safety lock “On” and close all supply valves during storage.

4. This is a good time to rinse any tips that were placed in the acetone for reuse. Simply rinse tip in water and make sure all residue is clear from tip before drying. **Cleaning a nozzle more than twice is not recommended.**

www.tigerfoam.com

5. Do not remove hoses from tanks. Do not flush or clean hoses with air, water or solvent. Removing or cleaning hoses may compromise gun assembly, which might affect foam quality.
The hose and gun is a disposable unit not designed for prolonged storage or continuous re-use. To help extend the storage life, it is recommended to dispense a minimal amount of foam from unit at least once every 3 days to ensure optimum flow of chemical through hoses. Use of contents within 30 days of initial use is recommended. Make certain valves are in upright position when storing, opening them, and operating the unit.

REUSE OF KIT AFTER STORAGE

1. Before disengaging the trigger safety lock, remove the nozzle.
2. Clean off excess petroleum jelly and check that gun face is free from dirt, chemical or other debris. If necessary, use a soft cloth or rag to remove any cured foam or chemical from the gun face. Apply a thin layer of petroleum jelly to cover the face of the gun. This thin layer of petroleum jelly helps keep the seating ports and gun face clean.
3. Follow the Set Up instructions at the top of the Operating Instructions.

DISPOSAL PROCEDURES

1. DO NOT INCINERATE TANKS.
2. After tanks are empty, they must be vented (depressurized). **CAUTION:** Tanks will still be under pressure. Respirator, protective eyewear and impervious gloves MUST be worn during the procedure. With tank inverted, slowly open tank valve, point tank AWAY from face and allow pressure to completely vent. This is best done into a garbage receptacle.
CAUTION: Empty tank could contain potential toxic vapor hazard. Respirator, protective eyewear and impervious gloves MUST be worn during the procedure. (Consult MSDS).
3. DISPOSE OF EMPTY CYLINDERS ACCORDING TO APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
Always read all operating, application and safety instructions before using any products. Use in conformance with all local, state and federal regulations and safety requirements. Failure to strictly adhere to any recommended procedures and reasonable safety precautions shall release the manufacturer of all liability with respect to the materials or the use thereof. For additional information contact your Sales Rep.

NOTE: Physical properties shown are typical and are to serve only as a guide for engineering design. Results are obtained from specimens under ideal conditions and may vary upon use, temperature and ambient conditions. Right to change physical properties as a result of technical progress is reserved. This information supersedes all previously published data. Yields shown are optimum and will vary slightly depending on ambient condition and particular application. Read all product directions and safety information before use. This product is organic, therefore combustible. Consult local building codes for specific requirements regarding the use of cellular plastics or urethane foam in construction.

www.tigerfoam.com

Troubleshooting

• **Poor chemical flow**- *(Note: when injecting foam into an enclosed cavity, it is important to check frequently that chemical is flowing properly and to replace any nozzle that has become clogged.)*
This problem could be that tank valves are not fully open or tanks opened in the wrong position, allowing only propellant gas to escape. Tanks are too cold.
• **Slow cure** - This problem could be that the unit is out of shelf life, chemical or substrate too cold or the kit is dispensing off ratio.
• **Dark crunchy foam** -This is a sign that the foam has become "**A" rich.**
The system is off-ratio causing more of the "A" chemical to be sprayed than the "B" chemical.
• **Foam shrinkage within 24 hours** - This is a sign that the foam was sprayed off-ratio and is "**B" rich.**
• **White spongy foam** - This is a sign that the foam has become "**B" rich.**
The system is off-ratio causing more of the "B" chemical to be sprayed than the "A" chemical. Foam that visibly shrinks within 24 hours after application may be an indication of "B" rich foam.
• **Sputtering from nozzle** - This is a sign of empty tanks, clogged nozzle, or a blockage in the system.
• **Lack of expansion in sprayed foam** - This problem could be associated with tank temperatures, clogged nozzles or spraying technique.
• Foam **leaking from hose connections –** Hoses not tightened enough.

Solution: STOP SPRAYING and follow instructions below

1. Remove nozzle and spray chemical into a plastic garbage bag. Check to see that both chemicals are being dispensed from the gun in approximately equal streams.
2. Make sure all valves from the tank to the dispensing unit are fully open.
3. For optimum results, the chemical temperature must be between 75-85°F (24-29°C). During colder months tanks up 1-2 days prior to the application to make sure the core temperature of the tanks have warmed to 75-85°F(24-29°C), especially if the tanks have recently been transported or stored in an unheated environment.
4. Replace nozzle. If the nozzle has become clogged, the foam may become off-ratio.
5. Make sure tanks are not empty and all valves are fully open. Shake tanks back and forth to determine that they contain chemical.
6. When spraying foam, allow a minimum of 1 minute before applying more foam over freshly sprayed foam. Spray in layers of 1-2" thick (2.5-5.1 cm.) with each application. Trying to apply more than 2" (5.1 cm) in a single spray will pack the foam and may result in lower expansion and lower yields.
7. Foam may be outdated and unusable. Check the expiration date.

LIMITED WARRANTY:
The Manufacturer warrants only that the product shall meet its specifications: this warranty is in lieu of all other written or unwritten, expressed or implied warranties and The Manufacturer expressly disclaims any warranty of merchantability, or fitness for a particular purpose. The buyer assumes all risks whatsoever as to the use of the material. Buyer's exclusive remedy as to any breach of warranty, negligence or other claim shall be limited to the replacement of the material. Failure

to strictly adhere to any recommended procedures shall release the Manufacturer of all liability with respect to the materials of the use thereof. User of this product must determine suitability for any particular purpose, including, but not limited to, structural requirements, performance specifications and application requirements prior to installation and after product has been properly applied.

Two – Component Dispensing Unit
U.S. Patent #6,345,776
Other Patents Pending