

FOR PROFESSIONAL USE ONLY

SILENT-SEAL®
MINE VENTILATION AIR SEALANT
LOW PRESSURE SPRAY POLYURETHANE FOAM
OPERATING INSTRUCTIONS
TWO-COMPONENT DISPOSABLE

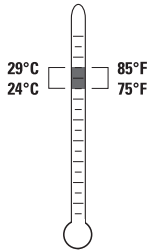


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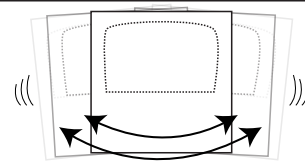
Instructions for Use

When spraying the dispensing unit for the first time or when starting a new kit, it is recommended to **trigger the gun only 1/2 to 3/4 open, until the desired output is achieved.** This controllable metering ability is a major advantage of this dispensing unit. It allows the user complete control of the flow rate that best fits the application. Maintain the dispensing unit nozzle within 24" of the structure being sealed, in order to comply with MSHA provisions for non-spraying applications, as recommended by MSHA Inspection Procedures Handbook, Chapter 9. MSHA suitable as an underground mine ventilation sealant (see packaging for suitability number).

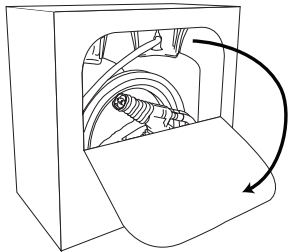
Initial Prep



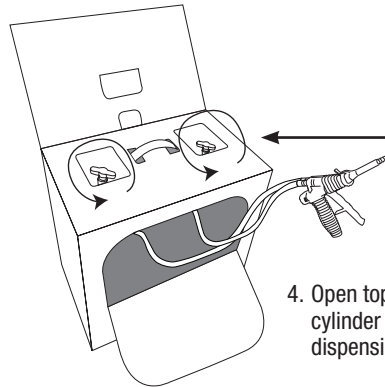
1. Wear protective glasses with sideshields or goggles, nitrile gloves, and clothing that protects against dermal exposure. Use only in a well ventilated area. See SDS (available inside the packaging or at www.icpadhesives.com) for more information.



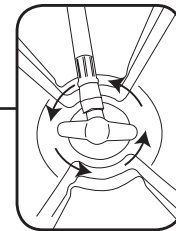
2. Shake kit for 1–2 minutes before use to ensure proper mixing. Typically chemical should be between 75–85°F (24–29°C). See TDS for formula specific shaking and temperature recommendations.



3. Push in top of front panel to open. Pull down flap for dispensing unit hose assembly. Remove nozzle packet and read instructions.

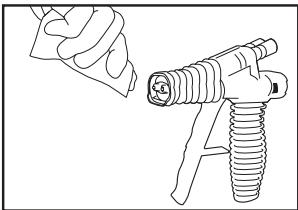


4. Open top flap of box to expose cylinder valves. Extend attached dispensing unit hose assembly.

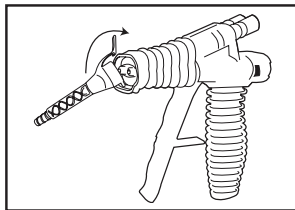


5. Open the valves completely by turning the valves COUNTER CLOCKWISE. Top flap may be removed or left in place during use or storage.

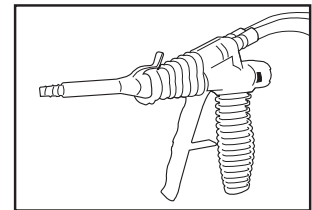
To Attach Nozzle



1. Before attaching nozzle, use petroleum jelly on face of gun.



2. Insert bottom tab of nozzle into bottom slot of dispensing unit.
3. Attach top latch by pushing towards back of unit, until an audible “snap” is heard.



4. Unit is ready to use.
5. After attaching nozzle, spray into “test shot” receptacle.
6. To remove used nozzle, push top latch up and forward to unsnap.

Spraying Foam

1. Wear protective glasses with sideshields or goggles, nitrile gloves, and clothing that protects against dermal exposure. Use only in a well ventilated area. See SDS (available inside packaging and at www.icpadhesives.com) for more information.
2. For best results, use when material is between 75–85°F (24–29°C), see TDS for formula specific temperature recommendations. Clean grease, oil, dirt and water off surfaces to be foamed. Shake kit before use for one (1) to two (2) minutes depending on the product requirements (See TDS for more information).
3. Open both cylinder (A & B) valves.
4. Attach nozzle to the dispensing unit; use of enclosed petroleum jelly on the face of the dispensing unit before attaching nozzle will help prevent contamination by cured foam or chemical and help keep the sealing ports clean. (Detailed instructions for attaching nozzle shown on separate page of this document.)
5. When spraying the dispensing unit for the first time and with each new kit, dispense foam by squeezing the trigger **only 1/2 to 3/4 open until desired output is achieved.** Maintain the dispensing unit nozzle within 24" of the structure being sealed, in order to comply with MSHA provisions for non-spraying applications, as recommended by MSHA Inspection Procedures Handbook, Chapter 9.
6. Once the trigger is released it **MUST BE REACTIVATED WITHIN 15 SECONDS** or a new nozzle must be installed. Failure to do this could result in chemical leakage, spills or splashes which can ruin the dispensing unit and/or hoses.
7. **IMPORTANT:** After releasing trigger, activate the trigger safety to prevent accidental discharge.
8. All dispensing unit nozzles are easily cleanable and solvent resistant. To clean nozzles, liquid chemical must be dissolved prior to its complete chemical reaction by flushing the nozzle with a suitable solvent such as Handi-Cleaner®. Gun face can be kept clean with the use of petroleum jelly on the face or with a soft cloth to remove residue.
9. **Do not remove hoses from cylinders. Do not flush/clean hoses with air, water or solvent. Removing and/or cleaning hoses may compromise the foam.**

Storage and Reuse

1. Close cylinder valves.
2. Do not store cylinders at temperatures above 100°F (38°C) or below 60°F (16°C). Kits stored below 60°F must be given sufficient time (1-2 days) for the chemical to warm up to 75–85°F (24–29°C), see TDS for formula specific temperature recommendations.
3. The used nozzle should be left on the dispensing unit during storage in order to help keep the outlet ports of the dispensing unit clean and free from any dust, dirt or chemical that can affect the proper sealing of the nozzle. **SAFETY:** Always engage the trigger safety and close all supply valves during storage.
4. All dispensing unit nozzles are easily cleanable and solvent resistant. To clean nozzles, liquid chemical must be dissolved prior to its complete chemical reaction by flushing the nozzle with a suitable solvent such as Handi-Cleaner®. Gun face can be kept clean with the use of petroleum jelly on the face or with a soft cloth to remove residue.
5. **Do not remove hoses from cylinders. Do not flush/clean hoses with air, water or solvent. Removing and/or cleaning hoses may compromise the foam.**

To reuse dispensing unit after storage:

1. Remove the used nozzle.
2. Check the face of the dispensing unit to make sure the outlet ports are clear and the face of the unit 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 face of the dispensing unit. Use of enclosed petroleum jelly is recommended to cover the face of the unit in order to prevent further contamination or if chemical is accidentally leaked into this area.
3. Shake kit or cylinders for 1-2 minutes to ensure proper mixing. Typically chemical should be between 75–85°F (24–29°C). See TDS for formula specific shaking and temperature recommendations.
4. Fully open all supply valves.
5. Dispense into waste container to verify that both chemicals are being dispensed in approximately equal streams.

All dispensing unit nozzles are easily cleanable and solvent resistant. To clean nozzles, liquid chemical must be dissolved prior to its complete chemical reaction by flushing the nozzle with a suitable solvent such as Handi-Cleaner®. Gun face can be kept clean with the use of petroleum jelly on the face or with a soft cloth to remove residue. Cleaning a nozzle more than twice is not recommended, unless the static mixing element is removed and replaced, in order to prevent residue build-up on this mixing element.

The dispensing unit 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 three (3) days to ensure optimum flow of chemical through hoses. Use of contents within 30 days of initial use is recommended.

Disposal Procedures

Always wear proper protective equipment as you would while spraying the two-component foam in a well-ventilated area.

1. **DO NOT INCINERATE CYLINDERS.**
2. Empty cylinders by dispensing the foam into a waste container like a cardboard box or plastic bag. Depressurize the used cylinders using the dispensing unit with a new nozzle attached. Spray the foam until one of the components/cylinders no longer sprays chemical.
3. Remove the nozzle and then continue to depressurize by dispensing the remaining chemical(s) into a waste container (a box lined with a plastic bag) that has adequate industrial liquid absorbing medium in the bottom. Dispense the residual chemicals until the pressure is down to a minimum or there are just large bubbles in the hose.
4. Close the cylinder valves completely, and then operate the dispensing unit again to empty and depressurize the hoses. Use a 9/16" wrench and remove the hoses from the cylinders. Use caution in case there is some residual chemical and/or pressure in the hoses.
5. Invert the cylinder and point away from face. Slowly open the cylinder over the waste container to catch any residual spray.
6. Return the cylinder to an upright position. Shake the container; there should not be any sloshing of liquid. Make sure to leave valves OPEN – do not close. **DO NOT PUNCTURE.**
7. The user of this material has the responsibility to dispose of empty cylinders, unused material and residues in compliance to all applicable federal, state, international and local regulations regarding the treatment, storage, and disposal for hazardous and nonhazardous wastes. Check with your local waste disposal service for guidance.

NOTE: After dispensing if one cylinder has chemical left in it, treat as hazardous material.

Troubleshooting Guide

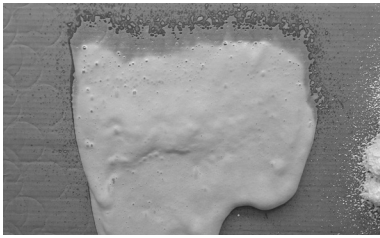
Equivalent flow of both A-component and B-component is required with all two-component polyurethane systems in order to obtain proper performance, curing and optimum yields. If a problem occurs, the cause is typically due to uneven chemical flow that is caused by a blockage of one of the chemicals.*

PROBLEM	POSSIBLE CAUSE	SOLUTION
Poor chemical flow	Cylinder valves not fully open	Turn cylinder valves counter-clockwise until they stop
	Cylinder valves in incorrect position	Place cylinder valves in upright position
	Material is too cold	Chemical temperature must be between 70–85°F (21–29°C)
Foam leaking from hose connections	Hoses not tightened	Tighten all hose fittings
	Cross-threaded hose	Replace gun hose assembly
Dark crunchy foam/ off-ratio (A-rich)	Material is too cold	Chemical temperature must be between 70–85°F (21–29°C)
	Clogged nozzle	Replace nozzle
	Blockage of one chemical port	Clean gun face and apply petroleum jelly
	Gun crossover	Replace hose
White spongy or shrinking foam/ off-ratio (B-rich)	Material is too cold	Chemical temperature must be between 70–85°F (21–29°C)
	Clogged nozzle	Replace nozzle
	Blockage of one chemical port	Clean gun face and apply petroleum jelly
	Gun crossover	Replace hose
Sputtering from nozzle	Cylinders are empty	Switch to new kit
	Clogged nozzle	Replace nozzle
	Hose blockage	Replace hose

*If kit is still not fully operational, stop spraying and contact the distributor where purchased.

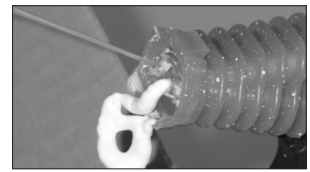
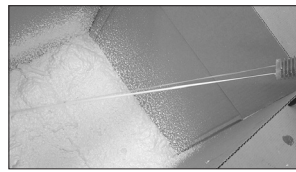
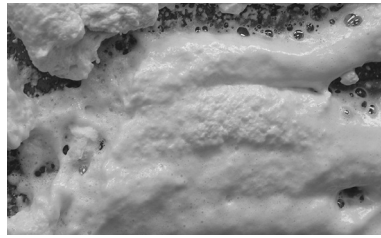
“A-Rich” Foam:

Crunchy, friable, slow or non curing.
Darker brown in color.



“B-Rich” Foam:

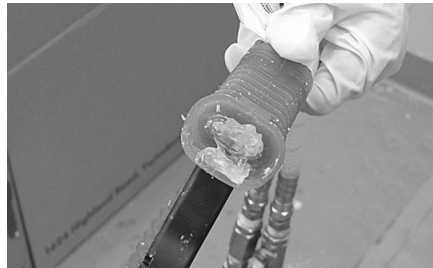
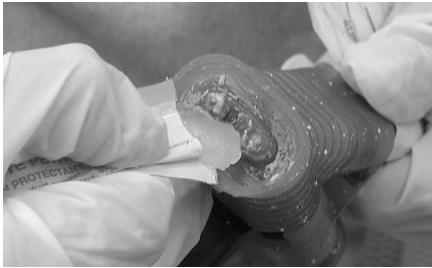
Softer, white colored foam, with shrinkage.



- With the nozzle removed, check that both chemicals flow with equivalent force.
- Partial or complete blockage of one chemical port will result in off-ratio foam.

Nozzle Care and Usage

Apply a small amount of petroleum jelly, which is provided with each kit, to help keep the gun face clean from cured foam or contamination that could block one of the chemical ports.



Change nozzles frequently! Foam will cure inside the nozzle in the same amount of time that foam becomes tack-free in the air.

Handi-Cleaner®

All Handi-Gun® nozzles are easily cleanable and solvent resistant. To clean nozzles, liquid chemical must be dissolved prior to its complete chemical reaction by flushing the nozzle with Handi-Cleaner or other suitable solvent. Gun face can be kept clean with the use of petroleum jelly on the face or with a soft cloth to remove residue. Cleaning a nozzle more than twice is not recommended.

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.

Warnings

WARNINGS: Silent-Seal® spray foam products are composed of a diisocyanate, hydrofluorocarbon blowing agent, amine catalyst and polyol. Consult the product's SDS (available at www.icpadhesives.com) for specific information. The urethane foam produced from these ingredients will support combustion and may present a fire hazard if exposed to a fire or excessive heat about 240°F (116°C). Wear protective glasses with side shields or goggles, nitrile gloves, and clothing that protects against dermal exposure. Recommend using in a well ventilated area. For professional use only.

WARNING: Non-Flammable Compressed Gas. Keep away from heat. Smoking and open flames, including hot work, should be prohibited in the vicinity of a foaming operation. Avoid contact with skin and eyes. May cause sensitization by inhalation and/or direct skin contact. Avoid prolonged or repeated breathing of vapor. **KEEP OUT OF REACH OF CHILDREN. FIRST AID:** In any first aid case CONSULT A PHYSICIAN. **EYES:** Flush with water for at least 15 minutes. **SKIN:** Remove contaminated clothing. Wash skin with plenty of soap and water. Cured foam must be removed manually. **INHALATION:** If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. **INGESTION:** give large quantities of water. Do NOT induce vomiting. Contact a physician immediately in any first aid situation. Consult the product's SDS (available at www.icpadhesives.com) for specific information.

Important

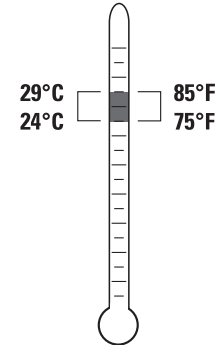
Always read all operating, application and safety instructions before using any products from ICP Adhesives & Sealants, Inc. Use in conformance with all local, state and federal regulations and safety requirements. Failure to strictly adhere to any recommended procedures and reasonable safety precautions shall release ICP Adhesives & Sealants, Inc. of all liability with respect to the materials or the use thereof. For additional information and location of your nearest distributor, call ICP Adhesives & Sealants, Inc. 330.753.4585.

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 conditions and particular application. Read all product directions and safety information before use. This product is organic, and therefore, is combustible. Consult local building codes for specific requirements regarding the use of cellular plastics or urethane foam in construction.

Silent-Seal® spray foam products are composed of a diisocyanate, hydrofluorocarbon blowing agent and polyol. Consult the product's SDS (available at www.icpadhesives.com) for specific information. The urethane foam produced from these ingredients will support combustion and may present a fire hazard if exposed to a fire or excessive heat about 240°F (116°C). Wear protective glasses or goggles, nitrile gloves, and clothing that protects against dermal exposure. Recommend using in a well ventilated area. See SDS (available at www.icpadhesives.com) for specific information. For professional use only.

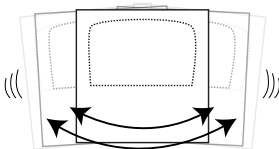



Temperature and Storage

Chemical temperature is very important, store kits at or above 70°F (21°C) prior to use. Cold chemical may lead to off-ratio flow. Optimum chemical temperature is 75–85°F (24–29°C), see TDS for formula specific temperature recommendations.



A-component chemical may eventually harden and clog the hose if stored for too long. Gun is disposable and is not intended for continuous re-use. For best results, dispense liquid from hose at least once every 3 days. Use contents within 30 days of initial use.

READ FIRST!

IDEAL CHEMICAL TEMPERATURE	SUBSTRATE APPLICATION TEMPERATURE	SHAKING REQUIREMENTS
<p style="text-align: center;">80°F (27°C)</p>	<p style="text-align: center;">40–100°F (4–38°C)</p>	<p style="text-align: center;">1 MINUTE</p> 
SDS, TDS & OPERATING INSTRUCTIONS	SPECIAL RECOMMENDATIONS	PERSONAL PROTECTIVE EQUIPMENT
<p>Scan here to be directed to the SDS, TDS and Operating Instructions page available on the website.</p> 	<ul style="list-style-type: none"> • Use only in a well ventilated area. • To ensure trouble free operations, change nozzle after 30 seconds of non-use. • Please read through the TDS, SDS and Operating Instructions prior to use. 	<p>Safety Glasses Covers Skin Nitrile Gloves Avoid Breathing Vapors Provide Good Ventilation</p> 
<p style="text-align: center;"> For additional information refer to www.icpadhesives.com • 1.800.321.5585</p>		

READ THIS FIRST
MATERIAL SAFETY DATA SHEET (SDS) INSIDE

REQUIREMENTS FOR USE OF LOW PRESSURE SPRAY POLYURETHANE FOAM

REQUISITOS PARA USO DE ROCIADOR DE BAJA PRESION DE ESPUMA DE POLIURETANO

Handi-Foam low pressure spray polyurethane foam kits are for professional use only and should always be used under the proper health and safety conditions. Recommended for use in a well ventilated area with certified respiratory protection or a powered airpurifying respirator (PAPR).

Los kits de espuma de poliuretano de presión baja de Handi-Foam son para uso profesional solamente y siempre deben usarse bajo las condiciones adecuadas de salud y seguridad. Recomendado para el uso en un área bien ventilada con la protección respiratoria certificada o un respirador purificador de aire accionado (PAPR).

Safety Glasses or Goggles

Safety Glasses or Goggles with side shields provide splash protection from chemicals or solvents.

Gafas o Anteojos de Seguridad

Anteojos o Gafas de Seguridad con escudos laterales que proporcionan protección contra salpicaduras de sustancias químicas o solventes.

NIOSH-Approved Respirator

Required respirators must be NIOSH approved. Recommended respirators include:

a) a negative pressure half mask respirator with organic cartridges and particulate prefilter (example - 3M[®] 6000-Series NIOSH/MSHA respirator), or

b) a PAPR (powered air purifying respirator) with an organic vapor cartridge for enclosed spaces without mechanical ventilation (example - 3M[®] GV-Series).

Respirador Aprobado por NIOSH (Instituto Nacional de Seguridad y Salubridad)

Los respiradores requeridos deben ser aprobados por NIOSH. Los respiradores recomendados incluyen:

a) un respirador de máscara media de presión negativa con cartuchos orgánicos y prefiltro de partículas (ejemplo - 3M 6000 Series respirador NIOSH/MSHA), o

b) un PAPR (respirador purificador de aire forzado) con cartucho de vapor orgánico para espacios cerrados sin ventilación mecánica (ejemplo - 3M GV Series).

Protective Clothing

Proper clothing should cover all exposed skin. Protective arm sleeves should be used if clothing does not adequately cover exposed skin.

Ropa Protectora

La ropa adecuada debe cubrir toda la piel expuesta. Se debe utilizar mangas protectoras si la ropa no cubre adecuadamente la piel expuesta.


Nitrile Gloves

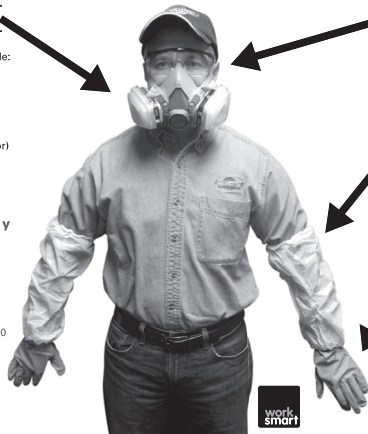
Chemical resistant nitrile rubber gloves provide the greatest protection from potential chemical contact to the skin.

Guantes de Nitrilo

Los guantes de goma de nitrilo resistentes a productos químicos proporcionan la mejor protección contra el posible contacto de productos químicos.

Click to watch the Health & Safety Video.





work smart