INNOVATIONS THAT
IMPROVE.®

Product Stewardship

GUIDELINES FOR SAFE USE, STORAGE AND HANDLING OF LOW PRESSURE POLYURETHANE FOAM PRODUCTS

The use and knowledge of low pressure polyurethane foams continues to grow. ICP Adhesives & Sealants' low pressure polyurethane foams provide the best and easiest solutions in stopping unwanted air infiltration. ICP Adhesives & Sealants' products are for professional use only and should always be used under the proper health and safety conditions. Please take a moment to review the proper storage, use and application of Handi-Foam® and Polyset® low pressure polyurethane foams.

Scan here to be directed to the Health & Safety page.

Section 1

Safe Handling and Use of Low Pressure Polyurethane Foams

ICP Adhesives & Sealants' (ICP) products are for professional use only. Homeowners interested in air sealing or insulating using the ICP Adhesives and Sealants' product lines can call ICP at 800.321.5585 to be put in contact with a professional contractor. Children should NEVER use these products.

- **Low Pressure One-Component Polyurethane Foam (OCF)**
  - Low pressure one-component polyurethane foam sealants and adhesives are moisture cured products dispensed using a straw applicator or dispensing unit.
  - For use in a bead type application for air sealing or adhering.
  - Recommend using in a well ventilated area. Avoid breathing vapors. Wear protective glasses with side shields or goggles, nitrile gloves and clothing that protects against dermal exposure.
  - Uncured foam may be cleaned using Handi-Cleaner® or Polysolv solvent cleaner.

- **Low Pressure Spray (SPF) and Pour-In-Place (PIP) Polyurethane Foams**
  - Low pressure polyurethane foams are chemically cured products dispensed using a patented Handi-Gun®, Handi-Gun II™ or FoamPro® dispensing unit.
  - For use in coating applications for insulation; bead applications for air sealing; or spatter or bead for adhering roofing materials.
  - Recommend using in a well ventilated area with a National Institute for Occupational Safety and Health (NIOSH)-approved air purifying respirator.
  - Outdoor use may provide enough ventilation that a respirator is not required.
  - Wear protective glasses with side shields or goggles, nitrile gloves, and clothing that protects against dermal exposure. (See section 2)
  - When using Handi-Foam low pressure polyurethane foam products, ICP recommends a 1 hour re-entry time. Please consult ICP's Product Compliance Department Manager for details (800.321.5585).
  - For use in enclosed spaces without mechanical ventilation, ICP recommends following all of our low pressure polyurethane foam PPE requirements including the use of a powered air purifying respirator (PAPR). A half mask air purifying respirator may be appropriate if mechanical ventilation is added.
  - See ventilation guidance. (See Section 7)

First Aid

- Always refer to product specific SDS for specific information and procedures regarding the product.
- 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 mechanically. INHALATION: Move to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. INGESTION: Drink large quantities of water. Do NOT induce vomiting. Contact a physician immediately in any first aid situation.
- See Section 4: First Aid Measures are available on ICP's product Safety Data Sheets which can be located at www.icpadhesives.com for more information.

For more information about the health and safety considerations when using spray polyurethane foams and for training on low pressure SPF, visit www.spraypolyurethane.org or consult ICP's product Safety Data Sheets available at www.icpadhesives.com. See Section 9 for links and QR codes.

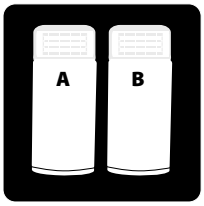
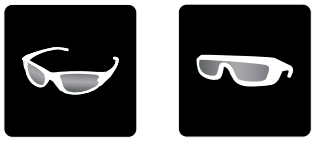
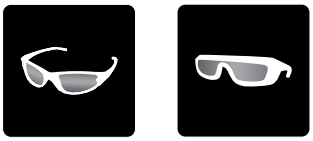
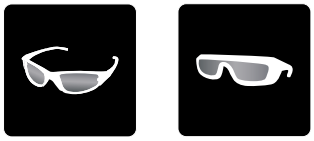
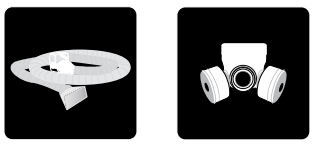
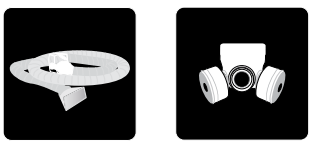
Section 2

Personal Protective Equipment (PPE) for Low Pressure Polyurethane Foams

- Handi-Foam® and Polyset® low pressure polyurethane foams should always be used in conjunction with a certified respiratory program in addition to safety glasses with side shields or goggles, nitrile gloves and clothing that protects against dermal exposure. When required, respirators should be NIOSH-approved. Medical evaluation, fit testing and training should be provided before use.
- There are many respirator options and the correct respirator may be determined based on the jobsite conditions (i.e. ventilation) or the applicator preference. Options include:
  - Half-face respirators can be used for protection against most vapors, acid gases, dust or welding fumes. Cartridges/filters must match contaminant(s) and should be changed periodically.
  - Full-face respirators are more protective than half-face respirators. They can also be used for protection against most vapors, acid gases, dust or welding fumes. The face-shield protects face and eyes from irritants and contaminants. Cartridges/filters must match contaminant(s) and should be changed periodically.
  - Loose-fitting powered-air-purifying respirators (PAPR) offer breathing comfort from a battery-powered fan which pulls air through filters and circulates air throughout helmet/hood. They can be worn by most workers who have beards. Cartridges/filters must match contaminant(s) and should be changed periodically.
  - For more respirator information, please visit www.osha.gov or call 800.321.OSHA.
- If needed, ICP recommends using one of the following:
  - NIOSH-approved negative pressure half mask respirator with organic vapor cartridges and particulate filters. (F65251 - Contractor Safety Kit includes 3M® 6000-Series NIOSH/MSHA respirator)
  - NIOSH-approved PAPR (powered air purifying respirator) with an organic vapor cartridge. (example 3M® GVP-Series)
  - Both respirator options (half mask and PAPR) require a medical evaluation prior to use (www.respexam.com). The half mask respirator requires a fit test prior to use. Refer to OSHA's Respiratory Protection standard (www.osha.gov, search 1910.134) for more information about creating the required respiratory program.
  - See the American Chemistry Council's Guidance for Developing a Written Respiratory Program at www.polyurethane.americanchemistry.com/resources-and-document-library.
- For additional information, see Section 9, page 11 for links and QR codes.

Section 2

Personal Protective Equipment (PPE) for Low Pressure Polyurethane Foams

	Low Pressure One-Component Polyurethane Foam Sealants & Adhesives (OCF)	Low Pressure Polyurethane Foams	Low Pressure Refillable Polyurethane Foam Systems
			
Routes of Exposure	Recommended PPE	Recommended PPE	Recommended PPE
EYES	Safety Glasses or Goggles 	Safety Glasses or Goggles 	Safety Glasses or Goggles 
SKIN	Covers Skin 	Covers Skin 	Covers Skin 
HANDS	Nitrile Gloves 	Nitrile Gloves 	Nitrile Gloves 
LUNGS	Avoid Breathing Vapors Provide Good Ventilation 	Respirator and/or Vapor Respirator OV/Pre-filter Provide Good Ventilation 	Respirator and/or Vapor Respirator OV/Pre-filter Provide Good Ventilation 

For additional information, see Section 9 for links and QR codes.

Section 3

Fall Protection

Falls are among the most common causes of serious work related injuries and deaths. OSHA requires employers provide fall protection at elevations of four feet in general industry workplaces, five feet in shipyards, six feet in the construction industry and eight feet in longshoring operations. In addition, OSHA requires that fall protection be provided when working over dangerous equipment and machinery, regardless of the fall distance.

Every job is different and requires specific Job Hazard Analysis to correctly address fall hazards. Employes must assess the fall hazards to determine the best protection system.

TO PREVENT EMPLOYEES FROM BEING INJURED FROM FALLS, EMPLOYERS MUST:

- Guard every floor hole into which a worker can accidentally walk (using a railing and toe-board or a floor hole cover).
- Provide a guard rail and toe-board around every elevated open sided platform, floor or runway.
- Regardless of height, if a worker can fall into or onto dangerous machines or equipment (such as a vat of acid or a conveyor belt) employers must provide guardrails and toe-boards to prevent workers from falling and getting injured.
- Other means of fall protection that may be required on certain jobs include safety harness and line, safety nets, stair railings and hand rails.
- Provide a fall protection training program to workers who might be exposed to fall hazards. Training must include how to recognize fall hazards and how to minimize them.
- For more information, refer to https://www.osha.gov/SLTC/fallprotection/.
    - o OSHA Fact Sheet: https://www.osha.gov/OshDoc/data_Hurricane_Facts/fall.pdf
    - o OSHA's Fall Prevention Campaign: https://www.osha.gov/stopfalls/index.html
    - o Fall Protection in Construction (PDF). OSHA Publication 3146, (2015): https://www.osha.gov/Publications/OSHA3146.pdf
    - o Protecting Roofing Workers (PDF). OSHA Publication 3755, (2015): https://www.osha.gov/Publications/OSHA3755.pdf
    - o Fall Prevention Training Guide (PDF). OSHA Publication 3666, (2014): https://www.osha.gov/Publications/OSHA3666.pdf
    - o Fall Protection Resource for New ention TrHome Construction. CPWR through NIOSH: http://www.ot.wustl.edu/fptech/index.htm

Scan the below to be directed to the sites listed above:

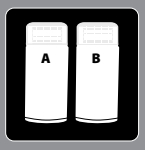
OSHA Fall Protection | OSHA Fact Sheet | OSHA's Fall Prevention Campaign | Fall Protection in construction | Protecting Roofing Workers | Fall Prevention Training Guide | Fall Protection Resource for New Home Construction

Adapted from the United States Department of Label/OSHA website: www.osha.gov/SLTC/fallprotection.

Section 4

Low Pressure vs. High Pressure Spray Polyurethane Foams

Key Differences of Low Pressure vs. High Pressure SPF

	LOW PRESSURE (LP)  POLYURETHANE FOAM DISPOSABLE KITS	LOW PRESSURE (LP)  REFILLABLE POLYURETHANE FOAM SYSTEMS	HIGH PRESSURE (HP)  SPRAY SYSTEMS
INTENDED USE	Air seal/insulate/adhere small to mid-size areas	Air seal/insulate/adhere small to mid-size areas	Insulate large surface areas
PRESSURE	Less than 250 psi	Less than 250 psi	1000-1300 psi (*typically*)
OUTPUT (FULL TRIGGER)	Up to 2–5 lbs. per min. *Standard fan or cone nozzle*	Up to 5–7 lbs. per min. *Standard fan or cone nozzle*	Up to 30 lbs. per min.
MIXER/ HOUSING	Static mixer/nozzle	Static mixer/nozzle	Chamber mixing/spray gun
CONTAINER	Single use cylinders	Refillable cylinders	55 gallon drums
HOSES	9–25 ft. (3–8 m) hoses	25–100 ft. (8–30 m) hoses 75–150 ft. (23–46 m) heated hoses	Transfer pump system Up to 400 ft. (122 m) heated hoses
PRODUCT TEMP. (RECOMMENDED USE)	70–85°F (21–29°C) *Optimum product temperature for standard systems*	70–85°F (21–29°C) *Optimum product temperature for standard systems*	120–150°F (49–65°C) *Machine heater system*

As seen on spraypolyurethane.org in the low pressure spray polyurethane foam health and safety training hosted by the Center for Polyurethane Industry (CPI) and American Chemistry Council (ACC).

For additional information, see Section 9 for links and QR codes.

Section 5 Low Pressure Product Storage

- Keep out of reach of children.
- Do not expose cans or cylinders to open flame.
- Before first use of product, store cylinders in a dry area between 60°F (16°C) and 90°F (32°C). Polyset AH-160 may be stored between 50°F (10°C) and 100°F (38°C). Store cans upright in a dry area below 122°F (50°C). See TDS for product specific temperature recommendations.
- See Section 7: Handling and Storage on ICP product Safety Data Sheets available at www.icpadhesives.com for more information.

Section 6 Product Disposal

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

Procedure for handling empty or partially used disposable cylinders (not returnable):

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.

Procedure for handling empty refillable cylinders:

THESE CYLINDERS ARE RETURNABLE. These cylinders (refillable cylinders) must be shipped back to ICP Adhesives & Sealants, Inc. to be cleaned, refilled, and redistributed. Return instructions are included in or on the A-cylinder collar.

Section 7 Product Support Documentation

ICP Adhesives & Sealants, Inc. offers extensive product support documentation. Please read and understand the information provided prior to use. These can be found by visiting www.icpadhesives.com or by calling 800-321-5585. Product Support Documentation includes:

SAFETY DATA SHEETS (SDS)

- The Safety Data Sheet is the best source of information for product contents, health and safety information, product disposal, transportation information and product hazard information.

OPERATING INSTRUCTIONS

- Operating instructions for all Handi-Foam and Polyset products are available at www.icpadhesives.com or directly inside the product packaging.

TECHNICAL DATA SHEET (TDS)

- Technical Data Sheets for all of the Handi-Foam and Polyset products include product information such as:
  - Application Areas
  - Product Properties
  - Physical Properties
  - Preparation and Usage Instructions
  - Storage and Disposal Instructions
  - Technical Data
  - Approvals and Standards
  - Temperature Guidelines

Section 8

Low Pressure Spray & Pour-In-Place Polyurethane Foam Ventilation Plan Guidelines for Weatherization and Air Sealing*

During the application of low pressure spray or pour-in-place polyurethane foam products, providing adequate ventilation is essential to having a healthy and safe work environment. Ventilating the area where the polyurethane foams are being applied will help control worker exposure to airborne contaminants. Outdoor applications may have different ventilation requirements. Read Safety Data Sheets, labels, product stewardship guidelines and operating instructions before use.

5 POINTS TO CONSIDER FOR ESTABLISHING A VENTILATION PLAN:

1. **Examine the work zone.**
   - Restrict entry for anyone not wearing personal protective equipment (PPE), or not involved in the application.
   - All non-essential personnel and building occupants should leave the spray area during application and not return to the jobsite for one hour after spraying is completed.
   - Estimate the amount of air flow needed.
     - Every work area will be different based on room shape and size (some rooms will be sufficient to isolate the work zone).
     - Consider the amount of polyurethane foam to be applied.
       - An application of 1 inch of foam to seal an entire attic floor requires more air flow than a gap and crack air seal application.
     - Consider that ductwork and filters can reduce the rated air flow performance.
   - Determine the placement of ventilation equipment.
2. **Follow best work practices.**
   - On jobsites where HVAC equipment is running, ensure that the units are off before application.
     - Failure to turn off the equipment could spread contaminants throughout the home or building.
   - Ventilation equipment should be used during and after application to prevent the build up of vapors.
   - Prevent migration of contaminants to other areas of the building. Seal off the application area. (Ensure that all open ducts and penetrations to other areas of the building are sealed.) It may be necessary to isolate the work area. Construct temporary enclosures to seal off the work area. Common materials used are plastic sheeting, tarps, and wind screens.
   - ICP Adhesives and Sealants highly recommends low pressure polyurethane foam applicators and assistants to wear the proper personal protection equipment. Refer to the PPE chart in this document, the SDS available in the packaging or on www.icpadhesives.com for details.
3. **Establish air flow.**
   - Use ventilation equipment that provides make-up air. Exhaust vapors to the outside of the building.
   - A typical fan with an output of 2000 to 3000 cfm can be purchased at a local retail home improvement center or hardware store (approx. $200-$300).
     - Ensure that the exhaust fan capacity is 10% greater than your supply fan. Use a larger capacity exhaust fan and a smaller fan to bring in the make-up air. Consider using different size flexible ducts to provide different flow rates.
     - Flexible ductwork, used to help control and direct air flow, can be purchased at a local home improvement center or hardware store (approx. $50-$100).
     - Filter exhaust fans with simple furnace particulate filters to protect the fans and outside property.
     - Consider protecting fans from overspray.
     - Using a fan without exhausting to the outside, can cause recirculated vapors to accumulate in the work area.
   - Use a smoke pencil to confirm air movement away from applicator.
   - In the attic and crawlspace application, do not block entry/exit point with fans.
4. **Exhaust vapors to a safe location outside of the building.**
   - Direct the exhaust away from all people and pets.
     - Mark off the work area with caution tape.
     - Close open windows or doors, not providing make-up air, to prevent vapors from entering other areas of the building.
5. **Continue to ventilate the work space for at least one hour after application.**
   - Occupants can re-enter one hour after the area has been ventilated.
     - Extend ventilation time for lingering or pre-existing odors.
     - Follow up with the building occupant to determine if they are satisfied with the polyurethane foam performance.

* Based on the EPA's 2011 Ventilation Guidelines for SPF (Spray Polyurethane Foam), refer to www.epa.gov/dfe for additional information. For detailed SPF information, visit the following sites: www.spraypolyurethane.org or www.sprayfoam.org. See Section 9 for links and QR codes.

Section 8

Health and Safety: Air Monitoring Study

Objective:

The goal of the study was to monitor the presence of airborne isocyanates, specifically MDI (Methylene diphenyl diisocyanate), during the application and curing of low pressure spray polyurethane foam (SPF) in a typical weatherization application. The air was sampled and monitored in order to confirm safety procedures for protective equipment and re-entry times as well as determine potential health hazards for the installers and/or homeowners. The data was collected to demonstrate that with the use of proper ventilation and personal protective equipment (PPE), low pressure spray polyurethane foam can be applied safely in a residential environment.

Case Study:

- Garrison Colonial home constructed in 1972
- 2300 ft^2 2 story home with 4 bedrooms and 2.5 baths
  - Full size unfinished basement
  - One story cathedral ceiling family room connecting the main house and garage
  - Steep pitch attic accessible by hatch way
  - HVAC equipment in the attic and basement

Methodology:

- Hired Independent Environmental Engineering Consultant to conduct monitoring
- Worked with Association for Energy Affordability to create a detailed scope of work following BPI standards and testing protocols
  - Baseline Readings
    - Measured for CO, CO_2, MDI and recorded temperature and humidity
  - Personal and Area Sampling (MDI)
    - During critical air seal of attic
    - During monolithic coating of entire attic floor (1" of foam)
    - During rim joist application
  - One hour re-entry confirmation
    - ICP's one hour recommended re-entry time based on a Human Health Risk Assessment and in-house air monitoring for MDI

Sealing the attic floor and rim joist during testing

* Based on the EPA's 2011 Ventilation Guidelines for SPF (Spray Polyurethane Foam), refer to www.epa.gov/dfe for additional information. For detailed SPF information, visit the following sites: www.spraypolyurethane.org or www.sprayfoam.org. See Section 9 for links and QR codes.

Health and Safety: Air Monitoring Study

Low Pressure Spray Polyurethane Foam (SPF) Results:

APPLICATION	DURATION	LIMIT	LOCATION	AIRBORNE CONCENTRATION MG/M³	CONCLUSION
Basement - Rim Joist	60 minutes	OSHA .200mg/m³ ACGIH 0.051 mg/m³ NIOSH 0.051 mg/m³	Personal Sample	<.015	**No recorded levels of airborne MDI**
			Area Sample	<.015	**No recorded levels of airborne MDI**
Attic - Critical Air Seal	130 minutes	OSHA .200mg/m³ ACGIH 0.051 mg/m³ NIOSH 0.051 mg/m³	Personal Sample	.0085	**Recordable, but below personal exposure limit**
			Area Sample	<.0076	**No recorded levels of airborne MDI**
Attic - Floor Air Seal	94 minutes	OSHA .200mg/m³ OSHA Action Level: .100 mg/m³ ACGIH .0.051mg/m³ NIOSH 0.051 mg/m³	Personal Sample	.028	**Recordable, but below personal exposure limit**
			Area Sample	<.0064	**No recorded levels of airborne MDI**
POST APPLICATION MONITORING RESULTS					
Attic Area	1 hour after application	OSHA .200mg/m³ OSHA Action Level: .100 mg/m³ ACGIH .0.051mg/m³ NIOSH 0.051 mg/m³	Attic	<.0017	**One hour after the application of low pressure polyurethane SPF, there were no recorded levels of airborne MDI**
2nd Floor Hallway			Hallway	<.0017	
1st Floor Bottom of Stairway			Stairway	<.0016	

Conclusion:

ICP's product stewardship recommendations for low pressure spray polyurethane foam are effective for protection of professional installers and building occupants.

During monolithic coating of entire attic floor (1" of foam)

Ventilation testing set-up for spraying the attic floor

Low Pressure One-Component Polyurethane Foam Sealant (OCF) Results:

APPLICATION	DURATION	LIMIT	LOCATION	AIRBORNE CONCENTRATION MG/M3	CONCLUSION
Applying beads of Handi-Foam polyurethane foam sealant	15 minutes	OSHA .200mg/m³ ACGIH 0.051 mg/m³ NIOSH 0.051 mg/m³	Personal Sample	<.001 mg/m³	**No recorded levels of airborne MDI**

Section 9

ICPAdhesives.com Product Resources

WWW.ICPADHESIVES.COM

An online resource providing up-to-date information on all of the Handi-Foam® and Polyset products, that includes:

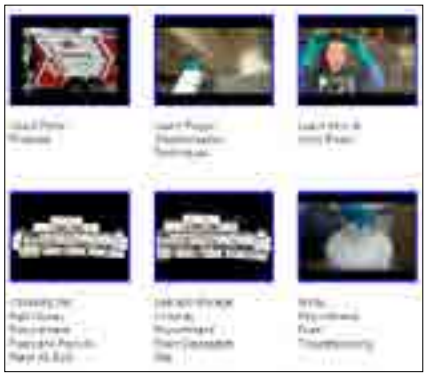
- Industry & Product News
- Videos
- About ICP Adhesives and Sealants, Inc.
- Products
- Technical Information
- Health & Safety
- Contact Information

A & S ACADEMY

Online training tool that features individual informative videos for each topic and gives us the opportunity to provide more dynamic and focused content, building into a library of resources and education on low pressure polyurethane foam sealants and adhesives and ICP Adhesives and Sealants, Inc.

A & S Academy has 7 video-based modules

- Foam 101
- Sealant & Adhesives
- Spray & Pour-in-Place Polyurethane Foams
- Importance of Temperature
- Health & Safety
- Weatherization
- Magnum Heated System® Recertification



VIDEO LIBRARY

- About ICP Adhesives & Sealants
- Learn Proper Weatherization Techniques
- Learn How to Work Smart
- Choosing the Right Kit Size
- Use and Storage of SPF Kits
- SPF Troubleshooting

SDS & TDS LIBRARY

SDS and TDS information for each product can be found under the “Technical Information” tab on the homepage. Here you can click on the desired product or logo to access SDS, TDS, and even specific operating instructions by either item number, product size, or product name.

INDUSTRY TRAINING

The center for Polyurethanes Industry (CPI) of the American Chemistry Council (ACC) has released free low pressure spray polyurethane foam (SPF) health and safety training available at www.spraypolyurethane.org.

www.icpadhesives.com | A & S Academy | Video Library | SDS & TDS Library | SPF Industry Training | NRCA.com

Section 10 Distributor Information

TRANSPORTATION (IN COMMERCE)

- Hazardous material training is required for shipping ICP products. Resources for this training include www.dgitraining.com and www.jjkelleronline.com. To acquire a CDL with a hazmat endorsement, go through your local drivers licensing authority.
- For more information regarding transportation requirements mandated by the U.S. Department of Transportation (D.O.T.), please visit www.phmsa.dot.gov/rules-regulations or call the federal D.O.T. hazmat hotline at 1.800.467.4922 for any hazmat questions.

MARKETING GUIDELINES

- ICP's low pressure polyurethane foam products are intended for professional use only and should not be marketed as homeowner or do-it-yourself products.
- Always use and recommend proper PPE (personal protective equipment) for application:
  - Low Pressure One-Component Polyurethane Foam Sealants & Adhesives – safety glasses or goggles, clothing that protects from dermal exposure, and nitrile gloves.
  - Low Pressure Spray and Pour-in-Place Polyurethane Foams – safety glasses with side shields or goggles, clothing that protects from dermal exposure, nitrile gloves, and proper respirator.
- Videos and Images - follow proper application and safety recommendations in visuals.
  - Do:
    - Show proper respirators, nitrile gloves, safety goggles and protective clothing in all product images and videos (See Section 2)
    - Instruct and show the use of PAPR (powered air purifying respirators) in enclosed spaces (i.e. attics and crawl spaces)
    - Consult the Marketing Department at ICP Adhesives & Sealants for guidance and approval of documents, websites and videos featuring Handi-Foam® or Polyset® images PRIOR to publishing (800.321.5585)
  - Do Not:
    - Show exposed skin on arms, hands or legs during application
    - Show children spraying or near the spray area
    - Show bystanders in the work zone without the proper PPE
    - Show the use of a surgical-type dust mask when spraying
    - Show an attic or crawlspace application without the applicator wearing a PAPR
    - Publish websites, videos or documents featuring Handi-brand images before receiving approval from ICP Adhesives & Sealants.
- Communicate SDS availability (available on www.icpadhesives.com under Technical Information)
- Do not describe polyurethane foam products as non-toxic
  - Chemicals used in these products are toxic; cured foam is non-toxic
- Energy efficiency or renewable resource/green claims - ALWAYS provide support documentation (reference FTC Guides for the Use of Environmental Marketing Claims)
  - i.e. "Save 50% on your energy bills", "improves indoor air quality"

Section 11 Industry Resources

For more low pressure polyurethane foam information and industry links, scan below:

OSHA Confined Spaces

OSHA Respirator Fit Testing

EPA Ventilation Guidelines for SPF

SPFA Technical Documents

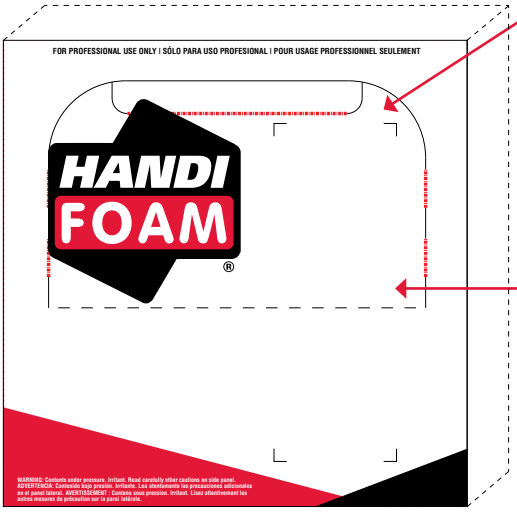
OSHA Fall Protection

Section 12 Packaging Information Examples

All of ICP's low pressure polyurethane foam products come in various sizes and formulations to meet application and market requirements. Product description, optimum chemical and storage temperature, personal protective equipment (PPE) requirements, yields and hazardous labeling are available on every products' packaging or labeling. See below for the general areas where this information can be found.

HANDI-FOAM® LOW PRESSURE POLYURETHANE FOAM DISPOSABLE KITS

FRONT



Operating Instructions located inside front flap

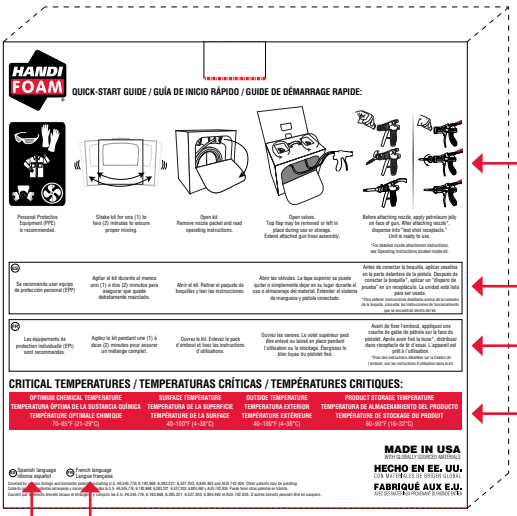
Item number, product description, weight, manufacture and expiration date.

SIDE

Hazards, Precautions, and First Aid labeling

Company contact information

BACK



Quick Start Guide

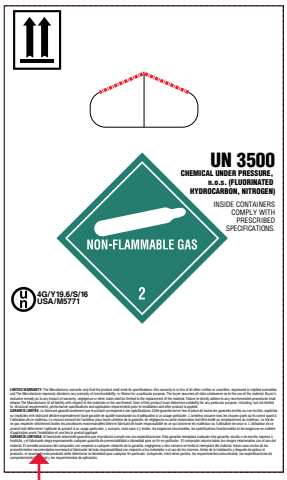
Spanish - Quick Start Guide

French - Quick Start Guide

Optimum chemical and storage temperatures

Trilingual language markings

SIDE



Shipping Information

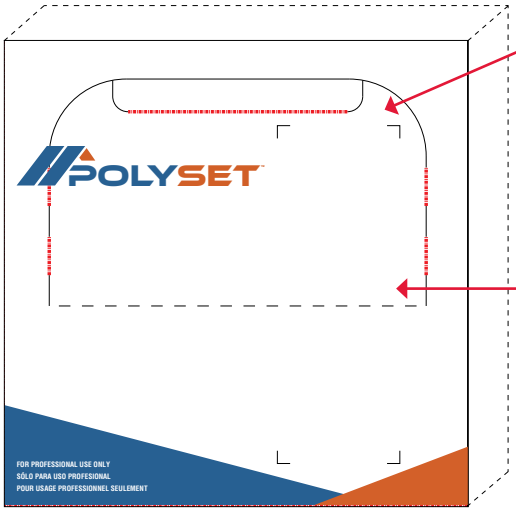
Trilingual Limited Warranty

PLEASE NOTE THE AREAS MENTIONED ABOVE ARE THE GENERAL LOCATIONS WHERE THIS INFORMATION CAN BE FOUND.

Packaging Information Examples

POLYSET® LOW PRESSURE POLYURETHANE FOAM ADHESIVE DISPOSABLE KITS

FRONT



Operating Instructions located inside front flap

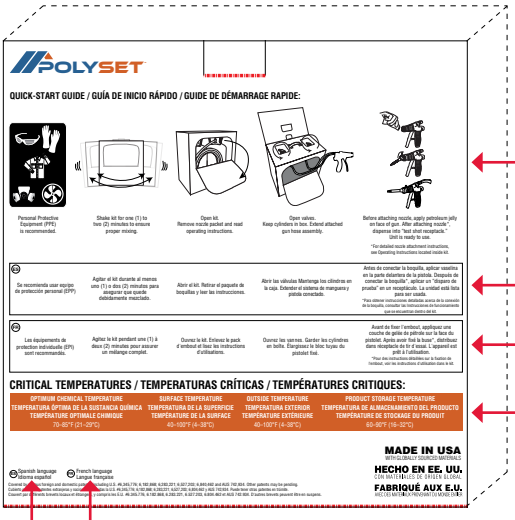
Item number, product description, weight, manufacture and expiration date.

SIDE

Hazards, Precautions, and First Aid labeling

Company contact information

BACK



Quick Start Guide

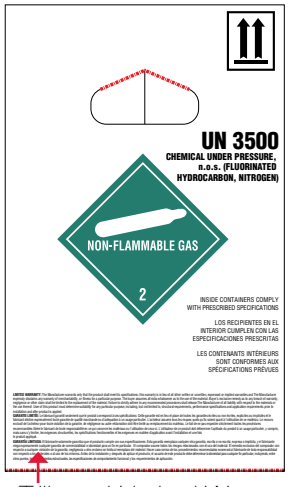
Spanish - Quick Start Guide

French - Quick Start Guide

Optimum chemical and storage temperatures

Trilingual language markings

SIDE



Shipping Information

Trilingual Limited Warranty

PLEASE NOTE THE AREAS MENTIONED ABOVE ARE THE GENERAL LOCATIONS WHERE THIS INFORMATION CAN BE FOUND.

Section 12

Packaging Information Examples

LOW PRESSURE ONE-COMPONENT POLYURETHANE FOAM SEALANTS & ADHESIVES (OCF)

EXAMPLE

Company contact information

Hazards, Precautions, and First Aid labeling

PPE pictograms and quick set-up instructions

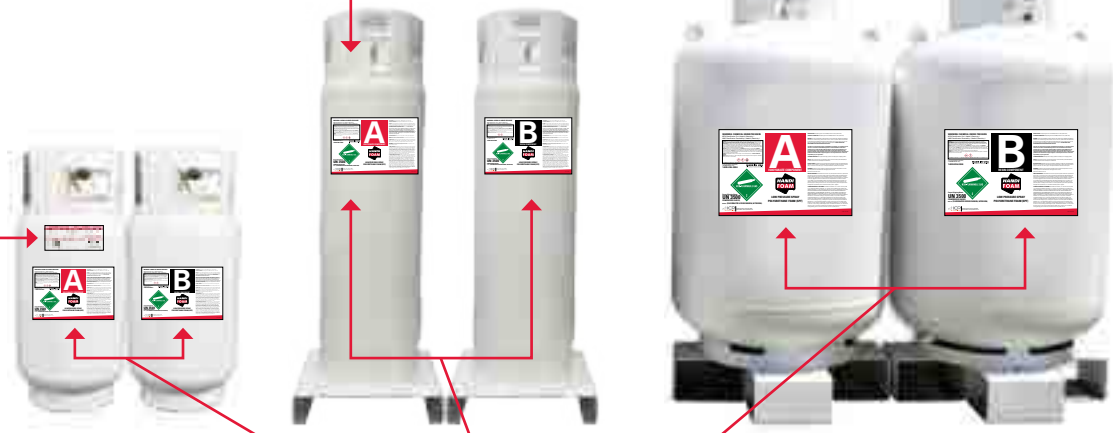
Initial prep, optimum chemical and storage temperature and yields

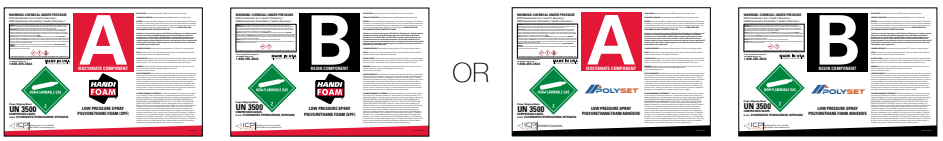
Product name, description, hazardous labeling and weight

REFILLABLE LOW PRESSURE SPRAY (SPF) & POUR-IN-PLACE (PIP) POLYURETHANE FOAM AND ADHESIVE SYSTEMS

Packet attached to the A-side tank (contains: Operating Instructions and Bill of Lading)

Packet located in A-side tank collar (contains: Operating Instructions and Bill of Lading)





OR

Product name, description, hazardous labeling, warranties and shipping information

PLEASE NOTE THE AREAS MENTIONED ABOVE ARE THE GENERAL LOCATIONS WHERE THIS INFORMATION CAN BE FOUND.

work smart

This document contains ICP Adhesives & Sealants' recommendations for the safe use and handling of our low pressure spray polyurethane products. It is intended to provide general information to persons who may handle or apply low pressure spray polyurethane foam chemicals. It is not intended to serve as a substitute for in-depth training or specific handling or application requirements, nor is it designed or intended to define or create legal rights or obligations. It is not a prescriptive guide. All persons involved in handling and applying spray polyurethane foam chemicals should independently ascertain that their actions are in compliance with current federal, state and local laws and regulations and should consult with their employer concerning such matters.

Scan to be directed to www.icpadhesives.com

Scan here to be directed to the Health & Safety page.

ICP ADHESIVES & SEALANTS
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Handi-Foam® low pressure one-component polyurethane foam sealants and adhesives (OCF), low pressure spray polyurethane foams (SPF), and low pressure pour-in-place polyurethane foams (PIP) are composed of a diisocyanate, hydrofluorocarbon or hydrocarbon blowing agent, and polyol. For polyurethane foam sealants/adhesives: wear protective glasses with side shields or goggles, nitrile gloves, and clothing that protects against dermal exposure. Use only in a well-ventilated area. Avoid breathing vapors. Read the SDS and instructions carefully before use (www.icpadhesives.com). For spray polyurethane foams and pour-in-place polyurethane foams: wear protective glasses with side shields or goggles, nitrile gloves, and clothing that protects against dermal exposure. Use only in a well-ventilated area and with certified respiratory protection or a powered air purifying respirator (PAPR). Additional information on ventilation can be found in the Product Stewardship Guide (www.icpadhesives.com). Read the SDS (www.icpadhesives.com) and instructions carefully before use. 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). Refer to each product's TDS for specifications, testing results, and other attributes. The customer is ultimately responsible for deciding whether products and associated TDS information are appropriate for customer's use. Refer to the products' SDS, Product Stewardship Guidelines, and operating instructions for guidance on the safe and proper application of the product (www.icpadhesives.com). For professional use only. Building practices unrelated to materials can lead to potential mold issues. Material suppliers cannot provide assurance that mold will not develop in any specific system.

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