POLYSET®

PROPACK® 30 • PROPACK® 100 Portable Field Kit

Use and Care of ProPack® 30's and ProPack® 100's

The ProPack® 30's & 100's are being used in many regions with great results. There have, however, been some instances of clogging within the gun/hose assembly. Research indicates the foam adhesive in the nozzle (which is a static mixer) will continue to expand, and if left attached to the gun assembly, will eventually cure and block the nozzle. This can happen in a short period of time, due to the small quantity of foam adhesive in the nozzle. When the installer activates the gun, the two chemical components (which are under pressure) will hit this blockage and back up into the gun/hose assembly. Usually, when this occurs, the gun will dispense only one chemical, rendering the gun unusable and must be replaced.

Note: This condition is avoidable and is not caused by any defect in the ProPack gun or assembly.

Polyfoam recommends the removal of the static mixer nozzle as the installer stops spraying **for any reason,** (i.e. stopping to move tile, taking a break, making tile cuts, etc.). Before continuing, replacement of a new nozzle will prevent the above condition from occurring. Each ProPack® has been provided with ten extra nozzles to enable the installer to replace when necessary. In addition, petroleum jelly (also provided with the ProPack®) should be placed on the gun ports whenever the gun is not in use. This will prevent the ports from sticking due to the reaction with air.

It is important for the installer to remember that the ProPack® is an adhesive dispenser and all adhesives react to heat, moisture and air. ***Properly used,*** the gun/hose assembly will dispense the contents of the ProPack® without any problems. ***Improperly used,*** the gun/hose assembly will clog resulting in unnecessary downtime and extra expense.

Any replacement gun/hose assemblies can be purchased through your local distributor or at Polyfoam Products, Inc. toll free **1-888-774-1099.**

Setup and Operating Instructions

Setting Up Your System

IMPORTANT: Follow Instructions

PROPACK® systems are factory tested to meet rigid performance standards. Proper function of the unit in the field, however, depends on close adherence to the instructions in this manual (see Safety Precautions, page 4).

Components:

Systems come with a gun/hose assembly, 10 mixing nozzles, packet of petroleum jelly, and wrench. Components are packed in the base of the PROPACK® 30 and at the top of the "A" carton of the PROPACK® 100. Petroleum jelly is applied to the gun face at the factory. It need only be used for storage and reuse.

Preparing the Gun and Hoses:

Set up your PROPACK® system in a clean area to prevent dirt or other foreign matter from contaminating equipment.

A. **Operator should always wear goggles and gloves.**
B. Attach hoses to tanks:
1. Place the PROPACK® 30 on its side. Remove punch out tab on the PROPACK® 100 system carton.
2. Attach "A" labeled hose to "A" tank valve. Turn collar nut down by hand and secure with wrench (Fig. 1). Repeat with "B" hose. Make sure the PROPACK® 30 cartons are turned upright (valves down) and PROPACK® 100 cartons are turned upright (valves up).
3. Open the "A" valve slightly (tilt the PROPACK® 30 carton slightly to reach under). Check for leakage. If there is none, open valve completely. If there is, make sure nut is securely positioned and tightened. Repeat with the "B" valve.

NOTE:
NEVER OPEN VALVES UNLESS THEY ARE POINTED
• DOWN FOR THE PROPACK® 30,
• UP FOR THE PROPACK® 100.

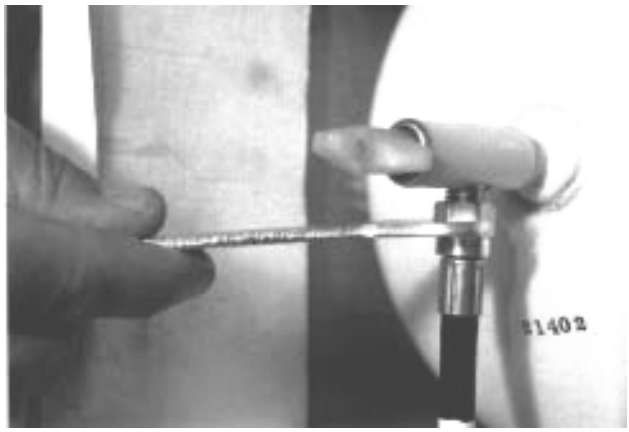

Fig. 1 - Tighten nuts securely with wrench

C. Using a small amount of petroleum jelly, lubricate the o-ring that surrounds the face of the gun. Install mixing nozzle. Align nozzle locking arms with slots in gun body. Push in firmly until you hear a 'click'. Nozzle is then firmly secured (Fig. 2).

Fig. 2 - Inserting the mix nozzle

D. Check operation. Aim gun into waste container. Disengage safety. Dispense foam at full pressure to make sure chemical is feeding from both tanks and reacting to make quality foam.

E. To remove nozzle, squeeze locking arms and pull nozzle out (Fig. 3).

Fig. 3 - Removing the mixing nozzle.

The patented U-CONTROL GUN permits the operator to meter the flow of material, dispensing only the amount of foam required for the particular job. Simply hold the gun as you would a pistol and pull evenly on the trigger until you obtain the desired flow.

NOTE:
DO NOT USE SOLVENTS SUCH AS METHYLENE CHLORIDE OR ACETONE, TO ATTEMPT TO CLEAN THE GUN OR NOZZLES.

Application

A common rule of thumb is to hold the nozzle about 6 inches from the area to be foamed. You can control the volume of flow by the amount of pressure you apply to the trigger. Get as close to the target as possible to achieve maximum coverage with minimum splatter.

Foam Setup Time

POLYPRO® AH160 sets up (tack free or dry to touch) in less than two minutes at temperatures between 70° and 80° F (21°-27° C). The higher the temperature, the faster the set-up. The operator must be aware of time lapsing between shots (dispensing).

RAPID CHEMICAL SET-UP WILL OCCUR IN NOZZLE AND BLOCK THE PORT OPENING. THEREFORE, IF WORK IS INTERRUPTED BY A TIME SPAN OF MORE THAN 60 SECONDS, REMOVE NOZZLE.

Application Factors

Surface Preparation

The substrate surfaces must be free from dust, dirt, oils, water and other contaminants.

Temperature

Temperature plays a major role in the cure time, density and physical properties of foam. Kits should be stored at between 60° and 90° F (16° and 32° C). At time of use, the chemical temperature must be between 60° and 95° F (16° and 35° C). When the storage or work area temperature drops below 60° F (16° C) the chemical must be warmed to a working temperature of at least 70° F (21° C). Proper chemical performance cannot be guaranteed if proper temperature recommendations are not followed. Ideally, the best results are obtained when the ambient temperature of the work environment is 70° to 95° F (21°-35° C). Properly heated foam can be sprayed on colder surfaces, but it must be understood that cold surfaces, generally those below 50° F (10° C), slows down the chemical reaction which causes the foam to expand. Spraying onto cold surfaces can reduce expected yields by as much as 25% and also affect foam quality. Cold surfaces should be warmed artificially if possible, or delay foaming until surface temperatures have been warmed by the sun or interior environment.

Operator

Because PROPACK® cannot be metered, operator skill is important in obtaining economical yields. Experience will teach the proper trigger pressure for specific jobs. The operator also must remember that the foam will expand 2-3 times its originally dispensed volume or size and to allow for this expansion. Always take into account surface irregularities under the tile, e.g. a narrow tile strengthening rib may require

a more foam than a wider flat surface in order to get the same square inch contact area. A good rule of thumb, which takes in a multitude of conditions, is to allow for 10% more foam than you actually calculate is needed for the job.

Usage and Re-use:

CRITICAL TO PROPER SYSTEMS OPERATION
GENERAL CONSIDERATIONS

Unopened systems are guaranteed up to the date stamped on the carton (13 months from date of manufacture). Once the tank valves are opened, the chemicals should be used within 30 days. Systems must be stored at 60° to 90° F (16°-32° C) whether opened or unopened. If it is necessary to store them at temperatures under 60° F (16° C) for a short period of time, they must be returned to an environment of 60° to 80° F (16°-27° C) for at least 24 hours before they can be used. In no event should units be stored at temperatures above 100° F (38° C). Nor should they be stored in direct sun, or near hot water pipes, furnaces, chimneys or heat ducts. Do not place containers directly onto the roof deck when ambient temperatures exceed 90° F (32° C). When ambient temperature exceed 90° F (32° C) place containers on a stack of roof tiles or on a platform elevating them off of the roof deck.

STORAGE AND RE-USE CRITICAL TO PROPER SYSTEMS OPERATION

1. Engage Safety. Make sure used nozzle is removed and discarded. Coat face of gun with petroleum jelly.
2. Apply petroleum jelly to valve stems and close valves.
3. Make sure cartons are turned upright (valves pointed **DOWN** for the PROPACK® 30 and **UP** for the PROPACK® 100). Store at 60° to 90° F (16° to 32° C).
4. Where system is used infrequently, it is recommended that the gun be shot briefly once a week to prevent line freeze-up. Aim gun into a plastic bag. Release safety and shoot briefly, without a nozzle, to remove any waste and make sure chemicals are feeding from both tanks. Agitate bag so that the chemicals will mix and create a solid disposable waste. Engage safety and coat gun face with petroleum jelly.

Re-using System

1. **MAKE SURE SAFETY IS ENGAGED.**
2. Open valves and inspect fitting for tightness and leaks.
3. Aim gun into a plastic bag. Release safety and shoot briefly, without a nozzle, to remove any waste and make sure chemicals are feeding from both tanks. Agitate bag so that the chemicals will mix and create a solid disposable waste.
4. Insert a new nozzle and spray foam.

Troubleshooting - Blockage

Polyfoam recommends the removal of the static mixer nozzle as soon as the installer stops spraying for any reason, (i.e., Stopping to move tile, taking breaks, making tile cuts, etc.). It is very easy for the nozzle to clog due to the small quantity of foam adhesive which remains in the nozzle when dispensing of the material is suspended. Replace with a new nozzle and continue with the tile installation. This practice will prevent potential blockage in the gun/hose assembly. If the gun is activated with a clogged nozzle, chemical will back up into the gun/hose assembly rendering the gun unusable. Blockage occurs and usually only one chemical will be dispensed. The gun/hose assembly will then have to be replaced.

Safety Precautions

PROPACK® tanks are pressurized. When in use they must not be punctured or incinerated. They can only be used once, and are not refillable. The "A" tank contains polymeric isocyanates. The "B" tank contains polyolamines. The user should make sure that the intended application of this product conforms with all local codes.

- **Wear gloves and chemical safety goggles.** In case of skin contact with either chemical, flush with water. For eyes, flush with water for 15 minutes and get immediate medical attention.
- Use only with adequate ventilation and/or respiratory protection.
- In areas not ventilated, do not remove respiratory protection immediately after spraying; wait until vapors and spray mist are completely dissipated.
- Smoking must not be allowed during application. Open flame and the use of welding or electrical equipment in the vicinity of application also should be prohibited.
- Keep systems out of children's reach, and do not apply material to objects which children might touch.
- Do not store foam at temperatures above 100° F (38° C). A storage temperature between 60° and 90° F (16°-32° C) is recommended.
- For liquid spills from the "A" tank (isocyanate), always wear respiratory protection. Cover the spill with a dry oil-absorbent material (e.g. sawdust, vermiculite). Scoop up waste and place in an open container. Remove it to an outdoor area and treat with a decontamination solution consisting of 90-95 parts water, 3 to 8 parts concentrated aqueous ammonia solution and .02 to .05 parts detergent, thoroughly mixed. Add 10% - 20% decontamination solution to absorbed "A" chemical. Do not seal the container and allow the mixture to stand for 72-96 hours. Dispose of waste in compliance with pertinent regulations. Wash down the spill area with aqueous detergent.
- For liquid spills from the "B" tank (polyol), cover with an absorbent such as sawdust and scoop into an open container. Dispose of as ordinary industrial waste in compliance with pertinent regulations. Wash down spill area with aqueous detergent.

IMPORTANT NOTES ON TANK DISPOSAL
DO NOT INCINERATE TANKS.

After chemicals have been used, each tank should be vented. This should be done with caution as the tanks still contain some pressure. Wear goggles and gloves and vent as directed.

PROPACK® 30:

Place tanks with valves pointed up. Open valves slowly and allow pressure to vent for 24 hours. Turn tank over (valves down) and drain any remaining chemical into a waste container. Where disposal rules require the tanks to be punctured, knock out the safety burst plug.

PROPACK® 100:

Place tanks upside down (valves down) and vent as instructed for smaller kits. Since dip tubes in these kits prevent draining of excess chemical, allow tanks to vent for 24 hours and then knock out safety burst plug to drain chemical.

Chemical tanks must be disposed of as ordinary industrial waste (sanitary landfill is recommended) in compliance with pertinent regulations. Chemical waste should be neutralized and disposed of as ordinary waste (see instructions for handling spills).

FOR CHEMICAL / MEDICAL EMERGENCIES: PHONE CHEMTREC AT 1-800-424-9300

LIMITED WARRANTY

WARNINGS

Individuals with chronic respiratory diseases, asthma, or bronchial disorders should not work with these materials, nor should those with allergic diseases.

Under certain building codes, there may be restrictions relative to the use of our product. The user is responsible for verifying and adhering to such codes.

It is the user's responsibility to determine the fitness of this product for any intended application. When this product is to be used in interior construction or in any confined area, it should be covered with another material to provide a fire rating of at least 15 minutes. A covering of a minimum of ½ inch of cement, plaster or fire-rated gypsum wallboard or an equivalent fire barrier is advised. Do not use this urethane foam where it will come in contact with steam pipes, heat vents, or areas where surface temperatures might exceed 212° F. No flame cutting or hot work should be conducted nearby. (If such work is a necessity, safe industrial proceduresshould be followed.)

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.

Polyfoam Products, Inc. warrants that the goods sold hereunder conform to its standard specifications.

NO REPRESENTATION OR WARRANTY OF ANY OTHER KIND, EXPRESS OR IMPLIED, IS MADE WITH RESPECT TO THE GOODS, WHETHER AS TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER MATTER.

Notice of Claims

Immediately upon receipt of this product, user should inspect it for any parts shortages or defects. Any claim for shortage of system components must be made to the distributor within ten days after user's receipt. All other claims, including claims for alleged defective goods, must be made to the distributor within 15 days after user learns of the facts upon which such claim is based, but in no event after 15 days after the expiration date stamped on the carton. Otherwise, any claim is waived.

Limitation of Liability

POLYFOAM PRODUCTS, INC. NEITHER ASSUMES, NOR AUTHORIZES THE DISTRIBUTOR OR ANY OTHER PERSON TO ASSUME FOR IT, ANY OTHER LIABILITY IN CONNECTION WITH THIS PRODUCT. ANY LIABILITY FOR LOSS OR DAMAGE RESULTING FROM ANY CAUSE WHATSOEVER, INCLUDING NEGLIGENCE, ALLEGED 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, THE REPAIR OR REPLACEMENT OF DEFECTIVE OR DAMAGED GOODS. IN NO EVENT, INCLUDING IN THE CASE OF A CLAIM OF NEGLIGENCE, SHALL POLYFOAM PRODUCTS, INC. OR ANY DISTRIBUTOR OF THIS PRODUCT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

COMMENTS AND LIMITATIONS

1. Before using, contact Polyfoam Products, Inc. toll free (888) 774-1099 for the installation instructions in your area.
2. Prior to applying the POLYPRO® AH 160 tile adhesive, the underlayment must be fastened to meet the wind loading requirements of your project.
3. Polyfoam Products offers five (5) paddy placement options. Each paddy placement will achieve different mean roof height limitations. Choose the proper paddy placement to meet the tile/wind loading requirements for your job condition.
4. Calibration of the PROPACK® dispensing equipment is automatically achieved within the PROPACK® gun and nozzle unit. The mix ratio between the "A" component and the "B" component is maintained between 1.0-1.15 ("A"):1.0 ("B") when operated under the guidelines mentioned in the application factor section beginning on page 2 of this document.
5. Adhere tile directly in freshly applied adhesive. The tile must be set within 1-2 minutes after foam has been dispensed.
6. POLYPRO® AH 160 tile adhesive shall not be exposed permanently to ultra violet rays (sunlight). Foam may be cut away and covered with mortar or coated with paint designed for application to polyurethane foam.
7. POLYPRO® AH 160 tile adhesive shall be applied with the PROPACK® dispensing equipment only.
8. Do not apply foam adhesive directly to uncured plastic cement.

SPECIFICATIONS

All PROPACK® systems have tanks composed of an enamel exterior, and incorporate a valve safety mechanism that vents the tanks at required pressures. All meet DOT Specification No. 39.

PROPACK® 30:

Working pressure: Not to exceed 250 psi-nitrogen.
Tanks: Two 424 cubic inch deep drawn steel tanks.
Minimum Burst: 650 psi
Hoses: Two 7-1/2 foot tubing pieces, .275" inner diameter, 3/8" outer diameter, with 7/16"- 20 connection nut.
Shipping Weight: 40 pounds.

PROPACK® 100:

Working pressure: Not to exceed 250 psi-nitrogen
Tanks: Two 1350 cubic inch deep drawn steel tanks
Minimum Burst: 650 psi
Hoses: 15 foot tubing pieces, .275" inner diameter, 3/8" outer diameter, with 7/16"-20 connection nut.
Shipping Weight: 120 pounds.

ORDERING ADDITIONAL ACCESSORIES

Additional U-CONTROL guns, hoses and nozzles are available from your nearest Polyfoam Products, Inc. distributor.

Practical Guide for Using the ProPack® 30's and ProPack® 100's

1) Using the enclosed wrench, attach the hoses to the tanks. Valves should be at the top for the PROPACK® 100's and at the bottom for the PROPACK® 30's.

Note: Never open the valves unless the position of the tanks is correct.

2) There are two tanks per chemical system. The blue one is the "A" chemical and should be marked with the letter "A" and the other tank is white and should be marked with the letter "B".

3) There are two hoses; only one is marked with the letter "A". Attach the "A" hose to the blue tank marked "A" and the other hose to the white tank marked "B".

4) Open the tank valves. When opening the valves on the PROPACK® 100's the valves must be in the up position. When opening the valves on the PROPACK® 30's the valves must be in the down position.

5) Clean the petroleum jelly from the tip of the gun. Activate the trigger until all of the air is released for the hoses and a good stream of both chemicals is visible through the gun orifices.

6) Clean residue from the tip of the gun. Install the mix nozzle (plastic tip). Apply several test shots on paper or cardboard. The mixed foam should rise and solidify within minutes.

7) Proceed to apply the foam according to the installation instructions. Use a paper towel or rag to clean the excess foam adhesive at the tip of the mix nozzle after the adhesive has been dispensed to avoid spillage over installed tiles and your clothes.

8) Shoot from approximately 6 inches (15 cm) from roof to avoid splattering. Foam will solidify in about two minutes.

<u>Extremely Important:</u> If you stop for more than one minute, change the mix nozzle immediately for a new one.

Note: The chemical tanks have different internal pressures. If you allow the foam adhesive to solidify in (clog) the nozzle, the next time you shoot the gun the adhesive will not be able to go through the nozzle and will back up into the side of the gun with the lowest internal pressure, this will clog the gun and it will become useless.

9) When you are finished using the PROPACK®, close all of the valves, throw away the mix nozzle and clean the gun orifices of debris. Apply petroleum jelly over the gun orifices and put the PROPACK® away in a dry storage area with temperatures between 60°F and 90°F (15°C and 32°C), Make sure the PROPACK® is stored in the proper position: PROPACK® 30's with the valves down and the PROPACK® 100's with the valves up.

10) For roof applications, the atmospheric temperature must be above 45°F (8°C). The surface temperature must be above 55°F (13°C) and the chemical should be kept between 70°F and 90°F (21°C and 32°C).

11) When re-using a previously open PROPACK®, clean the petroleum jelly off the tip of the gun. If you don't the petroleum jelly will cause the foam adhesive to go flat and not rise properly. In that state the adhesive will not make contact with the underside of the roof component.

NOTE: This is only a quick start guide for field convenience. You must read the complete PROPACK® operation manual first. Do not attempt to operate the PROPACK® unit without a thorough understanding of the product and the equipment.

<u>Important Notice:</u> Prior to using the product you must participate in the Polyfoam Qualified Applicator Program. Once you have attended the class and pass the test you will receive a diploma and an I.D. card stating you have completed the program and will be listed in our database.

Contact Polyfoam Products, Inc. Toll Free at 1-888-774-1099 or visit our website at www.polyfoam.cc for the installation recommendations or compliance reports for your given area.

Guía Práctica Para el Uso del PROPACK®

1) Instale las mangueras en los tanques. Las válvulas del PROPACK® 100 deben estar hacia arriba y las del PROPACK® 30 deben estar en la parte de abajo. Nunca los coloque de costado. No abra las válvulas a no ser que estén en la posición correcta.

2) Hay dos tanques, uno azúl, que debe estar marcado como “A”, y uno blanco que debe estar marcado como “B”.

3) Una manguera viene designada con la letra “A”. Esa se instala en el tanque azúl. La otra manguera se instala en el tanque blanco “B”.

4) Abra las válvulas de los tanques y asegúrese de que no haya salideros.

5) Quite la vaselina de la punta de la pistola y apriete el gatillo para botar el aire que está dentro de las mangueras hasta que se obtenga un buen flujo visible de ambas químicas por los orificios de la pistola.

6) Instale en la pistola una de las puntas plásticas mezcladoras. Haga varios disparos de prueba en algo desechable, como una bolsa de papel o de plástico. La espuma debe crecer y solidificarse en breve.

7) A una distancia de 15 cms de la superficie, proceda a disparar espuma en los lugares apropiados de acuerdo con el área donde se esté instalando la teja o con el accesorio que se esté colocando. Use un papel desechable o un trapo para evitar que el exceso de espuma que queda en la punta de la pistola se riegue por encima de las tejas ya instaladas y por su ropa.

8) La espuma se solidificará en menos de dos minutos.

Importante: Si por cualquier circunstancia hay que parar por mas de un minuto, se debe cambiar la punta plástica mezcladora inmediatamente. Para eso se proveen 10 puntas por cada PROPACK®.

Atención: Para que comprendan la importancia de este párrafo sepan que los tanques vienen con una presión interna diferente el uno del otro. Por eso si se permite que la espuma permanezca en la punta plástica de mezcla hasta que se solidifique, se tupirá y cuando dispare de nuevo, al no poder salir, retrocederá hacia la manguera del tanque de menor presión y tupirá esa manguera cuando se mezcle dentro de ella. La única solución entonces seria cambiar las mangueras. Recuerde, cambie las puntas cuando pare.

9) Al terminar de usar el PROPACK® , cierre las dos válvulas, bote la punta plástica de mezclar y limpie los orificios de materiales excesivos. Ponga vaselina sobre los dos orificios de la pistola y guarde el PROPACK® en un lugar seco y resguardado donde la temperatura esté entre 15^0C y 32^0C. (60^0F a 90^0F). Las válvulas del PROPACK® 100 deben apuntar hacia arriba y las del PROPACK® 30 hacio abajo. Las cajas siempre paradas, nunca de costado.

10) Para aplicar el producto en el techo la temperatura mínima atmosférica apropiada no debe ser menor de 8^0C (45^0F). La temperatura de la química debe estar entre 21^0C y 32^0C (70^0F y 90^0F). En la superficie donde se va a aplicar la espuma, la temperatura no debe ser menor de 13^0C (55^0F).

11) Cuando se use un Propack ya usado, limpie la punta de la pistola para quitarle la vaselina. De no hacerlo, la espuma no crecerá ni pegará y correrá por el techo.

Atencion: Esta es una guía práctica para refrescar la memoria en la obra. Con anterioridad debe leerse el Manual de Operacion oficial de los PROPACK® . No trate de operar los PROPACK® sin un conocimiento completo del Manual.

<u>Nota Importante:</u> Antes de usar el producto ud. Debe participar en el programa de entrenamiento para los PROPACKS® y pasar un exámen para recibir una identificación y un diploma y para estar en nuestra lista de aplicadores aprobados.

Para recomendaciones sobre la aplicación de nuestros productos o para información sobre los códigos de construcción ensu área, sirvase llamar a Polyfoam Products, Inc. al teléfono 1-888-774-1099 en los E.U.A. o visítenos en el internet: www.polyfoam.cc.