



PC 2000 HFO SPRAY FOAM INSULATION APPLICATION GUIDELINE

Product Design

PolyCon PC 2000 HFO is a Class A rated, closed-cell spray foam that offers applicators a high-yield, medium-density insulation solution. Its reliable, consistent performance and broad application temperature range provide excellent installation flexibility.

Product Use

PolyCon PC 2000 HFO adheres tenaciously to most building materials. When applied at a thickness as little as one and a half inches the product provides an air and vapor barrier helping to strengthen and protect the building envelope for residential, commercial and industrial applications.

Recommended Product Applications

- Walls
- Attics
- Floors
- Crawl Spaces
- Wine Cellars
- Vaulted & Cathedral Ceilings
- Refrigeration & Freezers
- Tanks
- Coolers
- Piping
- Foundations

Recommended Processing Parameters

	PC 2000 HFO Regular	PC 2000 HFO Winter
Mix Chamber	minimum of 01	minimum of 01
Transfer Pumps	2:1 , 3:1	2:1 , 3:1
Ambient / Substrate Temp	50 -120°F / -10 - 49°C	30 - 80°F / -1 - 27°C
Equipment Dynamic Pressure	1,000 - 1,500 psi	1,000 - 1,500 psi
Preheat Temperature	110-135°F / 43 - 57°C	110-135°F / 51 - 60°C
Drum Temperature	65 - 85°F / 18 - 29°C	65 - 85°F / 18 - 29°C
Storage Temperature <i>No Sun Exposure</i>	65- 85°F / 18 - 29°C	65- 85°F / 18 - 29°C

Material Shelf Life

Six (6) months when stored properly

Storage Requirements

Store ISO and resin material in a covered warehouse out of direct sun exposure. Ambient temperature should be relatively consistent but not fluctuate outside of 50 – 90°F.

Thermal Barrier

The IBC Code requires spray foam to be separated from a building’s interior by an approved thermal barrier, such as 1/2" gypsum wallboard or an equivalent material, installed according to manufacturer specifications and in compliance with local codes. Other protective layers may also be used if they have been tested as a composite system and passed third-party audited testing by an approved laboratory.

PC 2000 HFO

SPRAY FOAM INSULATION

Application Guidelines

PC 2000 HFO may be applied in residential, commercial or agricultural building applications. PC 2000 HFO can be applied to vertical and horizontal applications including walls, attics, refrigeration, freezers, crawl spaces and multiple ceiling configurations such as vaulted and cathedral ceilings. PC 2000 HFO will adhere tenaciously to most construction materials such as clean wood, metal, masonry and concrete substrates.

Startup Procedure

Ensure that drum temperatures are within recommended processing temperatures of 65 – 85°F throughout before charging equipment with new material. It is important to maintain a target temperature of 70°F for the A and B drums. PC 2000 HFO should not be recirculated to raise barrel temperatures. Instead, drum blankets, hot plates, or other approved methods may be used to gradually warm the drums according to the manufacturer's guidelines. Proper storage and temperature maintenance of the barrels are recommended for optimal results.

Flushing Procedure

It is imperative that prior to the introduction of the PC 2000 HFO to any equipment, the equipment must be purged thoroughly of any previous material to avoid cross contamination. Turn off and disconnect air to all transfer pumps. Remove the drum pumps from the ISO and Resin drums and wipe pumps and dip tubes clean. Ensure resin drum pump housing is empty. Place the drum pumps and dip tubes in PolyCon ISO and PC 2000 HFO resin drums. Reconnect and turn on the air to the drum pumps. Use the drum pumps to purge the ISO and resin supply and recirculate hoses back into their respective drums. Purging material usually generates one to two gallons of liquid, depending on hose length. When completed, and before changing into another system, flush the resin side with 3-4 gallons of water." It is important to note that water and air can ONLY be used to flush the Resin or B-Side hose.side with 3-4 gallons of water or compressed air.

Application Characteristics

On ratio finished product will result in uniformed cell structure and color throughout the installed system. For best results, apply the PC 2000 HFO in two (2) inches for the first pass. Each pass thereafter can be sprayed up to three (3) inches. Target surfaces for the PC 2000 HFO should have a moisture content of 18% or less. While spraying PC 2000 HFO, if the application appears to run or drip, increase the hose and preheat temperatures in three (3) degree increments until the condition is eliminated. Be sure to allow the increased heated material to reach the application gun before additional changes are made. Spray technique may also assist by starting the application from the bottom up allowing the warm air to rise across the substrate target. The hose heat and preheat temperatures should never exceed 145°F for both Iso and resin. When applying multiple lifts, wait at least fifteen (15) minutes between passes, especially in cool or cold weather, to allow any remaining surface moisture to evaporate. If subsequent passes display compromised adhesion, a longer wait time between passes may be required as a result of dew point and humidity. PC 2000 HFO should never be applied over three and a half (3.5) inches per pass and should always be allowed to cool between passes to ensure the product does not overheat, cause excess heat buildup and result in a fire or cause components of the formulation to generate unintended odors that may not dissipate over time.

Troubleshooting Shrinkage or Poor Pass Adhesion

Off ratio mix of ISO and resin?

- Check pressure gauges over 200 psi variance could be an indication of a material restriction.

Target substrate moisture content is too high?

- Surface moisture can occur as a result in ambient temperature fluctuations and an increased dew point.

Material temperature is too high causing a change to the intended reaction profile?

- If this occurs, reduce temperature at three (3) degree intervals until corrected.

Shutdown Procedure

In preparation for shutdown for periods of four (4) hours or more, follow equipment manufacturers guidelines for the machine, hose and gun. Ensure that the drummed material is properly sealed.

Handling and Safety

Respiratory protection is Mandatory! All precautions should be taken to avoid occupational exposure as well as protecting the working area to avoid unintended exposure by others. Supplied air and a NIOSH approved full face mask respirator must be used during the application as well as chemical safety goggles, protective, non-absorbent gloves and Tyvek suit properly secured around wrists to avoid any and all skin exposure.

Positive pressure ventilation of the work area is recommended to minimize the accumulation of vapors in the work area during the application. Improper application techniques of this foam system must be avoided. Any interior area, even with proper ventilation, should be considered a Confined Space and be treated with utmost precaution. Atomized vapors should not exceed TLV .02 parts per million of isocyanates. Avoid breathing vapors. Persons with known sensitivities or allergies should avoid exposure completely. If inhalation occurs, remove person from contaminated area and administer oxygen if having difficulty breathing. Call a physician immediately. Avoid contact with skin, eyes and clothing. Open containers carefully, allowing any pressure in the container to be relieved safely. Any contact with material should be washed thoroughly with soap and water. Wash clothes before reuse. Applicators should ensure the safety of the jobsite and construction personnel by posting appropriate signs warning all adjacent workers and trades to avoid the area. Ensure warning signs are visibly posted at job site that welding, soldering and torch cutting should take place no less than 45 feet from exposed in situ cured foam. If work must be performed, the polyurethane foam should be properly covered with an appropriate fire or welders blanket and fire watch should be provided. A protection program developed by the Center for Polyurethanes Industry / CPI is available for download at www.polyurethane.org. Spray Polyurethane Foam Alliance / SPFA also provides significant safety resources at www.sprayfoam.org, or can be reached directly at 571-748-5003.

In Case of Spills or Leaks

- Utilize appropriate personal protective equipment (PPE)
- Contain and cover spilled materials with loose, absorbent material such as Oil-Dry, Vermiculite, sawdust or Fuller's Earth
- Shovel absorbent waste material into proper waste containers
- Wash the contaminated area thoroughly with hot and soapy water
- Ventilate area to remove vapor
- Report sizable spills to proper environmental agencies

Jobsite Hazards

The potential results of improperly applied materials may include but not limited to excessive heat build-up which could result in a fire or offensive odors which may not dissipate over time and / or poor product performance due to improper density of the applied material. This includes excessive thickness beyond recommended application passes, off ratio material, and spraying into rising foam. Large masses of sprayed materials should be avoided. If large masses are generated they should be removed from the area, cut into small pieces, wetted down and allowed to cool before disposal. Failure to follow this recommendation may result in a fire. It is recommended that a fire extinguisher be located in the work area to ensure easy access.

In case of Fire Extinguishing Media

Use dry chemical extinguishers such as mono Ammonium phosphate, potassium sulphate and potassium chloride. Additionally, use carbon dioxide, high expansion chemical foam or water spray for large fires.

Disclaimer

The data presented herein is not intended for use by non-professional applicators, or those persons who do not purchase or utilize this product in the normal course of their business. The potential user must perform any pertinent tests in order to determine the product's performance and suitability in the intended application, since final determination of fitness of the product for any s the responsibility of the buyer. All guarantees and warranties as to the products supplied by PolyCon, LLC shall have only those guarantees and warranties expressed in writing by the manufacturer. The buyer's sole remedy as to any material claims will be against the applicator of the product. The aforementioned data on this product is to be used as a guide and is subject to change without notice. The information herein is believed to be reliable, but unknown risks may be present. NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING PATENT WARRANTIES OR WARRANTIES OF MERCHANTABILITY OR FITNESS FOR USE, ARE MADE BY POLYCON, LLC WITH RESPECT TO OUR PRODUCTS OR INFORMATION SET FORTH HEREIN.

To the best of our knowledge, the technical data herein is true and accurate as the date of issuance and is subject to change without prior notice. User must contact PolyCon, LLC to verify correctness before specifying or ordering products. No guarantee of accuracy is given or implied. We guarantee our products meet our published standards of quality control. WE ASSUME NO RESPONSIBILITY FOR COVERAGE PERFORMANCE OR INJURIES RESULTING FROM USE.



PolyCon LLC
1755 Transcentral Court, Suite 400
Houston, Texas 77032

1-855-PC1-FOAM
www.polyconspf.com