



Important Health and Safety Information for applying GuardFoam® 55 (High Pressure Delivery Systems)

Studies of high-pressure application of polyurethane foam insulation have shown that applicators can be overexposed to Diphenylmethane Diisocyanate (MDI) vapors and aerosols and other chemical vapors during certain spraying operations. The MDI in the isocyanate component is a skin, eye and respiratory tract irritant. Individuals with asthma or respiratory allergies should not be exposed to the foam component A. Overexposure can cause, among other things, asthma-like symptoms and may lead to sensitization in some individuals resulting in severe allergic respiratory reactions including wheezing, shortness of breath and difficulty breathing. Because of the poor warning properties of the chemicals, varying conditions at jobsites, and the many factors that can affect the level of MDI aerosol/vapor to which an individual in the spray area may be exposed, and lesser exposures from the B side polyol, good ventilation and appropriate Personal Protective Equipment **are required** to assure that applicators and others in the spray area are adequately protected at all times and under varying conditions. Methods of entry of the chemicals are inhalation, ingestion, or eye or skin absorption.

The work zone should be ventilated during spray operations and applicators should position themselves upwind of the spray stream whenever possible. Ventilation should have movement of fresh air in and contaminated air out of the work zone whenever possible. Ventilation is especially important in enclosed spaces such as attics or crawls. It may be necessary to isolate an area to control overspray, with ventilation at one end of the enclosure. Ventilation should be used immediately following completion of application to help dissipate chemical vapors in the air. No other trades or unprotected individuals should be in the home during spray operations and for 12 hours following completion of spray application. Residents should not move back into a home for at least 24 hours after spraying has been completed.

For all high pressure spray applications Guardian recommends the following Personal Protective Equipment (PPE): a supplied air respirator (SAR) with a hood (or full face-mask), chemical resistant butyl or nitrile gloves, an approved chemical resistant disposable suit, and workboots. The PPE should be worn while attaching or removing hoses or anytime a spray leak could occur. .

Employers who have employees wearing a respirator must comply with OSHA's Respiratory Protection Standard 1910.134. The standard requires a written Respiratory Protection Policy outlining steps taken to protect employees from overexposure to respiratory hazards, employee training, medical clearance for each employee who will wear a respirator on the job, annual fit-testing for tight-fitting respirators (dust mask, half-face or full-face respirator), cartridge use log if cartridges are used, and user seal check each time a tight-fitting respirator is worn. (Fit testing and user seal are not required with the hoods). Medical clearance is required for any individual wearing any type of respirator with the exception of employees who wear a dust mask respirator voluntarily (when not required). A doctor or occupational clinic provider with knowledge of the OSHA requirements can perform a medical clearance examination. Some vendors have an on-line medical clearance program. 3M has an on-line medical clearance program available at www.respexam.com.

Customers who will receive start-up training from Guardian are required to purchase the Start-up Safety Kit containing recommended Personal Protective Equipment for two employees. Employees to be trained in the spraying technique must have medical clearance to wear a respirator prior to the training date. (If facemask respirators will be worn in place of the hoods provided, the customer must also provide written verification that OSHA required fit testing will be completed prior to training).

MSDS sheets must be available to employees while working at jobsites and should be kept in the truck with a First Aid Kit, eye wash solution, Fire extinguisher and emergency contact information. Hot work should not be allowed near exposed foam. Products of combustion include smoke and gases that may be irritating, flammable, and/or toxic. If a fire occurs and cannot be extinguished immediately, evacuate the area.

For more information please check the GuardFoam55 Material Data Safety Sheets (MSDS) available at www.guardianbp.com (under Guardian Brand Products). Additional resources are available at www.spraypolyurethane.org. There is also information at www.sprayfoam.org, www.OSHA.gov and www.americanchemistry.com/polyurethane.



OSHA Requirements for a Respiratory Protection Program-29 CFR 1910.134 (c)
1910.134(c)

Respiratory protection program. This paragraph requires the employer to develop and implement a written respiratory protection program with required worksite-specific procedures and elements for required respirator use. The program must be administered by a suitably trained program administrator. In addition, certain program elements may be required for voluntary use to prevent potential hazards associated with the use of the respirator. The Small Entity Compliance Guide contains criteria for the selection of a program administrator and a sample program that meets the requirements of this paragraph. Copies of the Small Entity Compliance Guide will be available on or about April 8, 1998 from the Occupational Safety and Health Administration's Office of Publications, Room N 3101, 200 Constitution Avenue, NW, Washington, DC, 20210 (202-219-4667).

1910.134(c)(1)

In any workplace where respirators are necessary to protect the health of the employee or whenever respirators are required by the employer, the employer shall establish and implement a written respiratory protection program with worksite-specific procedures. The program shall be updated as necessary to reflect those changes in workplace conditions that affect respirator use. The employer shall include in the program the following provisions of this section, as applicable:

1910.134(c)(1)(i)

Procedures for selecting respirators for use in the workplace;

1910.134(c)(1)(ii)

Medical evaluations of employees required to use respirators;

1910.134(c)(1)(iii)

Fit testing procedures for tight-fitting respirators;

1910.134(c)(1)(iv)

Procedures for proper use of respirators in routine and reasonably foreseeable emergency situations;

1910.134(c)(1)(v)

Procedures and schedules for cleaning, disinfecting, storing, inspecting, repairing, discarding, and otherwise maintaining respirators;

1910.134(c)(1)(vi)

Procedures to ensure adequate air quality, quantity, and flow of breathing air for atmosphere-supplying respirators;

1910.134(c)(1)(vii)

Training of employees in the respiratory hazards to which they are potentially exposed during routine and emergency situations;

1910.134(c)(1)(viii)

Training of employees in the proper use of respirators, including putting on and removing them, any limitations on their use, and their maintenance; and

1910.134(c)(1)(ix)

Procedures for regularly evaluating the effectiveness of the program.

1910.134(c)(2)

Where respirator use is not required:



1910.134(c)(2)(i)

An employer may provide respirators at the request of employees or permit employees to use their own respirators, if the employer determines that such respirator use will not in itself create a hazard. If the employer determines that any voluntary respirator use is permissible, the employer shall provide the respirator users with the information contained in Appendix D to this section ("Information for Employees Using Respirators When Not Required Under the Standard"); and

1910.134(c)(2)(ii)

In addition, the employer must establish and implement those elements of a written respiratory protection program necessary to ensure that any employee using a respirator voluntarily is medically able to use that respirator, and that the respirator is cleaned, stored, and maintained so that its use does not present a health hazard to the user. Exception: Employers are not required to include in a written respiratory protection program those employees whose only use of respirators involves the voluntary use of filtering facepieces (dust masks).

1910.134(c)(3)

The employer shall designate a program administrator who is qualified by appropriate training or experience that is commensurate with the complexity of the program to administer or oversee the respiratory protection program and conduct the required evaluations of program effectiveness.

1910.134(c)(4)

The employer shall provide respirators, training, and medical evaluations at no cost to the employee.