



Pests and Pesticides in Child-serving Facilities: An IPM Newsletter

Special points of interest:

> [EPA's Spray Polyurethane Foam \(SPF\) Web Page](#)

EPA's Spray Polyurethane Foam (SPF) Web Page

Submitted by Karen M. Vail

Content from EPA's Web page on spray polyurethane foam (SPF) is provided below. More information on SPF is also found on this Web site at http://www.epa.gov/dfepubs/projects/spf/spray_polyurethane_foam.html. School personnel using SPF should use best practices when applying this material.

Spray polyurethane foam (SPF) is a widely used and highly-effective insulator and sealant; however, eye, skin, and inhalation exposures to its key ingredient, [isocyanates](#), and other [chemicals in SPF products](#) of concern in vapors, aerosols, and dusts during SPF installation can cause:

- Asthma, a potentially life-threatening disease
- Lung damage
- Respiratory problems and other breathing difficulties
- Skin and eye irritation
- Other potential adverse health effects

Information on these Web pages is aimed at helping to ensure the safety of SPF applicators and building occupants where SPF is installed. It is also aimed at providing safety and scientific information to professionals in business, non-governmental organizations, academic institutions, and regulatory agencies.

Steps to Control Exposures

Safe work practices should be in place to [avoid exposure at every stage of SPF installation](#). Building occupants and other trade workers not involved in the SPF installation should vacate the premises during installation of various [types of SPF products](#) in consultation with the contractor.

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This issue

EPA's Spray Polyurethane Foam (SPF) Web Page 1

Links 4

EPA's Spray Polyurethane Foam (SPF) Web Page Continued

To prevent [chemical exposures](#) during and after installation, SPF applicators and helpers should use "best practices" based on the [type of SPF product](#) applied as recommended by the manufacturer, including:

- Review product ingredients and use information, such as material safety data sheets (MSDSs)
- Vacate building occupants and other trade workers who are unprotected
- Isolate the work site
- Wear prescribed personal protective equipment
 - Chemical resistant (nitrile) gloves
 - Appropriate respirator
 - Chemical resistant clothing
- Ventilate the work site

[Clean](#) the area thoroughly before re-entry of unprotected workers or occupants

These "best practices" are a starting point to help professional applicators use SPF products more safely; this Web site will be updated with more specifics on "best practices" as EPA develops them. The two-component high-pressure kit is a professional system and should only be used by a trained applicator. Homeowners who decide to conduct a do-it-yourself project using the two-component low-pressure kit or the one-component can of spray foam should use the same safe work practices, techniques, and precautions that professionals would use. Read more information on the [types of SPF products and applications](#) and read the material safety data sheet and product information for proper procedures and appropriate protection specific to each type of application.

Building Occupants and Other Workers Should Vacate During SPF Installation

During SPF installation, other trade workers and building occupants should vacate the premises. Re-entry should be restricted until the building has been adequately ventilated and thoroughly cleaned.

Building occupants and unprotected trade workers in buildings where SPF is being installed could be exposed both through their skin and through inhalation to residual vapors, aerosols and dust particles generated during the SPF installation process.

People who enter a building after SPF has been installed could be exposed to residual vapors from "uncured" foam and possibly dust particles bearing isocyanates if the foam was cut or disturbed and if adequate building ventilation and cleaning did not occur prior to re-entry.

"Curing" of SPF means that the chemicals in the product are reacting to produce polyurethane foam. Initially the foam surface will harden or become "tack-free." However, at this stage, the interior of the foam is still curing and still contains unreacted SPF chemicals. Manufacturers estimate that it can take 23-72 hours after application for the foam to fully cure for the two-component high pressure "professional" SPF system. Read the manufacturer's recommendation for this and other [types of SPF products and applications](#) in the material safety data sheet and other product information.

EPA's Spray Polyurethane Foam (SPF) Web Page Continued

The curing time (complete reaction) varies depending on the product formulation, applicator technique, foam thickness, temperature, humidity and other factors. Cutting or trimming foam before it is fully cured may cause exposure to unreacted SPF chemicals.

When is it Safe to Re-Enter after SPF Installation?

It is not clear how much time is needed before it is safe for unprotected workers or building occupants to re-enter. Some manufacturers recommend 23 to 72 hours, but re-entry time is dependent on product formulation and other factors that affect the foam curing time. To determine a safe re-entry time for unprotected applicators, helpers, other workers, and building occupants, such as homeowners and school children, decision-makers should exercise caution. Homeowners, school administrators, and building managers should consult their SPF contractor for specific guidance. In the event that home or building occupants have concerns that they may be exposed to residual SPF chemicals or continue to smell odors, they should contact their contractor to ensure proper procedures and clean-up were followed. If their concerns are not resolved, homeowners or building occupants should contact their local or state consumer protection office or their local or state licensing board for contractors. Consumers can also file an online [Consumer Product Incident Report](#) with the U.S. Consumer Product Safety Commission.

Be Aware of Potentially Misleading Marketing Claims

Some advertising claims for SPF do not clearly indicate that these products contain hazardous chemicals. Marketing claims that ignore the presence of isocyanates and other toxic chemicals in SPF insulation mask the need for safe work practices. Read more about [chemicals in SPF products](#). Misleading marketing information can result in spray foam applicators and home and building owners not understanding the need for adequate personal protective equipment and other precautions, such as ventilation, during and after installation. Read more about steps to [avoid exposure at every stage of SPF installation](#).

The Federal Trade Commission (FTC) issued its Guides for the Use of Environmental Marketing Claims, commonly known as the "[Green Guides](#)," to help marketers avoid making environmental claims that are unfair or deceptive under Section 5 of the [FTC Act](#). Also relevant are sections 6 and 9. For consumers, the FTC has issued two brochures, "[Sorting out 'Green' Advertising Claims](#)" and "[Eco-Speak: A User's Guide to the Language of Recycling](#)." For businesses, the FTC has issued a brochure, "[Complying With the Environmental Marketing Guides](#)."

UT YEAH Contact Information:

Karen Vail, Ph.D., Professor,
 Urban IPM Specialist, UT Extension
 205 Ellington Plant Sciences Bldg.
 2431 Joe Johnson Drive
 Knoxville, TN 37996-4560
 ph: (865) 974-7138
 fax: (865) 974-4744
 email: kvail@utk.edu
 web: <http://schoolipm.utk.edu>
<http://eppserver.ag.utk.edu/personnel/Vail/vail.htm>



Martha Keel, Ph.D., Professor
 Housing & Environmental Health Specialist,
 UT Extension
 218 Morgan Hall
 ph: (865) 974-8197
 fax: (865) 974-5370
 email: mkeel@utk.edu
 web <http://utyeah.utk.edu>

James P. Parkman, Ph.D.
 Former UTIA IPM Coordinator
 205 Ellington Plant Sciences Bldg.
 ph: (865) 974-7135
 fax: (865) 974-4744
 email: jparkman@utk.edu

Mary Rogge, Ph.D., Assc. Professor
 UT College of Social Work
 225 Henson Hall
 ph: (865) 974-7500
 fax: (865) 974-4803
 email: mrogge@utk.edu

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**Comments or questions
 on this newsletter?
 Contact kvail@utk.edu**

For more information about IPM in Tennessee schools and other facilities, or to view past issues of *Pests and Pesticides in Child-serving Facilities*, please visit schoolipm.utk.edu or utyeah.utk.edu

NATIONAL IPM INFORMATION

eXtension's Pest Management In and Around Structures: Urban Integrated Pest Management
<http://www.extension.org/Urban%20Integrated%20Pest%20Management>

National School IPM
schoolipm.ifas.ufl.edu/

IPM in Schools Texas
schoolipm.tamu.edu/resources.htm

IPM Institute of North America
www.ipminstitute.org/

School IPM PMSP—all schools IPM by 2015
http://www.ipminstitute.org/school_ipm_2015.htm

National Pest Management Association IPM
www.whatisipm.org/

EPA schools
www.epa.gov/pesticides/ipm/schoolipm/index.html

For further information about the IPM program at your school or in your county, contact your county Extension Agent or the school IPM Coordinator. For county agent contact information, please visit www.agriculture.utk.edu/personnel/districts_counties/default.asp

Precautionary Statement

To protect people and the environment, pesticides should be used safely. This is everyone's responsibility, especially the user. Read and follow label directions carefully before you buy, mix, apply, store or dispose of a pesticide. According to laws regulating pesticides, they must be used only as directed by the label.

Disclaimer

This publication contains pesticide recommendations that are subject to change at any time. The recommendations in this publication are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. The label always takes precedence over the recommendations found in this publication.

Use of trade or brand names in this publication is for clarity and information; it does not imply approval of the product to the exclusion of others that may be of similar, suitable composition, nor does it guarantee or warrant the standard of the product. The author(s), the University of Tennessee Institute of Agriculture and University of Tennessee Extension assume no liability resulting from the use of these recommendations.

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