

Fire Safety Alert

Occupational Health Surveillance Program- Massachusetts Department of Public Health
Office of the State Fire Marshal Department of Fire Services



March 2006

Wood Floor Sanders Killed When Floor Finishing Product Catches Fire-Massachusetts

Wood floor finishing can expose workers, building occupants, and homeowners to fire hazards. In Massachusetts, three wood floor sanders died within a 10 month period (September 2004 – July 2005) in two separate fires when the flammable lacquer floor sealer they were using caught fire. The sealer used in these incidents was highly flammable (flash point 9°F/-13°C). All three of the fatally injured workers were Vietnamese immigrants.

Incident 1: Two floor sanders died from burns and two were seriously burned while they were refinishing wood floors in a three-family house. The house caught fire while the workers were applying a lacquer sealer that was ignited by a pilot light in a gas stove. At the time of the fire, windows were closed and no other means of ventilation were being used.

Incident 2: One floor sander died from burns and another received minor burns while finishing wood floors that they installed in a single family house. The house caught fire while the workers were applying a lacquer sealer that was ignited by a pilot light on a gas hot water heater. The heater was located in a closet on the same level of the house where the floors were being finished. At the time of the fire, the front door was open, but windows were closed and no other means of ventilation were being used.



What is the flash point of a liquid?

The flash point is the lowest temperature at which a liquid produces enough vapor to catch fire in the presence of a flame or other ignition source. **The lower the flash point, the more flammable the liquid.** A product's flash point can be found on the *Material Safety Data Sheet* (MSDS), or product label or by calling the product manufacturer.

HOW CAN YOU HELP PREVENT FIRE DURING FLOOR FINISHING?

Use less flammable wood floor finishing products (products with flash points greater than 100°F/38°C) for indoor applications.

Extinguish all open flames and other ignition sources before beginning work.

- Extinguish gas appliance pilots (on stoves, hot water heaters, heating units, clothes dryers, and other appliances).
- Turn off and unplug cycling electrical appliances (such as refrigerators, air conditioners, heating units, hot water heaters) and other electrical devices.
- Do not light or smoke cigarettes while you are working.
- Do not turn light switches on or off during the floor finishing process; turn off power to work area, if possible.

Adequately ventilate work areas during wood floor finishing.

- Open windows; keep open during product application until product is dry.
- If electric fans are used for ventilation, they must be classified as *explosion proof* and be plugged in outside of the work area.

In addition, employers should:

Provide safety training to employees, as required by law,* about the hazards of the chemicals they work with and safe work practices. Training should be provided in the languages spoken by employees.

*The Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200).

Conduct a job hazard analysis before each job. Also require employees to complete a safety checklist before beginning each job.

Before starting floor finishing jobs, employers should get information on manufacturer's safety recommendations for all products being used, ignition sources in the house and how to keep the work area ventilated. This information should be part of the safety checklist given to the work crew before going to the work site. Employers should make sure that the safety checklist has been completed before anyone starts work.



The Massachusetts Department of Public Health (MDPH), in cooperation with the National Institute for Occupational Safety and Health, conducts research oriented investigations of fatal work related injuries. The project, known as FACE (Fatality Assessment and Control Evaluation), seeks to identify the factors that contribute to these occupational fatalities. This alert was developed by the Massachusetts FACE Project in collaboration with the Office of the State Fire Marshal.

Please share this alert with others. This document is in the public domain and may be copied freely: it can be found along with other materials on the MDPH website at www.mass.gov/dph/bhsre/ohsp/ohsp.htm. If you have comments or questions, please call the FACE Project at 1-800-338-5223 or the Office of the State Fire Marshal at 877-9NO-FIRE.

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Some Massachusetts Health and Safety Resources

Massachusetts Division of Occupational Safety:

Offers free consultation services to help employers to improve their safety and health programs and train employees (www.mass.gov/dos/consult/index.htm)

Massachusetts Department of Industrial Accidents:

Has grants available for providing workplace health and safety training to employers/employees in companies covered by the Massachusetts Workers' Compensation Insurance Law (www.mass.gov/dia/Safety/index.htm)

Office of the State Fire Marshal:

Works to preserve life and property from fire and explosion by prevention, engineering, education, and enforcement (www.mass.gov/dfs/osfm/exec/index.htm)

Occupational Safety and Health Administration (OSHA):

Hazard Communication Standard (29 CFR 1910.1200) (http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10099)