

Hazard Advisory: Floor Coatings

Explosion kills man

A floor-

The victim was one of two men working in the basement. He was applying a coat of sealant to the floor when the b

-worker was upstairs talking to the

the explosion. (12 July 2000)

Over the last five years, several workers have died and many have been critically injured while applying coatings to floors in basements.

Most coatings contain petroleum products and are extremely flammable. When rolled or sprayed on, the coatings can create an atmosphere that poses the risk of flash fire or explosion if ignition sources are present.

Many coatings are also toxic and may cause respiratory problems if inhaled.

Controls are necessary to prevent and protect against hazardous levels of contaminants building up when adhesives, sealants, and other floor laying and finishing products are applied in residential basements.

Substitution

One approach involves substitution. For example, exchange a flammable product for a less flammable one—or eliminate flammable products from the process altogether.

WHMIS

The Workplace Hazardous Materials Information System (WHMIS) legislates safeguards. Employers are required by law to ensure that manufacturers' labels and material safety data sheets (MSDSs) are available for controlled products such as adhesives and coatings and that workers are instructed in their use.

Workers must be trained to read labels, follow MSDS instructions, and work safely with floor laying and finishing products. The MSDS will specify protective equipment such as gloves or respirators that must be worn when using the product.

Ignition Sources

When working with flammable products, ensure that all ignition sources have been eliminated or

locked out in the work area. Ignition sources can range from sparks and hot surfaces to pilot lights and smoking materials.

Confined Spaces

Other controls are based on regulated procedures for entering and working in confined spaces.

An unventilated residential basement where a flammable sealant is being applied qualifies under the law as a confined space. A space is "confined" when entry or exit is restricted and the atmosphere is hazardous.

Entry and work in confined spaces requires special precautions. For instance, before applying a floor sealant in a basement, determine whether any hazardous conditions are present:

- lack of air movement
- unventilated space
- sealant vapours heavier than air.

For floor laying and finishing in residential basements, the most effective controls are testing, ventilation, and monitoring.

- 1) A competent worker must test the basement atmosphere to determine that it's not toxic, oxygen-deficient, oxygen-enriched, or flammable.
- 2) If the atmosphere is hazardous, open doors and windows and, if necessary, use exhaust ventilation to clear the air.
- 3) The atmosphere must be continuously monitored as long as people are working there.

If the atmosphere cannot be adequately ventilated, then other, more stringent measures must be applied. These are spelled out in the construction regulation (O. Reg. 213/91), Sections 60-63.