

Fire Safety Around Spray Polyurethane Foam

Spray polyurethane foam (SPF) is an effective insulation and air sealant material, and its use is on the rise as a result of the “green building” movement. Despite its energy-saving benefits, there are fire hazards when performing hot work around the areas where it is installed.

OSHA defines hot work as “riveting, welding, flame cutting or other fire or spark-producing operation.” When performing one of these tasks around SPF, take the following precautions to prevent a fire.

Provide a thermal barrier for unprotected SPF.

When exposed to a fire source, SPF may ignite in a flash fire. When SPF begins to burn, a thin layer of less-flammable surface char forms, creating black smoke. If the fire grows and the temperature of the SPF exceeds 700° F, the SPF will actually fuel the fire.

Thermal barriers help reduce the risk of a flash fire and increase the amount of time a fire would take to ignite unprotected SPF. Examples of thermal barriers include gypsum drywall, cement plaster and spray-on cellulose and cementitious materials. Fire blankets or welder’s blankets may also be used in certain situations.

Wear the proper PPE.

Exposure to SPF can cause adverse health effects such as asthma, lung damage, other respiratory and breathing problems, and skin and eye irritation. When working around SPF, proper personal protective equipment (PPE) includes chemical-resistant gloves, safety goggles, a respirator and full body suits with an applicator hood. When SPF ignites, it can release isocyanates, hydrogen cyanide, amines and other toxic chemicals into the air.

A poorly fitted piece of protective equipment can cause headache or pain. If it does, see your supervisor immediately to have it adjusted or re-fitted. Wearing the proper PPE may take some getting used to at first, but remember that it could save your life against the harmful effects of SPF.

Know what to do if there’s a fire.

We never anticipate a fire on the jobsite, but it’s important to know the procedure if SPF ignites.

- Know where the fire extinguisher is located. If there is not one already present on the jobsite, we will provide one. If a fire cannot be immediately extinguished with a fire extinguisher, evacuate the site.
- Know the pathway to at least two alternative exits from every room or area at the jobsite.
- Know the Fire Prevention Plan. 4. Other considerations when working with SPF
- No smoking on the jobsite.
- Be aware of any hot work warning signs posted in the area.

As always, speak with your supervisor if you have any questions about working around SPF.

