

September 2022

## Working Safely on Supported Scaffolds

Always follow these safe work practices when working on supported scaffolds:

- Do wear a hard hat to protect yourself from falling hand tools, debris, and other objects. Your employer should also provide additional protection from falling objects such as a canopy structure, a debris net, or toe boards along the edge of scaffold platforms.
- Do keep tools and materials away from the edge of the platform to prevent them from falling to lower levels.
- Do keep walkways free of tools, debris, and other clutter to prevent trip and fall hazards.
- Don't climb the cross braces of a scaffold; always use designated ramps, ladders, and walkways to move about on the scaffold.
- Don't work from a scaffold that has not been properly erected under the supervision of a qualified person.
- Don't engage in horseplay on a scaffold.
- Don't stand on boxes, barrels, or other items to reach a higher working height.
- Don't work on a scaffold that is covered with snow, ice, or other slippery materials unless you are removing these materials.
- Don't work from a scaffold during a storm or in high wind conditions unless a competent person has determined that it is safe, and you are protected with a personal fall arrest system or a wind screen.



## Hydrogen Sulfide—Exposure Dangers and Safety Practices

Hydrogen sulfide is a gas and is most dangerous when inhaled. Inhaling very large amounts of hydrogen sulfide can quickly cause respiratory paralysis, loss of consciousness, and death. Hydrogen sulfide is produced naturally from decaying organic matter and can be released from sewage sludge, liquid manure, and sulfur hot springs, as well as with natural gas. It is also used in or is a byproduct in many industrial processes including petroleum production and refining; sewer and wastewater treatment; agricultural silos and pits; textile manufacturing; pulp and paper processing; food processing; hot asphalt paving; and mining.

Inhaling very large amounts of hydrogen sulfide can quickly cause serious health problems. Symptoms of overexposure to hydrogen sulfide can include:

- Headache and dizziness
- Confusion
- Decreased coordination
- Visual disturbance
- Nausea
- Drowsiness
- Eye, nose, and throat irritation
- Breathing difficulties

Prolonged exposure, even at lower levels, may lead to respiratory problems, appetite and weight loss, and headache. Hydrogen sulfide is not believed to accumulate in the body. Skin contact is not generally a problem with gases, though prolonged or major exposure could cause dermatitis.

Proper protective clothing is essential when working with hydrogen sulfide. Here's what you need to do.

- Always read, if applicable, the hydrogen sulfide's safety data sheet (SDS) to identify the particular type of protection you need, such as gloves, clothing, or eye protection.
- Because hydrogen sulfide is a serious inhalation hazard, workers at risk of exposure at or above permissible limits must use a self-contained breathing apparatus (SCBA) for protection.
- Inspect all PPE before you use it and remember to clean or dispose of PPE properly when you finish using it.

Hydrogen sulfide is a colorless gas that smells like rotten eggs. But because exposure to hydrogen sulfide can make you unable to recognize the smell, you can't depend on its odor to warn you. So be aware of any tasks or locations that could present exposure to hydrogen sulfide.

It's important to follow all applicable OSHA and company rules and procedures to avoid exposure to hydrogen sulfide. To avoid inhalation of hydrogen sulfide:

- Use all assigned respirators.
- Be sure ventilation where you are working is adequate.

Don't attempt to rescue anyone exposed to hydrogen sulfide unless you are trained and equipped to do so. Anyone who inhales hydrogen sulfide should immediately get to fresh air and get medical attention.

## Drill Press Safety

### Machine Preparation and Setup

- Select the proper drill bit for the job, and make sure it is not dull. The size of the bit must be equal to or less than the capacity of the drill press.
- Insert the drill bit into the chuck and tighten it securely using the chuck key. Before starting the drill press, remove the chuck key to prevent it from being thrown from the machine.
- Make any necessary adjustments to the equipment with the power shut off
- Place a backer board underneath the stock you are drilling and use a clamp or vise to secure the stock to the drill press table.

### Working Safely

- When drilling long stock, place the excess to your left so that if the stock rotates with the machine, it will hit the machine rather than hitting you.
- Keep hands and fingers clear of rotating drill bits.
- Never remove or try to bypass any machine guards or protective features of the machine.
- Do not exceed the recommended speeds for the type and size of the drill bit.
- Raise the bit out of the hole often as you work to clear chips from the hole and allow the drill bit to cool down.
- When you begin to break through the underside of the stock, ease up on the feed pressure to avoid tearing the material.
- Never reach around or under a rotating drill bit or try to stop the rotation of the drill press by hand.



In addition to being an inhalation hazard, hydrogen sulfide is flammable and explosive. Follow these steps to avoid such occurrences:

- Keep hydrogen sulfide away from heat, flame, sparks, or any ignition sources.
- Keep hydrogen sulfide away from oxidizers that could cause dangerous reactions.
- Do not smoke in the vicinity of hydrogen sulfide.
- Read labels and SDSs carefully for storage and handling instructions.

## Fire Prevention – Trash Talk

Trash and debris are some of the most easily ignited materials. To eliminate a fire hazard, you don't have to eliminate trash altogether. There are many easy ways to protect against the hazards that trash may cause.

Follow these tips provided by fire safety experts:

- Keep spaces and storage areas uncluttered, and empty trash cans as they fill up. Remove all garbage at the end of every working day and transfer it to outdoor trash containers.
- Cover outdoor trash containers, such as Dumpsters, and keep them away from buildings.
- Throw away oily rags in an approved covered metal oily waste container. Waste must be stored, labeled, and disposed of in compliance with local, state, and federal regulations.
- Avoid throwing out materials like rubber, foam plastic, aerosol containers, and PVC wiring insulation that could produce toxic or corrosive fumes when they burn.
- Don't allow paper and other trash to gather outside of garbage or recycling receptacles, and never store this material near hot equipment, electrical outlets, or smoking areas.
- Don't place outdoor trash containers against a wall unless it is fire-resistant.
- Don't place combustible materials such as paint thinners, acetone, propane tanks, gasoline containers, used motor oil, automotive batteries, or appliances in Dumpsters.
- Don't smoke near trash receptacles. Put out smoking materials properly and throw them away in designated areas.

HYDROGENLR  
SCAFFOLDSE  
USPSSOFRDL  
PREVENTION  
PEIFAELRP  
ORFDFLILFE  
RREFURPLFC  
TSUSRPTSG  
EFCSSDSDAI  
DYPUDVP IOL

supported  
scaffolds  
hydrogen  
sulfide  
drill  
press  
fire  
prevention

## Solvents—Fire and Spill Prevention: QUIZ

1. The flash point is the highest temperature at which a liquid will give off enough vapors in a high enough concentration so that the vapors can be ignited. TRUE or FALSE.

2. A low flash point indicates a more flammable solvent. TRUE or FALSE.

3. Solvents are considered flammable when they have a flash point of less than \_\_\_\_ degrees Fahrenheit.

A. 80

B. 90

C. 100

D. 110

4. Which of the following are best practices for preventing fires when using solvents? Choose all that apply.

A. Use solvents only in well-ventilated areas.

B. Keep solvents away from ignition sources.

C. Keep solvent containers opened when not in use.

D. Be careful with empty solvent containers.



## Fire Prevention—Trash Talk: QUIZ

1. Trash and debris are some of the most easily ignited materials. TRUE or FALSE.

2. To eliminate a fire hazard, you must eliminate trash altogether. TRUE or FALSE.

3. Which of the following materials can produce toxic or corrosive fumes when they burn? Choose all that apply.

A. Rubber

B. Foam plastic

C. Paper

D. Aerosol containers

4. Which of the following are combustible materials? Choose all that apply.

A. Acetone

B. Cardboard

C. Paint thinners. Propane tanks

### ANSWERS

1. TRUE. 2. FALSE. 3. A., B., D. 4. A., C, D.

## Solvents—Fire and Spill Prevention

### Fire Prevention

**Flash Point.** Whether a solvent is likely to cause a fire depends on the solvent's flash point. Here's what you need to know:

- The flash point is the lowest temperature at which a liquid will give off enough vapors in a high enough concentration so that the vapors can be ignited.
- A low flash point indicates a more flammable solvent. For example, acetone has a flash point of 50 degrees Fahrenheit, which means that the solvent vapors could easily ignite and burn at room temperature. A solvent with a high flash point (e.g., 300 degrees Fahrenheit) would have to be heated before it would give off enough vapors to be ignited.
- Solvents are considered flammable when they have a flash point of less than 100 degrees Fahrenheit.
- Nonflammable solvents, with flash points above 100 degrees Fahrenheit, are still dangerous. Although they often do not give off enough vapors to be ignited under normal conditions, they will burn easily and readily when heated and ignited.

Be sure to review the safety data sheet (SDS) for each solvent to understand the flash point of the solvent and the fire, explosion, and reactivity hazards. If you're aware of which solvents in the workplace are flammable and could easily start a fire, you will handle them with extra care.

**Fire Prevention Tips.** To prevent fires when using solvents, follow these important steps:

- Use solvents only in well-ventilated areas to prevent the buildup of vapors.
- Keep solvents away from ignition sources, such as flames, sparking tools, hot equipment, exposed electrical wires, and so forth.

## Solvents—Fire and Spill Prevention: ANSWERS

1. **FALSE.** The flash point is the lowest temperature at which a liquid will give off enough vapors in a high enough concentration so that the vapors can be ignited.
2. **TRUE.** A low flash point indicates a more flammable solvent.
3. **C.** Solvents are considered flammable when they have a flash point of less than 100 degrees Fahrenheit.
4. **A., B., D.** Some best practices to prevent fires when using solvents include using solvents only in well-ventilated areas; keeping solvents away from ignition sources; and being careful with empty solvent containers. Solvent containers must be closed when not in use to prevent the buildup of vapors in the area and to protect the solvent from any sparks or other ignition sources.



E	T	M	T	A	I	C	V	N	F	
E	H	V	E	E	V	T	E	C	H	
I	T	F	S	E	S	S	N	N	I	solvents
E	T	R	A	I	I	P	T	I	N	fire
P	R	E	V	E	N	T	I	O	N	spill
C	H	E	M	I	C	A	L	L	N	prevention
A	T	E	F	F	T	P	A	I	L	car
R	S	O	L	V	E	N	T	S	A	free
T	H	R	E	F	I	R	E	R	L	chemical
E	I	I	E	N	I	E	D	I	T	ventilated

- Never smoke when using or dispensing solvents—or anywhere near areas where solvents are stored.
- Keep solvent containers tightly closed when not in use to prevent the buildup of vapors in the area and to protect the solvent from any sparks or other ignition sources.
- Be careful with empty solvent containers. Although empty, they're still hazardous because they contain air that is saturated with solvent vapors, which means the vapors are concentrated and can burn easily. Never weld on an empty solvent drum. And before reusing a container that once held solvents, be sure it is thoroughly cleaned and ventilated.

### Spill Prevention

Because a sizable spill of some of the more hazardous solvents could be detrimental to your health, start a fire, or contaminate the environment, we must take proper precautions to prevent spills. So:

- Keep solvent containers closed when not in use.
- Inspect containers regularly for corrosion, dents, and other damage, as well as for small leaks.
- Clean up small solvent spills quickly and thoroughly. Large spills should be handled by the emergency response team.
- Be sure all containers, including waste containers, are properly labeled.

### Solvent Waste Disposal

Waste solvents and materials, such as rags contaminated with solvents, must be disposed of properly. Waste solvents should only be put into designated containers for recycling or disposal. Never empty them into storm drains, in sanitary sewers, down sink drains, or in the trash. Soaked rags and other cleanup materials should be put in designated closed containers to prevent fires.



### Chemical Spotlight: Cyclopentanol

Cyclopentanol is a thick, colorless liquid with a pleasant odor. It is used as a solvent and as an intermediate in making perfumes, pharmaceuticals, dyes, and other organic chemicals.

Store Cyclopentanol in tightly closed containers in a cool, well-ventilated area. Cyclopentanol is not compatible with acid chlorides, acid anhydrides, and oxidizing agents. Sources of ignition, such as smoking and open flames, are prohibited where Cyclopentanol is used, handled, or stored in a manner that could create a potential fire or explosion hazard.

If Cyclopentanol is spilled or leaked, avoid breathing vapors, mist, or gas, and ensure adequate ventilation. Remove all sources of ignition and evacuate personnel to safe areas. Use personal protective equipment (PPE), including goggles or safety glasses, gloves, flame-retardant protective clothing, and respiratory protection.

Prevent further leakage or spillage if safe to do so, and do not let the product enter drains, sewers, underground or confined spaces, groundwater, or waterways or discharge into the environment. Absorb liquids in vermiculite, dry sand, earth, or a similar material, and deposit in sealed containers. Ventilate and wash the area after cleanup is complete. It may be necessary to contain and dispose of Cyclopentanol as a hazardous waste. Contact the federal and local Environmental Protection Agency (EPA) for specific recommendations.