

Paints and Solvents

GENERAL DISCUSSION

Did you know that construction workers have been pulled over for drunk driving when they really haven't been drinking at all?

It can happen when they are intoxicated from paints or solvents on the job. Everyone knows that some paints and solvents are dangerous because they are highly flammable, but you may not realize how dangerous it can be to breathe their vapors. Just like alcohol, paint or solvent vapors can make you lose your coordination and cause accidents. Over a period of time, they can also destroy your liver and other body organs. You or a crewmember may want to add a personal story about paints or solvents.

Next, discuss with the crew what jobs and equipment may cause hazards at this particular job site:

Ask the Crew these Questions

After each question, give the crew time to suggest possible answers. Use the information following each question to add points that no one mentions.

1. What symptoms might warn you that you've had too much exposure to paint or solvent vapors?

- Dizziness
- Lack of coordination
- A lightheaded feeling
- Trouble concentrating

2. If you don't have these warning signs, does it mean that there's no problem?

- No. With some paints and solvents, even a small exposure over a long period of time can permanently damage your liver, kidneys, and nervous system (including the brain).

- If your exposure is high enough (such as in a confined space), some paint and solvent vapors may cause immediate coma or death.
- Paints, even some used today, may contain lead. Lead is highly toxic and can cause anemia, kidney damage, brain damage, and reproductive problems. (Lead is covered in more detail in a separate Training Guide.)

3. Are vapors the only health hazard of paints and solvents?

- No. Some chemicals can also damage the skin. Your skin may become dry and cracked, or you may get a rash or burn. Other chemicals can go right through the skin and get into your bloodstream. Certain chemicals do both.

4. Some products are more hazardous than others. How can you find out what specific chemicals are in a product, and what their effects might be?

- Don't open the container until you've found out what's in the product and what the hazards may be.
- Check the label. You may find a list of ingredients, a safety warning, or both. All containers must be labeled, or a labeled container must be in the immediate area.
- Read the Material Safety Data Sheet (MSDS) for the product. MSDSs are required by law, and everyone working on the site has a right to see them.

MSDSs are covered in more detail during basic Hazard Communication training, which everyone on the crew should already have completed.

5. What can the MSDS tell you about a product?

- The hazardous ingredients in the product and the safe exposure level for each one. OSHA has set permissible exposure limits (PELs) for many hazardous chemicals. The company has to keep your exposure below these limits.
- The flammability of the product, and fire prevention measures you need to take.
- What kinds of personal protective equipment you need (like a respirator or gloves).
- The volatility of the product (the likelihood that vapors will get in the air).
- How to store the product safely. For example, some products should be stored away from heat, light, or water. Some should never be stored near other products with which they could have a chemical reaction. (These are called incompatible chemicals.)

- How to dispose of the product safely. For example, some products should never be dumped into the drain or sewer.

On this job, you can get MSDSs from give the name and location of the person to see:

Let's look at the labels and MSDSs for some products we use on the job.

Show the crew the sample product containers and MSDSs you brought to the meeting. Explain them briefly.

6. What are some ways to protect yourself from toxic paints and solvents?

- Use a safer product if possible. Some products are much less hazardous than others.
- Work in a well-ventilated area if you can. A fan or open door may not be enough. If you're working outdoors, try to stay upwind from paint and solvent vapors.
- Stop what you're doing if you notice symptoms. You may need to change the way you're doing the work, or wear protective equipment (like a respirator or gloves).
- Use a respirator. If you need one, we must provide the right type of respirator, make sure it fits, teach you how to use it, and give you a physical to make sure you are able to wear it safely.

If required, respirators are available at:

- Keep paints and solvents off your skin and out of your eyes. If necessary, wear gloves and goggles. If you do get paints or solvents in your eyes, flush with water for 15 minutes. Never wash your hands or clothing with hazardous solvents.
- Don't eat, drink, or smoke on the job. Chemicals could have contaminated anything you put in your mouth. Wash up first.

7. How do you prevent fires and explosions when working with flammable liquids?

- Read the label and MSDS to find out what special precautions to take.

- Don't smoke.
- Avoid heat and sparks for example, from sparking power tools.
- Keep flammable liquids away from rags and other materials that might ignite.
- Bond and ground the containers when you transfer flammable liquids.
- Store flammables in tightly closed, approved containers or metal storage cabinets.
- Keep fire extinguishers readily available, and make sure they are the right type. Different fire extinguishers are needed for different kinds of fires.

OSHA Regulations

OSHA requires most of the safety measures we've talked about. We have to take these precautions, it's the law. I have a Checklist of the OSHA regulations on paints and solvents. If you'd like to know more, see me after the meeting.

Company Rules

Besides the OSHA regulations, we have some additional company rules about paints and solvents.

Discuss company rules

Comments from the Crew

Ask: Do you have any other concerns about paints & solvents? Do you see any problems on our job? (Let the steward answer first, if there is one.) What about other jobs you've worked on? Have you had any experience with paints & solvents that might help us work safer on this job?

GENERAL SAFETY REVIEW

This is a time to review all safety concerns, not just today's topic. Keep your notes on this page before, during and after the safety meeting.

Are you aware of any safety hazards from any other crews? Point out any hazards other crews are creating that this crew should know about. Tell the crew what you intend to do about those hazards.

Do we have any other safety business? Discuss any past issues or problems. Report any progress of investigations and action taken.

Have there been any accidents, near misses or complaints? Discuss any accidents, near misses, and complaints that have happened since the last safety meeting. Also recognize the safety contributions made by members of the crew.

Please remember, we want to hear from you about any health and safety issues that come up. If we don't know about problems, we can't take action to fix them.

ENDING THE MEETING

Circulate Sign-Off Form.

Assign one or more crew member(s) to help with next safety meeting.

Refer action items for follow-up. (Use the sample Hazard Report Form in the Reference Section of this binder, or your company's own form.)

Do you have any Safety Recommendations?

Do you have any Job Specific Topics you would like us to discuss?

Have you reviewed the M.S.D.S Sheet for this safety topic?

Yes____ No____ N/A____

Comments

SAFETY TALK REVIEW

Hazard Identification

- The company has a written Safety and Health Program that meets all OSHA requirements. It includes identification of hazards from paints or solvents on the site, regular inspections, accident investigation, and correction of hazardous conditions.
- Air monitoring has been done in work areas where exposure to vapors may exceed OSHA permissible exposure limits (PELs) for specific toxic substances.
- Workers have been informed of the results of air monitoring performed on themselves, in their work area, and/or for their trade.
- If air monitoring found any exposure exceeding the PEL, engineering, administrative, and work practice changes are used to reduce exposure where possible. Personal protective equipment is used only if other measures are insufficient.

Hazard Communication and Training

- The company has a written Hazard Communication Program.
- All workers have received basic Hazard Communication training.
- Everyone potentially exposed to paints or solvents has received specific training in health effects, safe use, minimizing exposure, personal protective equipment, proper disposal, and emergency procedures.
- All product containers are properly labeled.
- Material Safety Data Sheets (MSDSs) are available on the site for all paint and solvent products used.
- Workers know where to find MSDSs and how to understand them.
- Personnel working in adjoining areas of the job site, including subcontractors, are aware of the work and the hazards.

Work Practices

- No sources of ignition are present where flammable paints or solvents are in use or drying.
- Ventilation is sufficient to prevent dangerous concentrations of flammable vapors and dangerous exposure to toxic fumes and vapors.
- Work practices are used which minimize exposure to paints and solvents.
- If paints or solvents are used in confined spaces, there is a written confined space program and all procedures are followed.
- Workers dispensing flammable liquids use proper grounding and bonding procedures.

Personal Protective Equipment

- If necessary, personal protective equipment (PPE) is provided by the company and worn by workers. The types used are appropriate for the work and give adequate protection.
- Ventilation is adequate to reduce worker vapor exposure to a level below the OSHA permissible exposure limit (PEL). If not, appropriate respiratory protection is worn.
- Respirators are properly stored and maintained.
- The proper types of respirators and cartridges for the work are used.
- The Mine Safety and Health Administration or the National Institute has approved respirators, cartridges, and replacement parts for Occupational Safety and Health.
- Workers who wear respirators have been medically evaluated, fit-tested, and trained.
- If respirators are used on the site, the company has a written Respiratory Protection Program.
- Impermeable gloves of the correct type are worn to prevent skin contact with paints and solvents, except where gloves might become caught in moving parts or machinery. (To determine the appropriate glove for the substance, consult the MSDS for the product, or contact the glove supplier or manufacturer.)
- Full protective clothing (coveralls, etc.) is used to minimize skin contact where necessary.
- Workers use chemical goggles (or equivalent eye and face protection) where there is risk of splashing or spraying into eyes. Eye and face protection meets the requirements of *American National Standards Institute (ANSI) Z 87.1 1979, American National Standard Practice for Occupational and Educational Eye and Face Protection.*

Storage and Transport

- Paints and solvents are stored in approved containers and areas.
- Containers are kept closed when not in use.
- Only closed containers are used for transport or storage.
- Incompatible chemical products (which may cause a hazardous reaction if they come in contact) are not stored together.
- Smoking is prohibited in flammable liquid storage areas.
- Flammable liquids are not stored near sources of ignition (sparks, electricity, flames, or hot objects).
- Where more than 25 gallons of flammable liquids are present in small containers, they are kept in a storage cabinet approved by the National Fire Protection Association (NFPA).

- Indoor storage areas for flammable liquids are ventilated and have one clear aisle, at least three feet wide.
- Flammable liquids stored outdoors are at least 50 feet from the property line and 10 feet from any public way.
- Outdoor storage areas are graded to divert possible spills away from buildings.
- No flammable liquids are carried with explosives in vehicle cargo space.

Emergency Equipment

- Fire extinguishers of the proper type are readily available wherever flammable liquids are stored, transported, or used.
- Emergency showers and eye wash stations are available on the site.

Cleanup and Disposal

- Appropriate cleanup materials are available for leaks or spills.
- Leftover products and waste are properly stored, labeled, and disposed of according to the instructions on the product's MSDS.
- Workers do not use solvents to clean hands or clothes.
- Flammable liquids are not used to wash floors, walls, ceilings, structural members, furniture, equipment, machines, or machine parts unless ventilation is provided.
- Flammable liquids are not sprayed for cleaning purposes, unless used (1) in a ventilated spray booth, or (2) outdoors in an open shed with no ignition source within 25 feet.