Working Safely With Solvents Meeting Kit



WHAT’S AT STAKE

Solvents are so common in many workplaces that workers forget how dangerous they are. A solvent can be generally described as a substance—usually, a liquid—that is used to dissolve another substance. Solvents are found in a variety of products including cleaners, paints, floor polishes, and printer ink.

WHAT’S THE DANGER

DANGERS OF WORKING WITH SOLVENTS – ADVERSE AFFECTS

Because of their volatile nature, anything that could be considered an ignition source, such as smoke or sparks from welding, should be kept away from solvents and the vapors that are produced from them.

- Contact with the skin will cause dryness and cracking. This may lead to skin disorders, most commonly dermatitis. Take extra care with contact with the skin, as some solvents can possibly penetrate the skin and enter the blood circulation.
- Inhaling solvents will cause burning in the nose, throat, and lungs.
- Swallowing or ingesting solvents will burn the throat and affect the digestive system.
- Prolonged exposure to solvents will have overall negative health effects, mainly on the respiratory system, but also on the nervous system, reproductive system, and kidneys.

EXPOSURE TO A SOLVENT HAS ROUTES OF ENTRY

- Absorption by direct contact on the skin: If there are no “barriers” between the solvent and your skin, the solvent can be absorbed through your skin.
- Inhalation by breathing solvent vapors.
- Ingestion: from literally eating the chemical by not practicing good hygiene after handling solvents.
- Direct contact with your hands and mouth through eating or smoking may result in unexpected ingestion of solvents.
- Puncture of the skin by a tool or other object that has a coating of solvent.

HOW TO PROTECT YOURSELF

SAFETY MEASURES WHEN USING SOLVENTS

- Use personal protective equipment such as gloves, eye protection, boots, or any other barriers when working with solvents. Make sure all necessary equipment is provided by an employer if in the workplace.
- Make sure the room is properly ventilated, especially if the workspace is small. Solvents often get into the air through emitted vapors, ventilation is needed to help with air circulation.
- Be informed on what type of solvent you're working with. Familiarize yourself with any safety information and safe handling procedures included.
- Be extra cautious with flammable solvents and keep fire extinguishers readily accessible in any areas in which these solvents are used or stored.
- Train employees on what to do if a spill occurs or an emergency happens.
- Of course, use a safer bio-based solvent alternative whenever possible, so a lot of these additional safety measures can be avoided in the first place.

EMPLOYEES NEED TO KNOW ABOUT WORKING WITH SOLVENTS

One of the most common health hazards associated with exposure to solvents is dermatitis. Contact dermatitis can develop from a single or from multiple exposures. It can leave the skin susceptible to a short-term infection or to a chronic condition. Exposure can also result in sensitization to the solvent, which is a delayed allergic reaction that often becomes more severe with subsequent exposures.

One big danger with solvents is that they can cause trouble before you realize what's happening. Depending on the type and concentration of the solvent, exposure effects can range from mild respiratory irritation to severe damage to body organs and systems. In extreme cases, overexposure to solvent vapors can cause respiratory failure and death.

EMPLOYEES NEED TO DO THIS WHEN WORKING WITH SOLVENTS

- Read the labels and the safety data sheets (SDS) of the solvents. They list the hazards, health effects, and safe handling procedures.
- Use recommended gloves, eye and face protection, boots, barrier creams, or other personal protective equipment as required.
- Take care when pouring solvents from one container to another, as fire or explosions can occur from static electricity buildup.
- Prohibit welding, cutting, soldering, and other sources of ignition in areas where solvents are used.
- Store flammable solvents in well-ventilated areas constructed of fire-resistant materials. Ground and bond all tanks and equipment for storage.
- Install readily accessible fire extinguishers in storage and work areas.
- Clean up solvent spills promptly. Never wash your hands with solvents.
- Be ready to respond in the event of emergencies. These include an employee coming in contact with a solvent or should something catch on fire.
- If possible, consider less-toxic solvent alternatives.

FINAL WORD

There are a lot of different health hazards associated with solvent exposure including but not limited to toxicity to the nervous system, organ damage, respiratory issues, cancer and skin impairment.