

Solvents

What is a Solvent?

A solvent is a liquid that dissolves another substance. For example, solvents can be used to dissolve dirt on machinery. Solvents can dissolve solids, liquids or gases. Many solvents used in industry are classified as organic solvents (petroleum based). These and other solvents can be harmful to you.

What are Solvents Used for?

Solvents are the most widely used group of chemicals and are most often found in **cleaning products** and **degreasers**. They dissolve grease, oils, stains and dirt. Brand names of popular solvents are 'Varsol', 'Zep Stainless Steel Cleaner' and 'Champion Spray on Degreaser.'

How Can Solvents Harm You?

You can be exposed to solvents by breathing them in, or through contact with the skin.

Depending on the level of exposure **all solvents can**

- Irritate the eyes, nose and throat.
- Cause skin problems (dermatitis), including redness, itchiness, scales and blisters
- Cause headaches, nausea, dizziness, drowsiness, weakness, fatigue and confusion

Some solvents can

- Cause allergic reactions (rashes, itchiness)
- Damage the liver, kidney, respiratory and nervous systems.
- Interfere with reproductive health (infertility problems and miscarriage) and harm the unborn child.

Health effects can be greatly increased when alcoholic beverages are consumed at the same time as solvent exposure. Some solvents are also fire hazards, as they catch on fire very easily if there is a spark present.

Other Common Products That Contain Solvents

- paints/paint thinners
- enamels/lacquers
- adhesives/glues
- resins
- furniture strippers
- charcoal lighting fluid
- nail polish removers
- correction fluid (eg., 'White Out')
- dry-cleaning products

What Can Your Employer Do?

Employers are legally responsible for providing a safe and healthy work environment for all of their employees. In workplaces that use solvents, employers must

- ✓ **Use non toxic substitutes** whenever possible. For example, clay or earth can be used to absorb grease instead of a harmful degreaser.
- ✓ **Train employees** in solvent safety. Let workers know about the health hazards solvents can cause. Workers need to know about Material Safety Data Sheets (MSDS's) and how to read them.

- ✓ **Review work practices** - use the lowest quantity or concentration needed. Provide MSDS's for all products used. Provide workers with instructions about proper handling, storage, disposal, and personal protective equipment.
- ✓ **Ventilate the area** - use local exhaust ventilation systems to effectively reduce the solvent fumes. Make sure the exhaust system is spark and explosion resistant if the solvent is a fire hazard (flammable).
- ✓ **Provide personal protective equipment (PPE)** if necessary. Make sure the PPE's are resistant to the solvent used. Provide training on how to wear it properly.
- ✓ **Provide first aid training** and an action plan if there is a spill or accident.

What Can You Do?

- ✓ **Use non toxic substitutes** wherever possible.
- ✓ **Isolate or enclose the solvents.** Try to apply the solvents directly instead of spraying throughout the air. For example, use covered dip tanks instead of sprayers. Cover and store solvents properly. Never pour down drains or toilets.
- ✓ **Read Material Safety Data Sheets (MSDS's) provided and ask questions.** Ask your employer and workplace health and safety committee if you are unsure or need more information about solvents.
- ✓ **Use personal protective equipment (PPE's)** if necessary. Wear gloves, respirators, masks and other protective equipment will help to protect you from breathing in solvents or absorbing them through your skin. Check the Material Safety Data Sheets (MSDS's) to be sure that the equipment is appropriate for the chemicals

you are using.

- ✓ **Avoid sources of ignition** - sparks, flames, cigarettes, pilot lights can all ignite solvents.
- ✓ **Stop using the solvent** and notify your employer if you are experiencing any of the health effects associated with solvent use.

What Can Your Workplace Health and Safety Committee Do?

- ✓ **Work with your employer** to make safer work practices.
- ✓ **Develop a prevention plan** with employer to reduce workers use of and exposure to harmful solvents
- ✓ **Research** non toxic solvent substitutes and newest personal protective equipment (PPE).
- ✓ **Make sure that Material Safety Data Sheets (MSDS's) are available**, and that the workers are able to read them.

For more information please contact:

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