



Solvents @ work

A guide to safeworking practices



Responsible Care

WHAT IS A SOLVENT?

Many chemical substances which are used to dissolve or dilute other substances and materials are called 'solvents'. Industrial solvents are often mixtures of several individual substances. They can be found under a variety of trade names.

WHERE ARE SOLVENTS USED?

You are most likely to encounter solvents if you work in the following industries where they are used extensively:

- Engineering
- Construction
- Chemicals
- Printing
- Rubber
- Plastics
- Footwear
- Textiles
- Foodstuffs
- Pharmaceutical manufacture
- Woodworking
- Dry cleaning
- Paint manufacture
- Ink manufacture

They are also found in many products including:

- Cleaning and degreasing materials
- Paint removers
- Paints, lacquers and varnishes
- Adhesives
- Inks and ink removers
- Pesticides
- Toiletries

HOW CAN SOLVENTS AFFECT MY HEALTH?

Different solvents can affect your health in different ways. Some of the short-term effects are:

- Irritation of eyes, lungs and skin
- headache
- nausea
- dizziness
- light-headedness

Breathing solvent vapours can make you less alert, possibly causing headache and dizziness. These effects may increase your chance of having an accident. Some solvent vapours may cause a sensation of dryness or irritation in the eyes, nose and throat. Exposure to very high concentrations of solvent vapours may result in unconsciousness. It has been claimed that exposure to very high vapour concentrations for several years may cause mild changes in behaviour, affecting mood and memory. The evidence for these claims is uncertain. Repeated skin contact to solvents can cause cracking and dryness.

WHAT PRECAUTIONS SHOULD I TAKE?

- The more you know about solvents and the sensible precautions you should take, the safer you will be. That's why getting information and training is so important.
- Make sure your employer provides you with details of the hazards of the particular solvents you use, the precautions to take when you use them and the procedures to follow in an emergency.
- Read the supplier's safety data sheets and container labels and follow the advice on them. Ask your employer for clarification if you need to.
- Ask if solvent-free materials or safer solvents can be used.

CONTROL OF VAPOURS

- Make full use of any ventilation equipment your employer provides to remove vapours from your work area.
- Report to your employer any damaged or defective ventilation plant or protective equipment.
- Wear any respiratory protection which your employer provides. Keep protective equipment in a clean place. Make sure it is kept clean so it is fit to use.
- Make the most of natural ventilation where appropriate, by opening doors and windows.
- Prevent unnecessary evaporation of solvents by using the minimum amount for the job, keeping lids on containers and using sealed containers for solvent contaminated waste.
- Do not leave solvent contaminated rags lying around.

SKIN CONTACT

- Avoid skin contact with solvents and any products containing solvents by wearing suitable protective clothing (gloves, apron, goggles or face shield etc) where necessary.
- Do not use solvents to remove paint, grease etc from your skin.

OTHER PRECAUTIONS

- Do not eat or smoke in areas where there are solvents.
- Wash thoroughly after working with solvents before eating or smoking.
- Do not smoke, weld, burn or use any naked lights in areas which may contain solvent vapour.

WORKING IN CONFINED SPACES

Your employer should have checked if work can be done another way so that entry or work in confined spaces is avoided. Where this is unavoidable, a safe system of work must be followed with adequate emergency arrangements in place. When working in confined spaces special precautions are needed to prevent you from being exposed to solvents. In a confined space like a tank, pit, a small room or inside a vehicle, solvent vapours cannot escape easily and can build up to dangerous and even fatal concentrations very quickly. Beware of a build-up of vapours and gases which could be poisonous, explosive or flammable.

HOW CAN SOLVENTS GET INTO MY BODY?

Different solvents can affect your health in different ways:

Inhalation

If you breathe in vapours and fumes.

Ingestion

If you swallow liquid solvents.

Skin Absorption

If they come into contact with your skin and get absorbed.

WHAT SHOULD I DO IF I THINK MY HEALTH MIGHT BE AFFECTED?

If you believe that your health is being affected through work with solvents, or if you are concerned that adequate precautions are not being taken, you should first approach your supervisor, safety representative or doctor as appropriate. Show them this leaflet.

RECOMMENDATIONS

Do not use any materials containing solvents unless the area is adequately ventilated and, where necessary, you are provided with suitable respiratory protection.

Do not enter a confined space where there may be solvent vapours, unless your employer has ensured it is safe for you to do so by ventilating the space and testing the atmosphere, or unless special precautions are taken.

EMPLOYERS SHOULD:

- assess the risks to employees health from your use of solvents and the precautions necessary to protect it;
- introduce measures to prevent employees from being exposed to solvents;
- or, where this is not reasonably practicable, to ensure that employees exposure is adequately controlled;
- ensure that control measures are used, equipment is properly maintained and checked and procedures are observed;
- where necessary, monitor employees exposure and carry out appropriate health surveillance;
- inform employees about the risks and the precautions necessary to protect their health;
- train employees in the use of control measures and any protective equipment which is required.

EMPLOYEES SHOULD:

- co-operate with their employer;
- make full use of any control measures, use the protective equipment provided and report any defective equipment;
- where appropriate, attend health training at your workplace.



European Solvents Industry Group

Av. E. Van Nieuwehuysse 4 - Box 2

B- 1160 Brussels

Tel. +32 2 676 73 07

Fax. +32 2 676 72 16

email: esig@cefic.be

www.esig.info/solventsatwork



ESIG wish to thank the UK HSE for their assistance in producing this document.