



The Control of Hazardous Substances

Hazardous substances are not only used or produced in factories, they can be found in offices, shops, hotels, etc. They may be used directly in the workplace like paints and cleaning agents e.g. bleach, or they may arise from the work process itself in the form of fumes and waste products. Contact with, or exposure to, hazardous substances at work can result in discomfort, pain, time off work and even death, e.g. skin irritation, dermatitis or skin cancer from frequent contact with oils, and injuries to hands and eyes from contact with corrosive liquids. The following checklist will help you to understand the steps that you must take to control the risks from any hazardous substances present in your workplace.

STEP 1 Identify and list all the substances brought into your workplace, used or stored there, that may be hazardous. Normally they will be labelled Toxic, Harmful, Irritant, or Corrosive, (e.g. detergents, cleaning products, paints, toners etc.). Also identify all work activities likely to produce or generate hazardous substances.

STEP 2 Obtain information on all the hazardous substances from hazard data sheets (available from the manufacturer or supplier). Think how the information is relevant to the way the substances are used in your workplace, i.e. where and how they are used, handled, generated, released etc. (identify places, e.g. storage areas, painting booths). Find out if substances have occupational exposure limits (OELs) (HSE Guidance booklet EH 40 gives the official list of OELs and is revised annually).

STEP 3 Identify who might be affected (e.g. employees, contractors, public) and to what extent they are likely to be exposed to a hazardous substance and how, (e.g. from breathing the substance in, swallowing it or through contact with the skin).

STEP 4 If it is reasonably practicable you should prevent exposure by:

- Changing the process or activity so that the hazardous substance is not required or generated, or
- Replacing it with a safer alternative, or
- Using it in a safer form, e.g. pellets instead of powder

Case Study

An employee was permanently scarred when a cleaning product containing hydrofluoric acid spilled onto his foot as he was pouring the cleaner from a 25 litre container into a small spray which was used to clean alloy wheels. At the time of the incident he was wearing trainers. He washed his foot and returned to work. He had to attend hospital that evening with a badly burned and blistered foot. Hydrofluoric acid attacks the calcium in the skin, bone and soft tissue.

Hazard Warning Symbols



Very Toxic



Toxic



Harmful



Corrosive



Irritant

STEP 5 If prevention is not practicable you must adequately control exposure by a combination of the following:

- total enclosure of the process
- partial enclosure and extraction equipment
- general ventilation
- using systems of work and handling procedures which minimise the chances of spills, leaks, and other escapes of hazardous substances
- The use of personal protective equipment (PPE) such as goggles, gloves and masks (this should never be the first or only form of control)

STEP 6 Ensure that control measures remain effective by introducing a regular inspection, testing and maintenance system for plant and equipment (including any PPE).

STEP 7 Determine if you need to monitor employee exposure and provide health and or medical surveillance.

STEP 8 Train and inform your workforce about the risks they may face and the precautions to be taken.

STEP 9 Record your assessment, including the control measures introduced (unless the range of products and substances which might cause harm is very limited).

■ For Further Information:

Control of Substances Hazardous to Health Regulations (NI) 2000

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