

## **Hazardous substances**

Every year exposure to hazardous substances at work effects the health of many thousands of people. Common examples include lung disease (e.g. dusty conditions), skin irritation, dermatitis or skin cancer (e.g. frequent contact with oils, contact with corrosive liquids), occupational asthma (e.g. sensitisation to isocyanates in paints or adhesives), toxic fumes, occupational cancer etc. The high costs of ill-health arises from loss of earnings and productivity, prosecution and civil action.

The **control of substances hazardous to health (COSHH)** regulations 2002 provide a health framework to help protect people in the workplace from hazardous substances. The substances may be used directly at the work (e.g. cleaning chemicals) or may arise from the workplace (e.g. dusts, fumes and waste products).

COSHH lays down sensible step-by-step guidelines to the necessary precautions that should be considered, and is a useful tool for good management.

COSHH applies to virtually all substances hazardous to health. Exceptions include asbestos and lead (which have their own regulations) and the following waste products: radioactives, asphyxiants, or those that have explosive/flammable properties.

## **Definitions**

- Hazard - is the potential to cause harm
- Risk - is the likelihood that it will harm you in the actual circumstances of use. The risk will depend on a number of factors, such as the hazard presented by the substance, how it is used, how exposure is controlled, the degree and extent of exposure.

## **COSHH requires the following:**

- Assessment of the risks
- Deciding what precautions are needed
- Prevention or control of the risks
- Ensuring that control measures are used and maintained
- Monitoring exposure and health surveillance, where necessary
- Informing, instructing and training employees about the risks and precautions needed.

## **Assessment: a step-by-step approach:**

- Identify what hazards there are
- Evaluate the risks to people

Assessment is the responsibility of the employer. Persons preparing the assessment will need to:

- have access to, and understand, COSHH, related legislation, codes of practice and published guidance
- be competent to carry through the work of assessment
- consult widely within the workforce and inform them of results accordingly

- consider peripatetic workers (who work for you on other premises)

**Hazards: substances hazardous to health include:**

- substances classified as dangerous to health under the Chemicals Hazard Information and Packing for Supply) (CHIP3) Regulations 2002. Many are listed in "The Approved Supply List" which is part of the "CHIP 3" regulations.
- substances with occupational exposure limits (these are specified in Guidance Note EH40 which is revised annually)
- biological agents
- dusts of any kind in substantial concentrations

Identification of hazardous substances can be sought from:

- hazard data sheets, labels etc. from suppliers (required by law) from which you must draw conclusions relevant to the way the substance is used in the workplace
- knowledge from within your business or industry; trade literature
- published guidance/documents
- Part V of the Approved Supply List (HSE)

**Risks: risk assessment involves:**

- Use, handling, generation, release etc. of hazardous substances
- Who might be affected and likely exposure level/extent
- Nature of exposure (breathing in, swallowing, skin absorption etc.)
- Accidental leakage, spillage or release
- Cleaning and maintenance operations.

**Further action:**

1. No likelihood or insignificant risk - no further action until review of assessment.
2. Risks identified: ensure appropriate control measures, in the following order of priority:
  - a) Prevention - change process/activity so that the hazardous substance is not required or generated
  - b) Control may include any of the following: total enclosure of the process, partial enclosure and extraction equipment, general ventilation, using systems of work and handling procedures which minimise chances of spills, leaks etc. or exposure to the substance(s)
  - c) Personal protective equipment (e.g. respirators, protective clothing) only as a last resort when you cannot adequately control exposure by any combination of the measures above. Employees are required to make proper use of control measures and to report defects. Employers are required to keep controls in efficient working order and good repair. Engineering controls and respiratory protective equipment have to be examined and, where appropriate, tested at suitable intervals. Suitable records of all such actions taken must be kept.
3. Monitoring exposure is required in certain circumstances, e.g. where there could be serious risks to health if control measures were to fail or deteriorate or where you cannot be sure that exposure limits are not being exceeded. Records of monitoring should be kept.

4. Health surveillance is required

#### **Recording and reviewing an assessment**

Unless the assessment is so simple that it can be easily recalled and its conclusions explained, it should be put in writing. Reviews should take place regularly, at not less than five-yearly intervals, and in any case where it is no longer valid or there have been significant changes in the work.

#### **Informing, Instructing and Training Employees**

Must be carried out by employers regarding the substances and their associated risks and precautions. Sufficient information and instruction should be given on control measures, personal protective equipment, results of any exposure monitoring or health surveillance and emergency procedures.