

Chemical Hazards

Chemicals exist in a number of forms such as fumes, powders, liquids, gases, smoke and vapours. Employees can be exposed to chemicals in any workplace from a simple office space to a construction site.

Chemical substances include:

- Paints, inks, toners
- Cleaning materials
- Metals
- Pesticides
- Insecticides



Health Hazards

Chemicals can cause various types of harm and ill-health to persons who are exposed to them. Some effects are noticeable immediately:

- Allergic reactions
- Chemical burns
- Eye irritation
- Respiratory irritation

Some effects occur after long-term exposure to chemicals, such as:

- Occupational Asthma
- Cancers from exposure to asbestos, benzene and wood dusts
- Damage to the brain and nervous system after repeated exposure to lead, mercury and carbon monoxide
- Liver damage

Harm and ill-health can arise if these substances contact or enter the body by:

- inhalation
- ingestion
- contact with skin and eyes
- absorption through the skin
- injection

Physical Hazards

Chemicals can cause physical damage within the workplace, such as fire and explosions. This can occur if chemicals are

- flammable,
- oxidising,
- explosive properties, or
- compressed gas.

Physical hazards can cause serious damage and injury with the possibility of death if these hazards are not controlled appropriately.

Environmental Hazards

Chemical used in the workplace need to be stored and disposed of correctly to ensure that they are not hazardous to the environment. Chemicals can enter water supplies, be absorbed into the ground and enter the atmosphere where they can cause damage to persons, plants and animals.



You are required to carry out a risk assessment by first identifying the hazards that exist within your workplace. You then need to assess the risk of that hazard causing harm, ill-health or injury. The following section will take a look at controlling the risk.