

**Control of Substances Hazardous to Health (COSHH)**

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# Introduction

This Guidance Note gives practical information about COSHH

## Legal Obligations

The Control of Substances Hazardous to Health Regulations 2002 (COSHH) (as amended) provides the main legislative framework for the control of hazardous substances in the workplace. Legionella bacteria (which causes Legionnaires’ disease) is covered by these regulations, and has its own approved code of practice.

Hazardous substances can take many forms including;

* Substances used directly at work for example pesticides
* Substances generated during work activities e.g. fumes or dust produces through work
* Naturally occurring substances; flour, grain dust, anthrax etc.
* Biological agents such as bacteria.

Control is important, as some substances do not have immediate affects e.g. symptoms of exposure to silica may not occur until twenty to fifty years after exposure.

COSHH sets out, in broad and general terms, the measures needed to prevent or adequately control exposure to hazardous substances in virtually every place of work.

The definition of hazardous substances includes:

Substances with a Safety Data Sheet under **REACH** (Registration, Evaluation, Authorisation & restriction of Chemicals)

Substances assigned Workplace Exposure Limits (contained in Health and Safety Executive Guidance Note EH40, updates to which are available on the HSE website)

Biological agents that are used for, or produced as, part of a work activity

Dusts, and any substance that could pose a hazard to health in the working

environment.

**To make it easier any substance displaying one of the following symbols will require an assessment :**

**Flame**



It appears on chemical labels for substances that are:

* + Flammables–which are gases, aerosols, liquids, or solids that will burn or ignite under certain conditions
  + Self-Reactives–heating alone, without air, may cause fire or explosion,
  + Pyrophorics–in small amounts, may ignite within 5 minutes after contact with air
  + Self-Heating–which may catch fire only in large amounts and after long periods of time when exposed to air
  + Emitters of flammable gas, *and*
  + Organic peroxides–which, when heated, may cause fire or explosion; may be sensitive to impact or friction; and may react dangerously with other chemicals.

**Exclamation Mark**



It is used on a chemical label for substances that represent the following hazards:

* Irritant–irritates the skin or eyes;
* Skin sensitizer–which is an allergic response following skin contact;
* Acute toxicity–which may be fatal or cause organ damage from a single short-term exposure;
* Narcotic effects like drowsiness, lack of coordination, dizziness; and Respiratory tract irritation.

**Gas Cylinder**



This pictogram on a chemical label means that the substance is a compressed, liquefied, or dissolved gas under pressure at 29 pounds per square inch or more.

**Flame over Circle**



This symbol on a chemical label means that the substance is an oxidizer. Oxidizers may cause a fire by increasing the concentration of oxygen in the air.

**Corrosion**



This pictogram on a chemical label means that the substance causes skin burns, eye damage, or destroys metals.

**Skull and Crossbones**



Substances with a hazard of acute toxicity will have this symbol on their chemical label. Acute toxicity means that exposure to a single dose of the chemical may be toxic or fatal if inhaled or swallowed, or if it comes into contact with the skin.

**Exploding Bomb**



The exploding bomb pictogram appears on the chemical labels of substances that are:

* + Explosives—which is a solid or liquid chemical capable of a chemical reaction that causes damage to the surroundings,
  + Self-Reactive—heating may cause fire or explosion without the need for air, or
  + Organic peroxides—again, heating may cause fire or explosion.

**Environment**



This non-mandatory pictogram means the hazard the chemical presents is aquatic toxicity.

## Assessments

The COSHH regulations require you the employer (including the self-employed) to carry out an assessment of the substances used. There are 8 steps that need to be followed:

**Step One**

Assess the risk to health from the substances either being used or created.

The assessment must take into account:

* + Hazardous properties of the substance.
  + Information on the health effects provided by the supplier (look for safety data sheet).
  + The level, type and duration of the exposure.
  + The circumstances of the work.
  + Activities (e.g. maintenance) which may increase the potential for exposure.
  + Exposure limits.
  + Effects of control measures.
  + Results of monitoring.
  + Possible combinations of substances increasing the risks.
  + The approved classification of any biological agent.

Any additional information the employer may need.

Unless quantities of hazardous substances used are deemed to be so low that there is only a slight risk to the health of employees, the employer must ensure that they have arrangements in place to deal with accidents, incidents and emergencies.

This may include the provision of additional first aid facilities and safety drills.

The information concerning these arrangements must be readily available and displayed if necessary, together with the provision of suitable warning and communication systems.

Should an incident then occur, the employer must then take immediate steps to restore the situation to normal and control the effects that led to the incident.

**Step Two**

Decide what precautions are needed -You must not allow work to be carried out where hazardous substances are involved, without considering the risks and putting precautionary measures in place to protect employees and others who may be effected by the work.

**Step Three**

Prevent or adequately control exposure -There is a hierarchy of control measures that should be applied to hazardous substances, which is shown below in descending order of priority:

* + Elimination of the hazardous substance at source
  + Substitute the substance for a less hazardous alternative
  + Enclosure of the process
  + Use plant or processes which minimise the production of the hazardous substance
  + Partial enclosure, supplemented with the use of engineering controls
  + Use of engineering controls
  + Increasing general ventilation
  + Removal of persons from the hazard
  + Limit the time persons are exposed to the hazardous substances (e.g. use a system of task rotation)
  + Increased hygiene procedures (cleaning of contamination)
  + Provision of information, instruction and training
  + Provision of Personal Protective Equipment.

**Step Four**

Ensure the control measures are maintained and used properly and that the safety procedures are followed.

All control measures have to be maintained to ensure that they are still effective. If not otherwise specified, the measures taken should include visual checks and examinations as prescribed by the manufacturer.

There is a legal requirement to ensure that all LEV plant is thoroughly examined and tested at least once in every 14 months. There is also a requirement to ensure that RPE is thoroughly examined at least once a month, this requirement does not apply to single use disposable respirators.

**Step Five**

Monitor exposures.

Measure the concentration of hazardous substances in the air breathed in by workers where your assessment concludes that:

* There could be serious risks to health if control measures failed
* Exposure limits might be exceeded; or
* Control measures might not be working properly. Workplace exposure limits
* (WELs) are as the name suggests limits of the amount of hazardous substances people should be exposed to at work.
* WELs are concentrations of hazardous substances in the air, averaged over a specified time period, referred to as a time -weighted average (TWA). Two time periods are used:
* Long term exposure limits (8 hours)
* Short term exposure limits (15 mins) – set up to help prevent effects such as eye irritation, which may occur following brief exposure.

Workplace exposure limits are levels above which there is a known risk to health these must never be exceeded.

*N.B. There is no absolute “safe” level of exposure for dangerous substances, and employers should aim to bring exposure to the lowest achievable level.*

**Step Six**

Carry out appropriate health surveillance, if applicable For certain hazardous substances there is a requirement to carry out health surveillance.

These substances are listed in the Regulations.

Health Surveillance may also be necessary in situations where early detection will be beneficial in arresting the progression of ill health

**Step Seven**

Prepare Plans and Procedures to deal with Accidents, Incidents and Emergencies.

Where the work activity may lead to risk of an accident, incident or emergency involving exposure to a hazardous substance, which goes well beyond the risks associated with normal day to-day work, you should set up warning and communication systems to allow a suitable response immediately should any incident occur.

This is to ensure information on your emergency arrangements is available to those who need to see it, including the emergency services. It also requires these 'safety drills' to be practiced at regular intervals.

Only those staff necessary to deal with the incident may remain in the area and they must be provided with appropriate safety equipment.

Do not produce emergency procedures if:

* The quantities of substances hazardous to health present in your workplace are such that they present only a slight risk to your employees' health; and
* The measures you have put in place under Step 3 are sufficient to control that risk; BUT, the requirements described in Step seven must be complied with in full where carcinogens, mutagens or biological agents are used.

**Step Eight**

Ensure employees are properly informed, trained and supervised.

* Where to get information on hazardous substances Information on hazards posed by chemicals can be found through various sources:
* Suppliers safety data sheets (there is a legal requirement to provide safety data
* sheets under REACH).
* The Health and Safety Executive Environmental Hygiene (EH) series of guidance notes.
* Other information from the manufacturer.
* Information from trade associations and similar bodies.

Asbestos and Lead are subject to their own regulations and are not covered by COSHH:

* The Control of Asbestos Regulations 2012
* The Control of Lead at Work Regulations 2002.

## Overview

Assess the risks from substances hazardous to health.

* Decide what control measures are needed and how to provide them.
* Maintain the control measures and ensure that they are used.
* Monitor exposure levels.
* Provide health surveillance if needed.
* Provide information, instruction and training to employees.
* Review assessments periodically.

## Further Guidance

HSE website: http://www.hse.gov.uk/coshh/index.htm

Control of Substances Hazardous to Health Regulations 2002 (as amended)

Approved Code of Practice and Guidance L5 ISBN 9780717629813 Available at: http://www.hse.gov.uk/pubns/priced/l5.pdf

Working with substances hazardous to health: A brief guide to COSHH

INDG 136 Available at: http://www.hse.gov.uk/pubns/indg136.pdf

<http://www.coshhessentials.org.uk/> provides advice on controlling the use of chemicals for a range of common tasks, e.g. mixing and drying.

## Suggested COSHH HAZARD ASSESSMENT

**COSHH HAZARD ASSESSMENT Number:**

Substance/ Product Name and Description:

How is Supplied Substance to be used and quantity to be used:

Assessment of Risk and Precautions to be Taken:

Personal Protective Equipment Provided:

.

First Aid Information and Emergency Actions:

Spillage Procedures:

Fire Procedures:

Assessment Undertaken By:

Name:

Job Title:

Signature:

Review Date:

NB: If the product is to be used in a different manner to that described above, another assessment will be needed