



## **Substances Hazardous to Health**

### **1. COUNCIL POLICY**

The Council is committed to minimising the health risks to all employees who are exposed to hazardous substances. In particular it recognises its duties under the Health and Safety at Work etc. Act 1974, The Control of Substances Hazardous to Health Regulations 2002 (COSHH) and the Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR) and will:

- Assess the risks to the health of its employees arising from hazardous substances used in or present in work activities;
- Reduce these risks by having in place effective management systems to prevent or control exposure;
- Review the assessment regularly and whenever new equipment, materials or processes are introduced;
- Maintain, examine and test control measures;
- Ensure that all employees are properly informed, trained and instructed in the safe use of hazardous substances;
- Arrange health surveillance where necessary; and
- Prepare plans and procedures to deal with significant (fires, explosions or similar energetic events) accidental releases of hazardous substances.



## 2. DEFINITIONS

COSHH	Control Of Substances Hazardous to Health
DSEAR	Dangerous Substances and Explosive Atmospheres Regulations 2002
HSE	Health and Safety Executive
OEL	Occupational Exposure Limit
WEL	Workplace Exposure Limit
MSDS	Material Safety Data Sheet
CLEAPSS	Consortium of Local Education Authorities Providing Science Services
Acute	Short term effects
Chronic	Long term effects
Biological Agents	Any micro-organism, cell culture, or human endoparasite, which may cause infection, allergy, toxicity or otherwise create a risk to human health
Dangerous Substances	Substances that explode
	Substances that react exothermically with other chemicals (i.e. oxidising)
	Substances classified as being harmful, corrosive, or irritant
	Substances for which the HSE has an approved Operational Exposure Limit
	A biological agent
	Dust of any kind, when present in substantial concentrations in air
Flammable	Substances with a flash point between 22°C and 55°C and which have to be heated before they give off an ignitable vapour (e.g. diesel, paraffin, oil).
Highly Flammable	Substances with a flash point of less than 21°C which give off an ignitable vapour at normal temperatures (e.g. petrol).
Extremely Flammable	Liquids and liquefied gases which will readily ignite at normal temperatures or may explode or react violently (e.g. propane, butane, methane).



### 3. INTRODUCTION

As part of their work, some Council staff will be liable to be exposed to substances which may be harmful to their health.

These may be materials which are: purchased (e.g. cleaning materials, motor vehicle fuels, mains or LP gas, welding gases, pesticides/herbicides etc); produced as part of a work activity (e.g. dust from sawing or cleaning); transported during work (motor vehicle fuels, pesticides/herbicides etc); or naturally present in the environment (e.g. micro-organisms in water, or dust in the air).

Hazardous substances can have a wide range of effects on health and these can be either acute or chronic. Acute effects may be severe, usually happen fast and range from fires, explosions, burns, and skin or eye irritation, shortness of breath/wheezing or loss of consciousness. Chronic effects may include dermatitis, poisoning, cancer and other diseases, which may appear long after exposure to a substance.

For substances belonging to other employers (i.e. cleaning contractors etc) and where no council staff will be exposed to the substance, there is no need to carry out a council Hazardous Substance assessment. This element will be covered in management of contractors guidelines. Contact Corporate Health and Safety for further guidance

#### **RESPONSIBILITIES OF MANAGERS**

**Group Managers have overall responsibility for:**

- Ensuring there is a suitable and sufficient assessment of the risk to the health and safety of their staff posed by materials and substances in the work place;
- Reducing these risks by having in place effective management systems to prevent or control exposure;
- Reviewing the assessment regularly and whenever new equipment, materials or processes are introduced;
- Ensuring that all equipment provided by the Council is suitable for the job, safe and regularly maintained;
- Maintaining, examining and testing control measures and keeping suitable records;
- Ensuring that all employees are properly informed, trained and instructed in the safe use of hazardous substances;
- Where necessary, arranging for monitoring and health surveillance;
- Preparing plans and procedures to deal with significant releases of hazardous substances i.e. an accidental release of chlorine gas in a swimming pool; and
- Ensuring subcontractors under their control are monitored and undertaking relevant assessments and actions for hazardous substances.



*N.B. Group Managers can delegate the tasks to Line Managers where appropriate, but the responsibility to ensure the risk is managed remains with the GM.*

## **RESPONSIBILITIES OF EMPLOYEES**

All employees have a duty to:

- Use all substances /materials and work equipment in accordance with:
  - The relevant Council procedures;
  - The manufacturer or supplier's instructions;
  - The relevant hazard data sheet;
  - Any instruction and training received
- Not intentionally misuse anything provided in the interests of health and safety, such as protective clothing or equipment;
- Report to their immediate supervisor any defects found in work equipment.

## **WHO IS RESPONSIBLE FOR CARRYING OUT ASSESSMENTS?**

The responsibility for ensuring adequate procedures and controls are in place for hazardous substances lies with Group Managers, however, the actual carrying out of assessments will generally be delegated to those Team Leaders or Lead Officers who have responsibility for the employees or activities or to a suitably competent person, whether from within the Council or an external consultant.



## 4. ASSESSMENTS

For the vast majority of commercial chemicals, the presence (or absence) of a warning label will indicate whether it is considered a hazardous substance. Substances that are hazardous to health can take many forms. They can be gases, vapours, liquids, fumes, dusts, or solids and can be components of a mixture of materials. They can also be micro-organisms.

In general, substances hazardous to health or dangerous will display standard warning labels (**please see Appendix 1 for a complete list of the warning labels and explanations**).

**Please contact the Corporate Health and Safety team if you are in any doubt or would like more information.**

**Warning labels** provide basic information about hazardous substances such as:

- The identity of the substance;
- Possible hazards;
- Safety precautions and emergency action see Appendix 2 for list of safety phrases (i.e. S24 means “avoid contact with skin”);
- First aid advice;
- Supplier name, address and telephone number.

If more information is required about a substance, details can be found on the Material Safety Data Sheet (MSDS). The manufacturer/supplier will provide these with the product. MSDS are not hazardous substances assessments but the information contained in them will be useful in carrying out a hazardous substances assessment.

The MSDS gives details about:

- Proper use of the substance;
- Health risks and fire hazards;
- Steps to take for safe use, transportation and storage;
- Waste disposal;
- Effects on the environment;
- Physical characteristics of the substance; and
- How to handle spills and leaks.



## **HAZARDOUS SUBSTANCES - DO'S AND DON'TS!**

### **DO:**

- Consider the hierarchy of control, elimination, substitution, engineering controls, administrative controls then lastly personal protective equipment;
- Read the container label and hazard data sheet before using the substance, material or gas;
- Keep your work area clean;
- Use protective clothing and equipment;
- Follow safety rules;
- Use approved and labelled containers for storing and transporting hazardous materials;
- Follow instructions when removing hazardous materials from containers;
- Make sure there is enough ventilation, especially in a confined space;
- Keep compressed gas, flammables and explosive materials away from heat;
- Check that containers and hoses are in good working condition;
- Take safety training seriously.

### **DON'T:**

- Leave containers open when not in use;
- Siphon by mouth;
- Depend on a funny smell to detect hazardous substances in the air, some are odourless;
- Mix a chemical with another substance, even water, unless you are instructed to. Even then follow instructions exactly;
- Breathe gases produced from chemical reactions;
- Pour water into acid;
- Smoke, eat or drink around hazardous substances;
- Store hazardous chemicals next to each other without checking the hazard data sheet for possible hazardous reactions;
- Cut corners on hazardous substance handling procedures.



## **RISKS**

**It is a legal requirement that no work that is liable to expose anyone to substances hazardous to health shall be carried out unless an assessment has been made.**

The purpose of the assessment is to identify where the risk lies and to identify appropriate measures to reduce the risk. **A suitable form for carrying out the hazardous substances assessment is attached at Appendix 3.**

### **The assessment must:**

1. Identify the substances present in the workplace:
  - Think about substances which have been supplied, as well as substances which might be produced, during work activity or are present in the work environment (inside or outside).
  - Contact sources of information such as the manufacturer / supplier or the Corporate Health and Safety Team.
2. Consider the risks these substances present to people's health:
  - How much of the substance is used?
  - Who could be exposed to the substance, and how often?
  - How can the substance come into contact with the person? Can it be inhaled, swallowed, absorbed through skin, come into contact with the eyes, injected into the body by high pressure equipment or contaminated sharp objects?

**The assessments should be reviewed annually and revised whenever they are no longer valid, or where there has been significant change in the work activities.**

## **CONTROL MEASURES**

**The risks from hazardous substances can be significantly reduced by preventing or controlling exposure to them.**

### **Consideration should be given to preventing exposure by:**

- Avoiding sources of ignition;
- Keeping incompatible substances apart (separate storage);
- Reducing the quantity of dangerous substances in the workplace to a minimum; Changing the process or work activity so that the hazardous substance isn't needed or produced;



- Replacing the substance with a safer substance;
- Using a safer form of the substance - pellets instead of powder, dilute solution instead of concentrated, and so on.

**If any of the above are not reasonably practicable, one or more of the following exposure control measures may be used:**

- Totally enclose the process or partially enclose and use extraction equipment (local exhaust ventilation);
- Provide effective general ventilation;
- Use work, handling and storage procedures which minimise the chances of hazardous materials spilling, leaking or otherwise escaping;
- Reduce the number of employees exposed, or the length of their exposure (not exceeding the Workplace Exposure Limit for the substance if there is one);
- **As a last resort only**, use personal protective equipment/clothing such as gloves, respiratory equipment and eye protection as specified on the MSDS.

### **MONITORING**

Managers must ensure that all hazardous substance assessments are recorded on the appropriate form set out in Appendix 3 of this section.

The manager responsible for the assessment must ensure that completed assessments are accessible within the work area and must:

- Be available for inspection (by Internal and External Auditors) at all times;
- Have a written record of the preventative and protective measures in place to control the risks;
- Record what further action, if any, needs to be taken to reduce risk further;
- Be made available to all employees they relate to;
- Be kept for inspection in line with the Council's document retention policy.

### **ENSURING THAT CONTROL MEASURES ARE USED AND MAINTAINED**

Managers must take all reasonable steps to ensure that their staff make proper use of control measures, including wearing personal protective equipment. This is why they must ensure that staff, are given suitable training, information and appropriate supervision on COSHH assessments relevant to their role. Managers must also ensure that all controls are monitored to ensure compliance with COSHH assessments. Engineering controls and respiratory protective equipment must be examined





and, where appropriate, tested at suitable intervals. Records of examination and testing must be made and kept in line with the Council's retention policy.

### **HEALTH SURVEILLANCE**

In some circumstances, where employees work with particular substances such as respiratory sensitisers, health surveillance may be appropriate. This may include regular medical check-ups. Health records must also be kept where necessary. Advice on the need for health surveillance should be sought from the Corporate Health and Safety Team.

## **5. PREPARE PLANS AND PROCEDURES TO DEAL WITH ACCIDENTS, INCIDENTS AND EMERGENCIES**

This will apply where the work activity gives rise to a risk of an incident or emergency involving exposure to a hazardous substance which goes well beyond the risks associated with normal day to day work. In such circumstances, (e.g. an accidental release of chlorine gas from a splash park, fountain or an explosion), you must plan your response before it happens. That means preparing procedures and setting up warning and communications systems to enable an appropriate response immediately if an incident occurs, and to ensure that information on your emergency arrangements is available to those who need to see them, including the emergency services. It also requires these 'safety procedures' to be practiced at regular intervals.

If any incident or emergency occurs you must ensure that immediate steps are taken to minimise the harmful effects, restore the situation to normal and inform employees who may be affected. Only those staff necessary to deal with the incident may remain in the area and they must be provided with appropriate safety equipment. However, you do not have to introduce these 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 safety.

## **6. TRAINING**

COSHH and DSEAR requires employees to be provided with suitable and sufficient information, instruction and training, which should include:

- The names of the substances they work with or could expect to be exposed to, the risks created by such exposure and access to any safety data sheets that apply to those substances;
- The main findings of the risk assessment;
- The precautions they should take to protect themselves and others employees;
- How to use personal protective equipment and clothing provided;
- Results of any exposure monitoring and health surveillance (without giving individual employees' names);
- Emergency procedures which need to be followed.



You should update and adapt the information, instructions and training to take account of significant changes in the type of work carried out or work methods used. You should also ensure that you provide information that is appropriate to the level of risk identified by the assessment and in a manner and form in which it will be understood by all relevant employees. These requirements are vital. You must ensure your employees understand the risks from the hazardous substance they could be exposed to. Your control measures will not be fully effective if your employees do not know their purpose, how to use them properly or the importance of reporting faults.

## 7. GAS

- No person shall work on any gas installation, fitting or appliance unless they are a GAS SAFE registered engineer, qualified/competent to work on the relevant type of installation.
- The Council, as the landlord for its housing stock, is responsible for the gas safety of its tenants.
- The Council will ensure that annual gas safety checks (and servicing as appropriate) are carried out on all its housing stock.
- All records of gas safety checks will be kept in line with the Council's data retention policy.

### **IN A SUSPECTED MAINS GAS EMERGENCY:**

- Open all doors and windows to ventilate the property;
- Turn off the appliance and do not use it again until it has been checked by a GAS SAFE registered engineer;
- Turn off the gas supply at the mains;
- Call the national gas emergency number 0800 111 999;
- If you are feeling ill, visit your GP or hospital immediately;
- Contact a GAS SAFE engineer to check and repair the appliance / installation.

When gas is not fully burnt due to a faulty, incorrectly fitted or poorly maintained appliance, fitting or flue, Carbon Monoxide (CO) is given off. CO is a colourless, odourless, tasteless, poisonous gas, which when it enters the human body prevents the blood from bringing oxygen to cells, tissues and organs, resulting in asphyxiation.

### **The six main symptoms of CO poisoning are:**

1. Headaches
2. Dizziness
3. Nausea
4. Breathlessness
5. Collapse



6. Loss of consciousness.

**The following are signs that incomplete combustion may be taking place are:**

1. A yellow or orange flame (except in flame effect fire);
2. Soot or yellow/brown staining on or around the appliance;
3. A pilot light that frequently goes out;
4. Increased condensation on the inside of the premises windows.

## 8. GAS CYLINDERS

All gas cylinders must be stored in the open air in a designated area and be:

- Well away from any sources of ignition;
- On a level concrete base that has good drainage and is free from weeds/vegetation;
- A minimum of 2m from any opening or pit;
- A minimum of 1m away from the property boundary;
- No more than the minimum quantity needed should be stored;
- Before use, all gas pipes/hoses, joints, appliances and cylinders should be checked for damage and deterioration / wear.
- If the cylinder is being used in conjunction with a BBQ or patio heater, a fire blanket / extinguisher should be on hand. Do NOT change cylinders when the appliance is hot.
- All cylinders must have a regulator fitted using correct gas pipe/hose clamps, NOT worm drive clamps (i.e. jubilee clips) as they can damage the pipes/hoses and cause leaks in the joints.

## 9. PETROLEUM

Under normal circumstances NO council department or premises should store any more than mixes (e.g. two stroke), excluding fuel tanks attached to internal combustion engines. If more is required then they must seek the approval of the council's petroleum officer. Any petrol stored must be done so in containers manufactured for that purpose.

**(Plastic containers with a capacity of up to 10 litres and metal container with a capacity of up to 20 litres)**

These containers should also be clearly marked (in capitals) 'PETROL' and 'HIGHLY FLAMMABLE' and must be stored in a fire separated brick building or metal fire resistant container away from any source of ignition and well ventilated to the open air. Any decanting/refuelling of equipment must take place in the open air well away from any sources of ignition. No more than two containers up to a total of 30 litres are allowed to be in/on any vehicle at a time.



## 10. FURTHER INFORMATION

**If you have any queries regarding this procedure or would like further guidance please contact Corporate Health & Safety.**

## 11. USEFUL LINKS

The following documents and links may also be useful:

1. L5 Control Of Substances Hazardous to Health Regulations 2002 (as amended)
2. L138 Dangerous Substances & Explosive Atmospheres Regulations 2002
3. INDG 136 COSHH a Brief Guide
4. HSG 97 A step by step guide to COSHH assessments
5. L56 The Gas Safety Installation and Use Regulations 2013.
6. PELG – PETEL 14. The Petroleum (Consolidation) Regulations 2014.
7. United Kingdom Low Pressure Gas (UKLPG) Code of practice Number 7.

For GAS SAFE information go to: [www.gassaferegister.co.uk/help/gas\\_emergency.aspx](http://www.gassaferegister.co.uk/help/gas_emergency.aspx)

All of the above Health and Safety Executive (HSE) publications can be downloaded from the HSE website: [www.hse.gov.uk](http://www.hse.gov.uk)