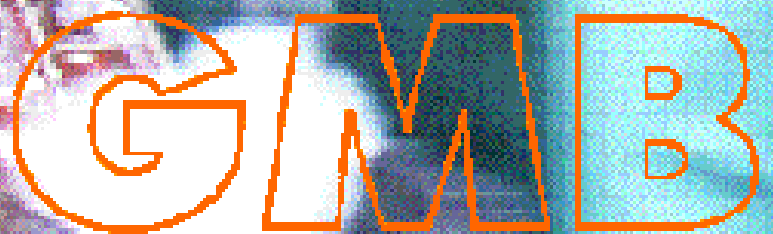




GMB
working together

CHEMICAL SAFETY



GMB

BRITAIN'S GENERAL UNION

Chemical Safety

There are literally millions of different types of chemicals in every day use in workplaces and homes throughout the UK. Some chemicals in use have no harmful effects but others can cause serious illnesses such as asthma and even cancer.

We know that chemicals used at work are affecting our health. Government research carried out in 1995, known as the Labour Force Survey of Self-Reported Work-Related Illness, found that 200, 000 people suffered from respiratory illness and 66, 000 suffered from skin diseases caused or made worse by work. Chemicals are one of the main causes of skin diseases such as dermatitis and respiratory diseases such as asthma. Other serious health effects of chemicals include cancer, damage to the reproductive system of both men and women and damage to the unborn child in pregnant workers exposed to chemicals.

GMB Safety Representatives have an important role to play in making the workplace safer and preventing the illnesses and diseases caused by chemicals. We know that where there are union Safety Representatives the accident rate is 50% lower than in those where managers alone make decisions about health and safety. More recent research carried out by the Health and Safety Executive found that union Safety Representatives had a better understanding of chemical exposure standards than many managers.

This guide aims to give you, the GMB Safety Representative, a better understanding of chemical safety, the law and chemicals and how to prevent accidents and ill health from when a chemical first enters the workplace to when it is disposed. Accompanying this guide is a pull out poster that shows how chemicals can harm health. This should be displayed in your workplace for all members to see.

Chemical Hazards

Generally speaking hazardous chemicals can be split into three types:

1. Chemicals which can cause fires or explosions
2. Chemicals which can be harmful to health
3. Chemicals which can pollute the environment

The type of hazard is illustrated by a sign and letters indicating the type of danger. These signs can either be found on the label or on the safety data sheet which the supplier of a chemical must provide. The signs and what they mean are detailed below.

1. Chemicals which can cause fires or explosions

Highly Flammable

F

Extremely Flammable

F+



Flammable products can be solids, liquids or gasses which ignite in air and continue to burn. An extremely flammable substance has the same symbol as a highly flammable but is usually indicated by the letter F+. An extremely flammable substance is the most hazardous. Examples of commonly used highly and extremely flammable substances include methylated spirits, acetone, and petrol.

Oxidizing

O



These are chemicals which contain oxygen and keep flammable substances burning. Examples of commonly used oxidizing substances include hydrogen peroxide and nitric acid.

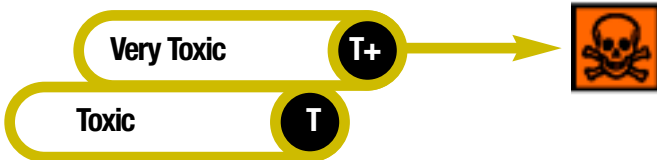
Explosive Substances

E



Certain products react violently to flames, heat, shock or friction, resulting in an explosion. These may cause accidents, serious burns and sometimes extensive material damage. Examples of explosive substances include nitrocellulose and benzoyl peroxide.

2. Chemicals which can be harmful to health



These are the most hazardous substances to health, even in small amounts. They can enter the body either through breathing in toxic fumes or gasses, eating, drinking or smoking with contaminated hands and with some chemicals through skin contact. Some very toxic and toxic chemicals can cause instant death e.g. cyanide but most have more longer term health effects such as damage to the kidneys and brain. Some toxic substances can cause cancer, these are known as carcinogenic. Some can also cause damage to the unborn child or future generations and are known as mutagenic. Examples of very toxic and toxic substances include chloromethane, acrylamide, carbon disulphide, phenol and mercury.



These substances are similar to toxic substances and can cause the same serious health problems but usually in larger doses. They can enter the body in the same ways as toxic chemicals. Examples of harmful chemicals include trichloroethylene and toluene.



These substances have the same symbol as harmful substances but are indicated by the letters Xi. Irritant substances can cause damage and irritation to the skin or lungs. Examples of commonly used irritant substances include bleach and ammonia. Many industrial strength cleaners contain irritant chemicals.



Corrosive substances seriously damage the skin causing burns. Examples of corrosive substances include acids such as hydrochloric or sulphuric acid, some oven and toilet cleaners and caustic soda.

Chemicals can enter the body in



three different ways

- ✗ **Entry via the mouth** This is known as Ingestion. People do not swallow chemical products deliberately but entry through the mouth is usually accidental or through not washing contaminated hands - especially before eating, drinking and smoking.
- ✗ **Entry via the lungs and airways** This is the most common entry route at work, as pollutants can be present in the atmosphere. They can enter the lungs with the air that we breathe. Once inhaled into the lungs these products can not only damage the lungs and airways but can also enter the blood and damage other parts of the body.
- **Entry via the skin** Certain products such as irritant and corrosive products become hazardous when they contact the skin. Some other more hazardous substances can get absorbed through the skin and enter the bloodstream causing damage to the kidneys liver and nervous system.

3. Chemicals which can pollute the environment

Dangerous for the environment

N



These substances can damage the environment in different ways e.g. gasses and fumes damaging the ozone layer or liquids entering drains and polluting water and rivers. Examples of substances which can damage the environment include some pesticides and CFCs.

Step by Step Guide to Chemical Safety in the Workplace

The chart below includes a checklists that Safety Representatives can use in their workplace to make sure that all chemicals are being used safely.

STEP ONE

Deciding whether the chemical is hazardous.

All chemicals entering the workplace should have a safety data sheet. This is the starting point for checking whether a chemical is safe or not. Remember that work processes such as welding, soldering or heating up chemicals can also produce hazardous fumes, dusts and gasses.



CHECKLIST

- Make sure that you have a copy of the manufacturers safety data sheet which should accompany all chemicals entering your workplace.
- Check the safety data sheet to see whether the chemical is hazardous or not. Hazard symbols on the data sheet or label should indicate this.
- Check if there are any extra hazards for pregnant workers or those who have just given birth or are breastfeeding?
- Are there any work processes that give off hazardous fumes, dusts or gasses?
- If the chemical or the process fume/gas/dust is hazardous go to step two.

STEP TWO

Carrying out an assessment

If the chemical is hazardous your employer should carry out a risk assessment. The risk assessment should go through the following stages:

- a) can something else be used instead of the hazardous chemical?
- b) can the chemical be substituted for a safer alternative? and if not;
- c) what precautions are needed to protect workers?

In order to carry out this assessment your employer must be competent. This means that they should have an understanding of the regulations and the ability and authority to make correct decisions on the risks and precautions needed. As a Safety Representative you should be consulted on the assessments. A new guidance booklet issued by the Health and Safety Executive entitled "COSHH Essentials" can help with these assessments (see page 5).



CHECKLIST

- Has your employer involved and consulted you and the members who use the chemical in the assessment process?
- Has your employer got a copy of COSHH Essentials?
- Has your employer checked whether the hazardous substance can be eliminated or if not substituted for a safer alternative?
- If there is no safer alternative to do the job, what other precautions are to be taken?
- Does your employer have procedures in place for safe storage and safe disposal of the chemical?

These steps should be repeated whenever a new chemical enters the workplace or a work process changes. They will also need to be repeated if there are accidents or cases of ill health that are related to chemicals.

STEP THREE

Taking Precautions

Precautions are known as “control measures”. These reduce workers’ exposure to hazardous chemicals and range from good general ventilation, local extract ventilation, safe systems of work and enclosing the process. Personal protective equipment such as gloves and facemasks are also control measures but should only be used as a LAST RESORT when ventilation or other precautions are not enough. The employer should regularly inspect, examine and maintain control measures.

Workers should be given information and instructed on control measures such as how to operate local ventilation systems, how to wear protective equipment correctly and safe systems of work. Workers should report any defects or faulty equipment and the employer must take prompt corrective action.



STEP FOUR

Monitoring Exposure

Some chemicals have exposure standards and in certain cases your employer may have to measure the levels of hazardous substances in the air. Monitoring is necessary where there could be serious risks to health if control measures failed and where there is uncertainty over the levels workers are being exposed to.



STEP FIVE

Does your employer carry out health checks?

Your employer may need to carry out a series of health checks on workers, known as health surveillance. These checks can range from simple questionnaires to full medicals depending on what chemical is handled. Your employer may need to seek competent advice in the form of an occupational health professional to advise on health surveillance. Records of health surveillance must be kept for 40 years.



CHECKLIST

- Has your employer introduced adequate precautions? (If workers are suffering from health problems these precautions are NOT adequate)
- Are these precautions regularly inspected and maintained?
- Are workers given information and training on the health and safety hazards and precautions to take when working with chemicals?
- Is protective equipment provided free of charge and are there suitable storage facilities for protective equipment so that workers do not have to take it home?

CHECKLIST

- Does the chemical have an Occupational Exposure Standard (OES) or Maximum Exposure Level (MEL)? (This can be found on the safety data sheet and is usually illustrated as a measurement in mg³).
- If it does have a MEL or an OES ask your employer whether they can demonstrate that they are complying with this standard. If the answer is no there maybe a need to carry out specialist monitoring.

CHECKLIST

- Do you work with chemicals that cause skin problems such as dermatitis or ulcers or chemicals which can cause breathing problems such as asthma or more serious problems such as cancer?
- If yes to the above question, is your employer carrying out health checks?
- Are there arrangements for keeping records of health checks in a secure place for 40years?

Chemicals and the Law

Supplying Chemicals

The Chemical (Hazard Information and Packaging for Supply) Regulations 1999, better known as CHIP, require suppliers of hazardous chemicals to label packages of chemicals and provide a safety data sheet to whoever purchases the chemical. A safety data sheet should detail the properties of the chemical or mixture of chemicals, information on handling and storage, and exposure controls/personal protection. They should also detail any emergency and first aid procedures and how to dispose of the chemical safely.

Using Chemicals in the Workplace

The Control of Substances Hazardous to Health Regulations 1999, better known as COSHH place a duty on employers to assess the risks from hazardous chemicals. They should:

- Eliminate the hazard by using a safer chemical or changing the process so that the chemical is not needed or, if this is not possible;
- Reduce the risks by implementing control measures such as general ventilation, enclosing the process, safe systems of work and/or local extract ventilation
- Provide Personal Protective Equipment (PPE), such as gloves or respirators as a LAST RESORT when other measures are not adequate.

These steps are better known as the "Hierarchy of Controls" and employers must always try and eliminate the hazard first before taking the next steps.

Employers also have the following duties under COSHH:

- To ensure that control measures are used and regularly maintained.
- To monitor workers exposure to chemicals
- To carry out appropriate health checks
- To ensure that employees are properly informed, trained and supervised on chemical safety.



A new guidance booklet entitled COSHH ESSENTIALS has been developed to help employers comply with the law and chemicals. It is especially useful to small and medium enterprises such as engineering firms or manufacturers who use chemicals.

COSHH Essentials is available from HSE Books, PO Box 1999, Sudbury, Suffolk, CO10 6FS. Tel: 01787 881165



Major Chemical Process Sites

In addition to the COSHH regulations The Control of Major Accident Hazards Regulations (COMAH) 1999 apply to certain large industrial chemical process sites. Every operator of such sites has a general duty to take all measures necessary to prevent major accidents and limit their consequences to persons and the environment. Every operator must also prepare and keep a major accident prevention policy (MAPP).

Environment & Fire

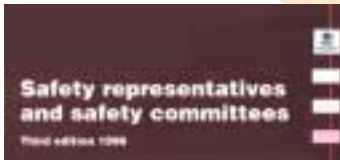
Workplaces not covered by COMAH may still be subject to environmental and fire regulations especially in the areas of storage and disposal of chemicals. If your workplace uses chemicals it may need to comply with these regulations. Further advice on complying with environmental laws can be obtained from the local authority environmental health officer, the local office of the Environment Agency and, on fire safety issues, from the local fire brigade.

Pregnant workers

The Management of Health and Safety at Work Regulations 1999 require employers to identify and assess any risks to new and expectant mothers. Some chemicals can harm a pregnancy leading to miscarriages or development problems in the unborn child. Some hazardous chemicals can also enter the breast milk in breastfeeding mothers. Where new or expectant mothers are working with such chemicals the employer should, where possible, eliminate or substitute these chemicals for safer alternatives. Where this is not possible the worker should be moved to alternative work or if no alternative work is available suspended on full pay until it is safe for her to return.

Safety Representatives and Chemical Safety

The legal rights of trade union Safety Representatives, the Safety Representatives and Safety Committee Regulations 1977, can be effectively used to help prevent workplace accidents and ill health. These rights can be applied in the area of chemical safety in the following ways.



Information

Safety Representatives have a right to access information that the employer has on health and safety issues. In relation to chemicals, Safety Representatives should be able to access the following documents:

- Safety data sheet
- Risk assessments carried out on chemicals
- Results of any monitoring or analysis on chemicals
- Engineering reports
- The collective results of any health surveillance
- Any reports from the Health and Safety Executive including inspection reports

This information can be used to identify hazardous chemicals and check whether control measures are working. For example, if the results of health surveillance show that a large number of people in one area are suffering from skin problems this could be related to the chemicals they are using.

Consultation

Safety Representatives have a right to be consulted “in good time” on health and safety issues. Consultation is a two way process and in good time means BEFORE any changes or new procedures are introduced. In relation to chemicals when an employer plans to introduce new chemicals into the workplace the Safety Representative should be consulted and should press the employer to introduce the safest possible chemical that does the job.

Safety Representatives should also be consulted on risk assessments of chemicals and the arrangements the employer has in place for training employees on chemical safety.

Investigation

Employers must allow Safety Representatives to investigate potential hazards, the causes of accidents at the workplace and any complaints raised by employees. Safety Representatives should encourage members to report any accidents or cases of ill health which they think may be related to the chemicals they use, they can then, with the use of supporting information, investigate these issues.

Inspection

Inspections should be carried out following a notifiable accident, disease or dangerous occurrence, where there is a substantial change to the conditions of work and routinely at least every three months. During walk through inspections, Safety Representatives should check to see whether chemicals are being used and stored safely and that control measures such as ventilation systems and personal protective equipment is functioning and regularly maintained.

Training

Employers must allow Safety Representatives paid release in the employer’s time to attend TUC or GMB health and safety training. Training on chemical safety would be an important element of such training.

Safety Committees

Where two or more Safety Representatives make a written request to the employer for a safety committee this must be set up within 3 months of the request. Safety Committees are an ideal forum to raise problems relating to chemical safety, particularly outbreaks of ill health or clusters of accidents relating to chemicals. They are also a forum to raise and discuss any health and safety audits or reports from the Health and Safety Executive.



GMB case study one

Armaboard at Burnley Lancashire manufacture melamine surface coated materials for the furniture industry. All chemicals used in the process contain formaldehyde to some degree. The GMB Safety Representative is working with the company to re-organise health and safety. This has included new COSHH assessments, health screening programmes introduced for all employees and improvements to the local exhaust ventilation system.

GMB case study two

GMB Safety Representatives at a Borough Council in the West Country arranged for copies of COSHH assessments to be provided to all relevant staff and for lockable storage facilities to be provided for any potentially hazardous substance.



How the GMB can help

Independent research has shown that people who are in a trade union are **50% LESS LIKELY TO HAVE AN ACCIDENT** than those who are not in a trade union.

Union/non union	Injury Rate	Actual injuries in one year
Trade Union Recognised	5.3	58,300
No Trade Union Recognised	10.9	181,500

Source: Reilly, Paci and Hall; British Journal of Industrial Relations, 33:2, June 1995

In other words:

YOU ARE TWICE AS SAFE IN THE GMB

The GMB is Britain's leading union for health and safety. To back up our Representatives the GMB has a network of health and safety specialists in each of our 10 Regions. The GMB also has a large National Health and Safety Department that is widely acknowledged to offer the best health and safety service of any trade union. **JOIN THE GMB NOW!!**



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