

COSHH

a brief guide to
the regulations



What you need to know about the Control of Substances
Hazardous to Health Regulations 1999 (COSHH)

Why COSHH matters?

Using chemicals or other hazardous substances at work can put people's health at risk. So the law requires employers to control exposure to hazardous substances to prevent ill health. They have to protect both employees and others who may be exposed by complying with the Control of Substances Hazardous to Health Regulations 1999 (COSHH).*

COSHH is a useful tool of good management which sets seven basic measures that employers, and sometimes employees, must take. These are set out in this leaflet in a simple step by step approach which will help you to assess risks, implement any measures needed to control exposure and establish good working practices.

This leaflet is written mainly for employers to help them meet their specific duties under COSHH. But it will also be useful to safety representatives, health and safety professionals and anyone interested in health and safety issues.

If you, as an employer, fail to

adequately control hazardous substances your employees or others may become ill. Effects from hazardous substances range from mild eye irritation to chronic lung disease or, on occasions, death (see opposite). This may:

- result in lost productivity to your business;
- leave you liable to enforcement action, including prosecution under the COSHH Regulations;
- result in civil claims from your employees.

There can be positive benefits to your business from carefully following through the requirements of COSHH:

- improved productivity as a result of using more effective controls (eg less use of raw material);
- improved employee morale;
- better employee understanding and compliance with health and safety requirements.

Details of all publications mentioned in this leaflet may be found in the reference section at the end of this leaflet. All publication titles are in italics.

* Due to be replaced by the COSHH Regulations 2002.

Hazardous substances

Hazardous substances include:

- substances used directly in work activities (eg adhesives, paints, cleaning agents);
- substances generated during work activities (eg fumes from soldering and welding);
- naturally occurring substances (eg grain dust).

Where are hazardous substances found?

In nearly all work environments (for example):

- factories;
- shops;
- mines;
- farms;
- offices.

Examples of the effects of hazardous substances include:

- skin irritation or dermatitis as a result of skin contact;
- asthma as a result of developing allergy to substances used at work;

- losing consciousness as a result of being overcome by toxic fumes;
- cancer, which may appear long after the exposure to the chemical that caused it;
- infection from bacteria and other micro-organisms (biological agents).

What COSHH requires

To comply with COSHH you need to follow these seven steps:

Step 1 *...page 6*

Assess the risks to health arising from hazardous substances used in or created by your workplace activities.

Step 2 *...page 8*

Decide what precautions are needed. You must not carry out work which could expose your employees to hazardous substances without first considering the risks and the necessary precautions, and what else you need to do to comply with COSHH.

Step 3 *...page 10*

Prevent or adequately control exposure. You must prevent your employees being exposed to

hazardous substances. Where preventing exposure is not reasonably practicable, then you must adequately control it. The advice in this leaflet, and in the other guidance it refers to, will help you to make correct assessments and to put the appropriate controls into place.

Step 4 ...page 12

Ensure that control measures are used and maintained

properly and that safety procedures are followed.

Step 5 ...page 12

Monitor the exposure of employees to hazardous substances, if necessary.

Step 6 ...page 13

Carry out appropriate health surveillance where your assessment has shown this is necessary or where COSHH sets specific requirements.

Step 7 ...page 14

Ensure employees are properly informed, trained and supervised.

What is a substance hazardous to health under COSHH?

Under COSHH there are a range of substances regarded as hazardous to health:

*Substances or mixtures of substances classified as dangerous to health under the Chemicals (Hazard, Information and Packaging for Supply) Regulations 1994 (as amended) (CHIP).**

These can be identified by their warning label and the supplier must provide a safety data sheet for them. Many commonly used dangerous substances are listed in the HSE publication *Approved Supply List. Information approved for the classification and labelling of substances and preparations dangerous for supply*, as part of the CHIP package. Suppliers must decide if preparations and substances that

* Due to be replaced by the CHIP Regulations 2002.

are not in the *Approved Supply List* are also dangerous, and, if so, label them accordingly.

Substances with Occupational exposure limits, these are listed in the HSE publication *Occupational exposure limits*.

Biological agents (bacteria and other micro-organisms), if they are directly connected with the work or if exposure is incidental, such as with farming, sewage treatment or healthcare.

Any kind of dust in a concentration specified in COSHH.

Any other substance which has comparable hazards to people's health, but which for technical reasons may not be specifically covered by CHIP eg some pesticides, medicines, cosmetics or substances produced in chemical processes.

What is not a substance hazardous to health under COSHH?

COSHH applies to virtually all substances hazardous to health except:

- asbestos and lead, which have their own regulations;
- substances which are hazardous only because they are: radioactive; simple asphyxiants; at high pressure; at extreme temperatures; or have explosive or flammable properties (other regulations apply to these risks);
- biological agents if they are *not* directly connected with the work and they are outside the employer's control, such as catching a cold from a workmate.

For the vast majority of commercial chemicals, the presence (or not) of a warning label will indicate whether COSHH is relevant. For example, there is no warning label on ordinary household washing-up liquid, so if it's used at work you do not have

to worry about COSHH; but there is a warning label on bleach, and so COSHH does apply to its use in the workplace.

Step 1

Assess the risks

Your first step is to decide whether there is a problem with the substance(s) your company is using. This is called a risk assessment. You must:

identify the hazardous substances present in your workplace;

consider the risks these substances present to people's health.

Identify the hazardous substances present in your workplace.

Look at the list on pages 4-5. Remember to think about substances which have been supplied, as well as substances which might be produced by your work activity, eg fumes, vapours,

aerosols, final products and waste materials.

Other sources of information which will help you identify hazardous substances are:

- trade associations;
- other employers in the same business;
- HSE guidance, such as *Occupational exposure limits*;
- HSE publication *Approved Supply List*.

Consider the risks these substances present to people's health.

Assessing the risk involves making a judgement on how likely it is that a hazardous substance will affect someone's health. You need to ask yourself:

- How much of the substance is in use and how could people be exposed to it? For supplied substances HSE has developed a generic risk assessment guide to help. It uses information on hazard, amount used and simple definitions of dustiness for solids or volatility for liquids. The guide is called *COSHH essentials: easy*

steps to control chemicals. The guide also helps you with the next two steps - deciding what action you need to take to control risks and controlling exposure. As well as the published version *COSHH essentials* can be found free on the Internet at

www.coshh-essentials.org.uk where you can follow the steps quickly and easily on-line.

- Who could be exposed to the substance and how often? You must remember to include all groups of people who could come into contact with the substance, ie contractors, visitors and members of the public, as well as your employees. Don't forget those involved in cleaning and maintenance tasks - high exposures can occur during this type of work.

- Is there a possibility of substances being absorbed through the skin or swallowed (eg as a result of a substance getting into the mouth from contaminated hands, during eating or smoking)?

- Are there risks to your employees at other locations, if

they work away from your main workplace? See the HSE guidance *Working alone in safety* for solitary workers away from their home base.

Who should do the assessment?

Legal responsibility for the assessment is yours, but others can do some or even most of the work of preparing it on your behalf. Except in very simple cases, whoever carries out the assessment will need to:

- have access to and understand the COSHH Regulations and relevant Approved Codes of Practice;
- be able to get all the necessary information and have the knowledge and experience to make correct decisions about the risks and the actions needed.

You and your employees have the most knowledge of what really happens in the workplace. Use this knowledge before deciding whether you need outside help. If there isn't expertise available in the company to assess the more

complex risks, you will need to get competent help, for example from a professionally qualified occupational hygienist, health and safety specialist or a trade association.

Your employees or their safety representatives or safety committee should be involved in assessments. They have valuable contributions to make. They must also be informed of the results of the assessment.

Step 2

Decide what precautions are needed

If you identify significant risks, decide on the action you need to take to remove or reduce them to acceptable levels.

To help you decide whether risks are significant, we suggest you compare any controls you already use with:

- Advice from *COSHH essentials: easy steps to control chemicals*.

This guide is for supplied substances. It takes you through a

simple risk assessment and identifies what is needed to control exposure. For a number of common industrial operations it provides detailed advice on control measures. If the controls you have in place are the same or more stringent than those recommended by the guide, then you are likely to be taking the right type of action.

- The results of monitoring workers' exposure with occupational exposure limits (OELs) published in *Occupational exposure limits*. See Step 3 for information on adequate control and for information about OELs.

- Good work practices and standards used by, or recommended for, your industry sector, eg trade associations, Health and Safety Commission industry advisory committees. Also check your chemical supplier or manufacturer's advice on storage, use and disposal.

Remember to:

- check that your control systems work, and are effective;
- consider whether the substance could be absorbed

through the skin. Where this could occur, a biological monitoring programme may help you to assess the risks. The HSE publication *Biological monitoring in the workplace: a guide to its practical application to chemical exposure*, sets out when biological monitoring is useful and the procedures for setting up an effective programme.

What further action should be taken?

If you decide that there is no risk to health or the risk is trivial, the risk assessment is complete and you do not need to do anything else at this stage.

But if you decide there are significant risks you must take action to protect your employees' (and others') health. The rest of the steps in this booklet will help you.

Even if you judge there are no risks using your present controls, you should go through the remaining steps to ensure you are fully complying with COSHH. This will also help you ensure your controls stay effective.

Recording and reviewing the assessment

View your risk assessment as a management tool. You need to retain a record of the main findings of the assessment, either in writing or on computer, unless they are so simple that they can be easily recalled and the conclusions explained at any time. You need to record enough information to explain the decisions you have taken about whether risks are significant and the need for any control measures. Also record the actions your employees and others need to take to ensure hazardous substances are adequately controlled.

The assessment should be a 'living' document, which you revisit if circumstances change. It should definitely be reviewed:

- at not less than five-yearly intervals;
- whenever there is reason to think it is no longer valid;
- where there has been a significant change in the work.

The assessment should state when the next review is planned. Records are mainly for your benefit

and form part of your system to protect health, but others may want to see them, eg safety representatives, safety committees, health and safety inspectors.

Step 3

Prevent or adequately control exposure

The COSHH Regulations require you to prevent exposure to substances hazardous to health, if it is reasonably practicable to do so. You might:

- **change the process or activity** so that the hazardous substance isn't needed or generated;
- **replace it** with a safer alternative;
- **use it in a safer form**, eg pellets instead of powder.

The HSE guidance booklet *7 steps to successful substitution of hazardous substances* advises on how to replace hazardous substances with safer alternatives.

If prevention is not reasonably

practicable, you must adequately control exposure. You can do this using one or more of these measures:

- **totally enclose** the process;
- **partially enclose it** and use extraction equipment ('local exhaust ventilation');
- **provide general ventilation**;
- **use systems** of work and handling procedures *which minimize* the chances of hazardous materials spilling, leaking or otherwise escaping;
- **reduce the number of employees exposed**, or the duration of their exposure, but only *after* considering, and where possible using, the above measures.

The *COSHH essentials: easy steps to control chemicals* guide gives advice on adequate control measures for supplied chemicals. To get the best from the guide it is important that you work through the risk assessment process it outlines, to arrive at the right measures for your chemicals and tasks.

If you cannot adequately control exposure by any of the above measures, you should

provide personal protective equipment (PPE), eg face masks, respirators, protective clothing, as a means of control. *But* please note, the Regulations only permit the use of PPE to achieve adequate control if other means of control cannot be used alone.

For a carcinogen (a substance which may cause cancer) special requirements apply. These are set out in the *Carcinogens ACOP*.

Adequate control

Under COSHH, adequate control means reducing exposure to a level that most workers could be exposed to, day after day at work, without adverse effects on their health. For a number of commonly used hazardous substances the Health and Safety Commission has assigned an occupational exposure limit (OEL) to help define adequate control.

There are two types of OEL, occupational exposure standards (OESs) and maximum exposure limits (MELs). A list of current OELs can be found in *Occupational exposure limits*.

■ **Occupational exposure standards.**

An OES is set at a level that is not likely to damage the health of workers exposed to it, by inhalation, day after day (based on current scientific knowledge).

For substances with an OES, you should reduce exposure to comply with that OES. However, under COSHH you will still be considered to have adequate control if the OES is exceeded, provided you identify why it has been exceeded and take appropriate steps to reduce exposure as soon as is reasonably practicable.

■ **Maximum exposure limits.**

MELs are set for substances which may cause the most serious health effects such as cancer and occupational asthma, and for which it is not possible to set an OES. For substances with MELs you are required to reduce exposure so far as is reasonably practicable and, in any case, below the MEL.

Skin absorption

Some substances can damage the skin itself while others can readily

penetrate it, become absorbed into the body and cause harm. So you must consider the need to protect skin in deciding on control measures. The guide *COSHH essentials: easy steps to control chemicals*, contains useful advice on skin protection.

Step 4

Ensure that control measures are used and maintained

Using the controls

COSHH requires your employees to make proper use of control measures and to report defects. It is your responsibility to take all reasonable steps to ensure that they do so. This is why you must give your employees suitable training, information and appropriate supervision (see Step 7 for a more detailed explanation).

Maintain controls

COSHH places specific duties on you to ensure that controls are kept

in efficient working order and good repair. Engineering controls and respiratory protective equipment have to be examined and, where appropriate, tested at suitable intervals. COSHH sets specific intervals between examinations for local exhaust ventilation equipment, and you must retain records of examinations and tests carried out (or a summary of them), for at least five years.

Step 5

Monitor exposure

Under COSHH, you have to 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 or deteriorated;
- exposure limits might be exceeded;
- control measures might not be working properly.

Air monitoring must also be carried out when employees are

exposed to certain substances and processes specified in Schedule 5 to the COSHH Regulations. Where it is appropriate to carry out personal air monitoring, the air to be sampled is the space around the worker's face from where the breath is taken, ie the breathing zone.

You should keep a record of any exposure monitoring you carry out for at least five years.

You can find more information on monitoring in the HSE guidance *Monitoring strategies for toxic substances*.

Step 6

Carry out appropriate health surveillance

COSHH requires you to carry out health surveillance in the following circumstances:

- where an employee is working in one of the processes listed in Schedule 6 of COSHH, eg manufacture of certain compounds of benzene, *and* is likely to receive significant exposure to the

substance listed in the Schedule;

- where employees are exposed to a substance linked to a particular disease or adverse health effect *and* there is a reasonable likelihood under the conditions of the work of that disease or effect occurring *and* it is possible to detect the disease or health effect.

Health surveillance might involve examination by a doctor or trained nurse. In some cases trained supervisors could, for example, check employees' skin for dermatitis, or ask questions about breathing difficulties where work involves substances known to cause asthma (see the questionnaire in the HSE publication *Preventing asthma at work. How to control respiratory sensitisers*). You must keep a simple record (a 'health record') of any health surveillance carried out. COSHH requires you to keep health records for at least 40 years.

For further information you can refer to the HSE guidance note *Health surveillance under COSHH: guidance for employers*. Biological

monitoring can also have a role in health surveillance. You can find further information on setting up a biological monitoring programme in the HSE publication *Biological monitoring in the workplace: a guide to its practical application to chemical exposure*.

Step 7

Ensure that employees are properly informed, trained and supervised

COSHH requires you to provide your employees with suitable information, instruction and training about:

- the nature of the substances they work with or are exposed to and the risks created by exposure to those substances;
- the precautions they should take.

You should give them sufficient information and instructions on:

- control measures, their purpose and how to use them;

- how to use personal protective equipment and clothing provided;
- results of any exposure monitoring and health surveillance (without giving people's names);
- emergency procedures.

This last step is vital. You must ensure your employees understand the risks from the hazardous substances they could be exposed to. Your control measures won't be fully effective if your employees do not know how to use them properly, or the importance of reporting faults.

Further advice and information

If in doubt, contact your local HSE office (the address is in the phone book). The staff there can refer you to the appropriate inspector or the environmental health officer at your local authority.

COSHH publications

*The Control of Substances Hazardous to Health Regulations 1999**

SI 1999/437 Stationery Office 1999
ISBN 0 11 082087 8

*General COSHH ACOP (Control of substances hazardous to health) and Carcinogens ACOP (Control of carcinogenic substances) and Biological agents ACOP (Control of biological agents). Control of Substances Hazardous to Health Regulations 1999. Approved Codes of Practice**

L5 HSE Books 1999
ISBN 0 7176 1670 3

Health surveillance under COSHH: guidance for employers

HSE Books 1995
ISBN 0 7176 0491 8

* These publications will be replaced during 2002.

COSHH essentials: easy steps to control chemicals

HSG193 HSE Books 1999
ISBN 0 7176 2421 8 also available at
www.coshh-essentials.org.uk

The management, design and operation of microbiological containment laboratories

HSE Books 2001 ISBN 0 7176 2034 4

Related publications

5 steps to risk assessment
INDG163(rev1) HSE Books 1998

Monitoring strategies for toxic substances

HSG173 HSE Books 1997
ISBN 0 7176 1411 5

Biological monitoring in the workplace: a guide to its practical application to chemical exposure

HSG167 HSE Books 1997
ISBN 0 7176 1279 1

Biological monitoring in the workplace: information for employees on its application to chemical exposure

INDG245 HSE Books 1997

Hazardous substances publications

Occupational exposure limits

EH40/2002 HSE Books 2001

ISBN 0 7176 2083 2 (revised annually)

*The complete idiot's guide to CHIP2. Chemicals (Hazard Information and Packaging for Supply) Regulations 1994**

INDG181 (rev1) HSE Books 1999

ISBN 0 7176 2439 0

*Approved Supply List (6th edition). Information approved for the classification and labelling of substances and preparations dangerous for supply. Chemicals (Hazard Information and Packaging for Supply) Regulations 1994 (as amended) (CHIP 2000)**

L124 HSE Books 2000

ISBN 0 7176 1832 3

7 steps to successful substitution of hazardous substances

HSG110 HSE Books 1994

ISBN 0 7176 0695 3

Maintenance, examination and testing of local exhaust ventilation

HSG54 HSE Books 1998

ISBN 0 7176 1485 9

The selection, use and maintenance of respiratory protective equipment. A practical guide

HSG53 HSE Books 1998

ISBN 0 7176 1537 5

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Publications on particular risks

There is space here for only a small selection - please consult HSE for details of any other guidance produced for your industry.

Ministry of Agriculture, Fisheries and Food/Health and Safety Commission *Code of Practice for the safe use of pesticides on farms and holdings. Part III of the Food and Environment Protection Act 1985 (FEPA) and the Health and Safety at Work etc. Act 1974 (HSWA) combined code* **MAFF Publications 1998** (available free via www.pesticides.gov.uk).

Safe use of pesticides for non-agricultural purposes. Control of Substances Hazardous to Health Regulations 1994. Approved Code of Practice

L9 (Second edition) HSE Books 1995
ISBN 0 7176 0542 6

Legionnaire's disease. The control of legionella bacteria in water systems. Approved Code of Practice and guidance **L8 HSE Books 2000** **ISBN 0 7176 1772 6**

Preventing asthma at work. How to control respiratory sensitisers

L55 HSE Books 1994
ISBN 0 7176 0661 9

Assessment of exposure to fume from welding and allied processes

EH54 HSE Books 1990
ISBN 0 7176 0570 1

Working alone in safety: Controlling the risks of solitary work

INDG73(rev) HSE Books 1998

Health risk management: A guide to working with solvents

HSG188 HSE Books 1998
ISBN 0 7176 1664 9

Working safely with solvents: a guide to safe working practices

INDG273 HSE Books 1998

While every effort has been made to ensure the accuracy of the references listed in this publication, their future availability cannot be guaranteed.

Further information

This leaflet is produced by HSE.
HSE priced and free publications are available by mail order from:

HSE Books, PO Box 1999, Sudbury,
Suffolk CO10 2WA
Tel: 01787 881165
Fax: 01787 313995
Website: www.hsebooks.co.uk

HSE priced publications are also available from booksellers.

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Fax: 02920 859260 e-mail: hseinformationservices@natbrit.com or write to HSE Information Services, Caerphilly Business Park, Caerphilly CF83 3GG. You can also visit HSE's website: www.hse.gov.uk

This leaflet contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

This leaflet is available in priced packs of 10 from HSE Books, ISBN 0 7176 2444 7. Single free copies are also available from HSE Books.

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