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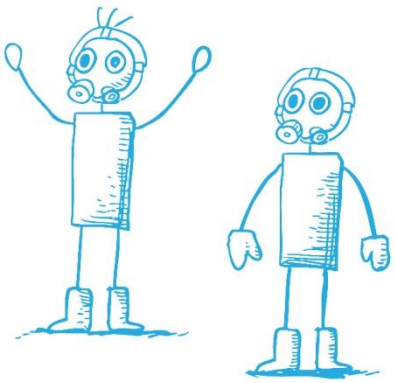
HEALTH & SAFETY

How do I carry out…?

HAZARDOUS SUBSTANCES ('COSHH') RISK ASSESSMENT



Introduction

This Guide was put together by Just Health and Safety in response to the need for a clear method of carrying out Risk Assessments under the 'Control of Substances Hazardous to Health Regulations', otherwise known as 'COSHH'.

Often, COSHH assessments are completed somewhat reluctantly by those who have been given little training or guidance on their purpose. It should be no surprise then that many completed COSHH assessments are meaningless, and do not serve in reducing risk.
Many people just don't know where to start with COSHH, so we hope that by following this Guide you will be able to avoid some of the common pitfalls and produce meaningful COSHH assessments that will benefit your organisation.

We hope that you find this guide useful – however, if you have any suggestions then please do come back to us!

What does the Law say?

'An employer shall not carry out any work which is liable to expose any employees to any substance hazardous to health unless he has made a suitable and sufficient assessment of the risk created and the steps that need to be taken to meet the requirements of the Regulations and then implemented these steps'. – Regulation 6 of the Control of Substances Hazardous to Health Regulations 2002 (as amended)[1]

These are the things you need to do:

A. Know what is meant by the term 'hazardous **substances'**
B. Find out about the potential **exposure** to hazardous substances that may happen to your employees whilst at work
C. See whether there are **prevention** measures you can take to stop exposure to any of these substances
D. Carry out an **assessment** of the risks from any remaining substances that your employees might be exposed to and, if necessary, decide on how to reduce any exposure which could be harmful
E. Take **action** – put the steps that you've decided are needed into practice

In order to carry out these tasks, we've outlined them in a step-by-step process you can follow on the next few pages.

[1] See Appendix 2 for full text of this Regulation

Step-by-Step Approach

Substances – Exposure – Prevention – Assessment - Action

A. Substances

A good first step is to make an inventory of all the substances that you use or are generated at work.
You need to make sure you think about all work processes including contact with e.g. cleaning agents, waste products etc.

For the majority of 'hazardous substances', it's easy to find out more information about them. If you've bought something in to use at work then the supplier is obliged to give you a 'datasheet' on which you find that the substance is described under the heading of 'indication of danger' as either **toxic**, **harmful**, **corrosive** or **irritant**.

However, you may also need to consider substances that are produced during the work, for example as fumes, vapours or dusts. This may need some research or maybe even sampling by an outside service such as those provided by analytical laboratories.

When you've got your inventory together, make sure that you've got up-to-date Safety Datasheets for all of the substances that have been bought in.
Often, these information sheets have reams of information so it's a good idea to extract the information that you need onto a 'COSHH Assessment Form'.
Different forms have been developed according to the needs of individual businesses, however typically a form will have space for recording:

- The Name of the person(s) making the assessment – often a team effort is best
- How the substance is used in the workplace – e.g. is it sprayed, mixed and in what quantity
- Who could come to harm from the substance – certain members of staff only etc.
- When the substance is used/produced – times of day, duration etc.
- Where the substance is used/produced, and under what conditions – well ventilated room etc.

Useful information to transfer from the datasheet is likely to be:

- Hazard Level
- Exposure Warnings
- Standard Precautions
- Personal Protective Equipment
- First Aid Arrangements
- Spillage and Disposal procedures

NB: If the substance has been assigned a Workplace Exposure Limit ('WEL'), or has been classified as Carcinogenic/mutagenic, or as a Respiratory/skin sensitizer then you may need to investigate more closely. See Appendix 1 for the first checks to make.

B. Exposure

It may sound obvious, but if there's no exposure to hazardous substances, then there's no problem!
(NB: however, don't forget to think about possible harm to the environment as well as to employees)

In order to determine this, it is a good idea to think about what happens *routinely*, and what could *potentially* happen.
It's important to consider exposure even if it is only occasional or unintended (e.g. if you're aware that during a decanting operation, substance X regularly gets onto the operators hands).

When considering this, bear in mind that the effort in carrying out risk assessment should be proportionate to the perceived risk – spending hours assessing the risk from 'Typ-ex' is likely to be disproportionate unless you work in the factory producing it.

If you've determined that there is exposure, it's then helpful to specify how this exposure is happening, and any controls that are in place to prevent this.

Employees may be harmed by exposure to hazardous substances when the substance is taken into the body (either during routine use or through accidental exposure) by:

- Breathing in the substance
- Skin contact
- Eye contact
- Swallowing
- Injection

Sometimes damage is caused immediately at the contact site e.g. a chemical burn or irritation, however some substances cause harm a long time after exposure, so by reading the datasheet you should know in advance about the capabilities of the substance and potential exposure.

C. Prevention

The first requirement of COSHH is to prevent exposure to substances hazardous to health where it is 'reasonably practicable' – i.e. the costs in preventing exposure would not be grossly disproportionate to the benefits.

So you should ask yourself: Can I do any of the following to prevent or reduce exposure:

- *Stop using the substance* or enclose the process to prevent exposure?
- Use a *safer alternative*?

  (NB: if you find you can only replace it with something that is *less harmful* – which also has to be one of your considerations – then you'll have to go through this process for the new substance);

Can I minimise the emission, release or spread of hazardous substances by:

- Improve the *design or operation* of processes/activities?
- Increase the *effectiveness or reliability* of the controls?
- Reduce the *amount of substance* used/stored?

And can any of the following be achieved:

- Reduce the *number of people exposed*/exposure time?
- Control exposure adequately *without resorting to the use of PPE*?
- Provide *information/training* for all employees on the risks & controls?

D. Assessment

In going through the above process, you've already carried out most of the 'assessment', the only thing that is missing is an obvious conclusion.

Different risk assessment scoring systems have been developed, but in most cases you will have a keen awareness of whether you are doing enough or whether you need to put improvements in place to better control exposure – so a simple 'Yes/No' may suffice.

E. Action

To make sure that you have reduced exposure to as low a level as is 'reasonably practicable', you must apply the following principles of good practice:

a) Design and operate processes and activities to minimise emission, release and spread of substances hazardous to health

b) Take into account all relevant routes of exposure – inhalation, skin absorption and ingestion – when developing control measures

c) Control exposure by measures that are proportionate to the health risk

d) Choose the most effective and reliable control options which minimise the escape and spread of substances hazardous to health

e) Where adequate control of exposure cannot be achieved by other means, provide, in combination with other control measures, suitable protective equipment

f) Check and review regularly all elements of control measures for their continuing effectiveness

g) Inform and train all employees on the hazards and risks from the substances with which they work and the use of control measures developed to minimise the risks

h) Ensure that the introduction of control measures does not increase the overall risk to health and safety

Appendix 1

If the substance has been assigned a Workplace Exposure Limit ('WEL'), or has been classified as Carcinogenic/mutagenic, or as a Respiratory/skin sensitizer then you may need to investigate more closely.

Ask yourself the following questions:

i. Has been assigned a Workplace Exposure Limit ('**WEL**')

How would I know? Workplace Exposure Limits are concentrations of hazardous substances in the air, and are listed in HSE publication EH40/2005 and in the safety datasheet

If so, you must make sure that the WEL is not exceeded;

ii. Has been classified as Carcinogenic/mutagenic

How would I know? They carry the risk phrase R45, R46 or R49, or are listed in Schedule 1 of COSHH and in the safety datasheet

If so, then you must make sure that exposure is reduced to as low a level as is 'reasonably practicable' ('ALARP')

iii. Has been classified as a Respiratory/skin sensitiser

How would I know? They carry the risk phrase R42, or R42/43, or are listed in section C of an HSE publication[2] or your risk assessment may have shown a substance to be a potential cause of occupational asthma

If so, then you must make sure that exposure is reduced to as low a level as is 'reasonably practicable' ('ALARP')

[2] *'Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma',*

Appendix 2

Regulation 6

1. An employer shall not carry out any work which is liable to expose any employees to any substance hazardous to health unless he has:

a. made a suitable and sufficient assessment of the risk created by that work to the health of those employees and of the steps that need to be taken to meet the requirements of these Regulations; and

b. implemented the steps referred to in sub-paragraph (a).

2. The risk assessment shall include consideration of:

a. the hazardous properties of the substance;
b. information on health effects provided by the supplier, including information contained in any relevant safety data sheet;
c. the level, type and duration of exposure;
d. the circumstances of the work, including the amount of the substance involved;
e. activities, such as maintenance, where there is the potential for a high level of exposure;
f. any relevant workplace exposure limit or similar occupational exposure limit;
g. the effect of preventive and control measures which have been or will be taken in accordance with Regulation 7;
h. the results of relevant health surveillance;
i. the results of monitoring of exposure in accordance with Regulation 10;
j. in circumstances where the work will involve exposure to more than one substance hazardous to health, the risk presented by exposure to such substances in combination;
k. the approved classification of any biological agent; and
l. such additional information as the employer may need in order to complete the risk assessment.

3. The risk assessment shall be reviewed regularly and forthwith if:

a. there is reason to suspect that the risk assessment is no longer valid
b. there has been a significant change in the work to which the risk assessment relates; or
c. the results of any monitoring carried out in accordance with regulation 10 shows it to be necessary,

and where, as a result of the review, changes to the risk assessment are required, those changes shall be made

4. Where the employer employs 5 or more employees, he shall record:

a. the significant findings of the risk assessment as soon as is practicable after the risk assessment is made; and
b. the steps which he has taken to meet the requirement of regulation 7.