

WHITEPAPER:

Understanding COSHH Regulation

Substances Covered by COSHH Include;

- Gases, such as CO, CO₂, Radon and Hydrogen Sulphide.
- Dusts produced from cutting, sanding or breaking common construction materials.
- Biological agents and germs, such as bacteria, viruses and parasites.
- Liquids, including cleaning products and pesticides.
- Fumes, such as exhaust fumes, welding or burning fumes.
- Vapours such as Acetone, Xylene and other VOC's which may be flammable when mixed with air.
- Nanomaterials and technology, found in products such as batteries, cosmetics and coatings.
- Any respirable or inhalable dust that does not have its own limits in EH40 is covered by COSHH when present in sufficient quantities.

What is COSHH?

The Control of substances hazardous to health regulations 2002 set out the principles which must be followed to ensure that employees are not exposed to hazardous materials whilst at work.



Hazardous Contact and Exposure

Hazardous substances can cause harm in many different ways; inhalation, ingestion, contact with skin or wounds can all result in illness or damage to our bodies.

Hazardous substances can also cause severe damage to the environment, effecting wildlife and surrounding ecosystems.

Exposure to hazards can effect everyone differently but, generally, they can cause mild to severe short and long term health effects.

Milder short term effects could include eye or skin irritation, allergies and viral infections. Severe long term effects can include poisoning, skin diseases, respiratory diseases, cancer and reproductive issues that can lead to birth defects. Therefore, the correct handling of hazards is essential to the health of people and the environment.

Hazard Symbols



= Flammable



= Oxidising



= Toxic



= Corrosive



= Explosive



= Health Hazard



= Environmental Hazard



= Serious Health Hazard



= Gas Under Pressure

Liquids



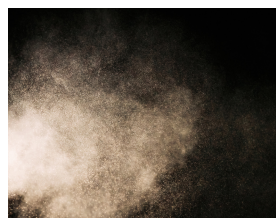
Hazardous liquids come in a number of forms e.g. cleaning products, pesticides, poisons, acids, alkalis, and liquefied gases.

These hazards must be stored in appropriate containers that display the correct hazard symbol(s), risks and safe-use guidance.

Protective measures include;

- Working in well-ventilated areas.
- Following the product label instructions.
- Keeping chemicals that may react to each other separate.
- Keeping hazards in their original containers and never transferring a hazardous liquid from one container to another.

Dusts



Hazardous dusts can be produced by materials, such as wood, ballast, plasterboard, concrete, bricks and glass. Once produced, dust spreads very easily.

Size, type and amount of dust in the air determines whether the dust is caught in your airways or is pulled deep down into your lungs.

Effective dust control can be managed in three easy steps;



Capture the hazard - Position the dust extraction hood as close as possible to the activity to ensure the dust is captured at source.

Contain the hazard - The immediate work area should be contained as much as possible to prevent dust/fume migrating and affecting other workers on site or people nearby.

Control the hazard - Negative pressure can be applied to prevent dust migration outside of the work area.

Gases, Vapours, Mists and Fumes



These hazards carry different risks and are produced by activities and equipment, such as welding, paint sprays, cutting, grinding and diesel plant/ vehicles. Harmful gases are particularly hazardous when working in confined environments e.g. basements and tunnels.

Protective measures include;

- Ensuring work is carried out in well ventilated areas.
- Carrying out works up-wind of substances where possible.
- Not removing any protective equipment or clothing until substances have cleared from the work area.

Legislation

The Globally Harmonized System (GHS) has been adopted worldwide for each country to base their own legislation on.

The British system, known as the "Great Britain Mandatory Classification and Labelling" (GB MCL) follows the same principles as the GHS.

Recognised British and European legislation includes;

- **The Globally Harmonized System (GHS)**
- **The Great Britain Mandatory Classification and Labelling" (GB MCL)**
- **GB CLP - legislation for England, Scotland and Wales**
- **EU CLP - legislation for Europe and Northern Ireland**

5 Simple Steps



There are a number of ways that risks to health and safety can be reduced and controlled. These can be achieved through five simple steps.

- 1. Assess the risks**
- 2. Control exposure**
- 3. Follow procedures**
- 4. Monitor exposure**
- 5. Conduct Health surveillance**

1. Assess the Risks

Before starting work with any potentially hazardous material, you should check the manufacturers data sheets for any specific hazards. If the material is classed as "dangerous for supply" you should obtain a copy of the manufacturers Material Safety Data Sheet or MSDS which will give you specific information that you will need to safely work with the material including:

- The risks associated with the substance
- Any applicable hazard symbols and statements
- Storage and disposal conditions
- Control measures which should be put in place when using the material
- What to do in the event of an emergency
- A contact number for the supplier that can be used for emergency advice

2. Control Exposure

Now you know the materials you are dealing with, it is time to consider the work activity and environment. This is best done by following the hierarchy of control.

The Hierarchy of Control; Explained

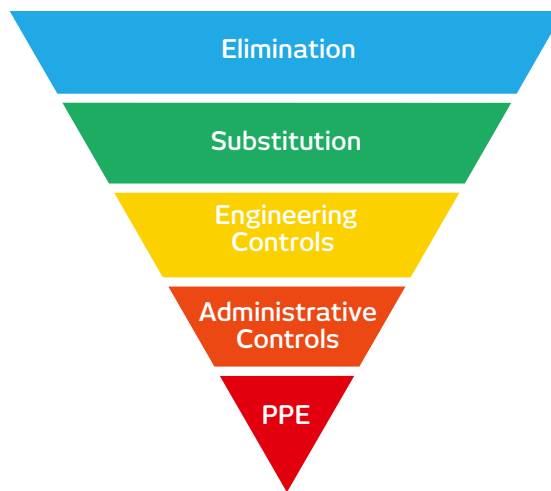
Elimination – Ensure the hazard is avoided in the first place by cutting off access to the site, for example.

Substitution – If elimination cannot be achieved, look at safer alternative products or processes.

Engineering Controls – If the above fail to achieve the required results, look at Local Exhaust Ventilation (LEV) systems and containment which capture hazards at their source, effectively improving and protecting your environment.

Administrative Controls – How much is too much? Apply Work Exposure Limits (WELs) here. Understanding what workers can be safely exposed to on site, allows you to manage exposure time.

Personal Protective Equipment (PPE) – PPE is a last resort. If you only rely on PPE, then you are not improving and protecting the environment; the person wearing the PPE will be the only one protected, and those in the surrounding environment will be affected by the hazard(s).



If you are unable to eliminate the hazard or make suitable substitutions, you will need to consider engineering controls. Some examples are shown below.



Ventex® Centrifugal Fan 300M ATEX

A high airflow ATEX approved centrifugal fan, suitable for use in potentially explosive atmospheres and supplying long duct runs of up to 80m. This unit can move in excess of 15mtrs/sec when multiple 100mm ducts are on the intake.

[LEARN MORE](#)



RAVEX® Portable Welding Fume Filter MF

A light-weight, high-volume and high-pressure fume extraction system, designed to capture and filter welding fume particulate. Intended for light duty welding applications, this is an ideal solution when working in confined and hard to reach spaces on site.

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RAVEX® Wandafilta Plus

This powerful fume extraction and filtration kit can achieve negative pressures. It can be fitted with up to three stages of filter media (eg. EU4, EU7, Carbon, HEPA), and has an optional integrated spark guard.



[LEARN MORE](#)

DUSTEX® Wandafilta Pro

This kit can move up to 5400m³/hr of air, making it ideal for heavy duty dust extraction, as well as the maintenance of pressure differentials to prevent the spread of hazardous dust.

Remember!



Everyone in your place of work is responsible for preventing accidents and emergencies from happening - including you.



If you've taken all of the precautions required and have followed procedure, you can be confident that you aren't putting yourself, those you work with or those you live with at risk of exposure.



If you feel unsure or concerned about anything in your place of work regarding your health and/or safety, talk to your manager or health and safety representative.

Are you unsure what health hazard controls you require on site?

Click here to arrange a free consultation.

BOOK NOW



3. Follow procedures

We know the hazards and have a plan for controlling them to reduce exposure to below any workplace exposure limits. We now need to manage our team to ensure that we are working safely and to the plan, using controls like LEV systems correctly and observing good hygiene practices.

If there are any concerns about the product, process or any control measures, work should stop, and the risk assessment and method statement be revisited. Each member of the team will play a part in the successful, safe delivery of the project.

4. Monitor exposure

Where possible use real-time monitoring equipment to ensure that the controls are effective in preventing or reducing exposure to below legal limits as laid out in HSE document EH40.

Maintaining records of the control measures, work durations and residual exposures will demonstrate that the hazards have been suitably controlled and that our people are protected.

5. Conduct health surveillance

Depending upon the products and materials in use there may be a requirement to conduct health surveillance on a regular basis. Whilst this is only mandatory for a relatively small number of products, it makes sense to carry out relevant checks to ensure that the health of our people is not negatively impacted by our work.

- Any protective items provided for you **MUST** fit properly, and should be comfortable to wear and use; they should help you complete your task, not interfere with it.

It is also very important to wash your hands;

- After handling any hazardous substances (even if you've worn PPE).
- Before eating, drinking, smoking - anything involving your hands going near your mouth or eyes.