

SECTION 4

WORKING WITH CHEMICALS



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SECTION 4 - WORKING WITH CHEMICALS

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4.2 What are hazardous chemicals?

Hazardous chemicals fall under the **Control of Substances Hazardous to Health Regulations 2002** – this is often shorted to **COSHH**.

The purpose of the COSHH regulations is to protect people against health risks – both short-term and long-term - caused by hazardous substances used at work.

Under the COSHH regulations, employers need to prevent or reduce their workers' – and other people's - exposure to substances that are hazardous to health.

HAZARDOUS SUBSTANCES

Any substance that can be harmful to health

Hazardous Substances can take different forms:

- Liquids – such as bleach
- Dust – such as henna
- Solids
- Gases – such as aerosols
- Vapours
- Micro-organisms – such as from legionella

Hazardous Substances can enter our bodies in different ways:

- Ingestion – eating or drinking chemicals, such as from not having washed hands properly prior to eating
- Inhalation – such as breathing in hairspray
- Injection – Injected through the skin via contaminated needles
- Absorption – via the skin, such as chemicals touching the skin directly
- Instillation – via the eyes, such as chemical splatters

Acute health effects, such as eye and throat irritation may occur almost immediately. Chronic health effects, such as allergic contact dermatitis, take some time to develop.

The likelihood of a hazardous chemical causing health effects depends on a number of factors, including:

- the toxicity of the substance

- the amount of chemical that workers are exposed to
- the length of exposure
- the frequency of exposure
- the route of entry into the body

You can determine whether a product is a hazardous chemical by reading its label ([see 2.3.2](#)) and safety data sheet ([see 2.3.3](#)). If you are unsure, contact your supplier.

4.3 Cosmetics Regulations

[The Control of Substances Hazardous to Health Regulations 2002](#) (COSHH) are the regulations that govern substances hazardous to health in the UK.

There is also a regulatory framework governing the cosmetics industry in the UK. It is there to ensure consumer safety and product quality, to protect customers from misleading claims and to protect the environment. The main legislation is [The Product Safety and Metrology etc. \(Amendment etc.\) \(EU Exit\) Regulations 2019](#) (also called UKCR or UK Cosmetics Regulations). These are based on the [EU Cosmetic Products Regulation \(EC\) No. 1223/2009](#).

The regulations cover a wide range of products, including makeup, skincare, perfumes, hair dyes, sunscreens, and deodorants.

They require all products made available in the UK – whether for payment or free of charge, manufactured in the UK or abroad - to be safe and fit for purpose.

Each cosmetic needs to have a Product Information File (PIF). This file contains all the important information about the finished product:

- 1) The description of the cosmetic product
- 2) Cosmetic Product Safety Report
- 3) Method of manufacture,
- 4) Proof for any effects that are claimed
- 5) Data on animal testing

4.4 The Classification, Labelling and Packaging (CLP) Regulation







The GB CLP Regulation 2021 regulates the classification, labelling, and packaging of chemicals in England, Scotland, and Wales. It is the Retained CLP Regulation (EU) No. 1272/2008 as amended for Great Britain.

The manufacturer has a duty to label and package the product in accordance with the GB CLP Regulation. They have to include instantly recognisable pictograms which indicate the hazardous nature of a product. This is a globally harmonised recognition scheme, with the same system used throughout the world (since June 2015).

Under the Globally Harmonized System of Classification and Labelling of Chemicals (GHS Rev. 10, 2023), two sets of hazard pictograms must be used:

- 1) for the labelling of containers and workplace hazard warnings
- 2) for use during the transport of dangerous goods

The pictograms in the group for the labelling of containers and workplace hazards are a black and white symbol, surrounded by a red diamond. See the pictograms below:

	GHS01: EXPLOSIVE		GHS02: FLAMMABLE
GHS03: OXIDIZING		GHS04: COMPRESSED GAS	
	GHS05: CORROSIVE		GHS06: TOXIC

GHS07: HEALTH HAZARD/ HAZARDOUS TO OZONE LAYER		GHS08: SERIOUS HEALTH HAZARD	
	GHS09: HAZARDOUS TO THE ENVIRONMENT		

It is essential that you recognise and learn these pictograms and their meanings and that your staff are made aware of them. Where a product is labelled in accordance with the CLP Regulation, it is your duty to undertake a COSHH assessment.



Containers of hazardous chemicals must be labelled with the following information:

- I. Product ID
- II. GHS pictogram
- III. A signal word (Danger or Warning)
- IV. Hazard statements
- V. Precautionary statements
- VI. Supplier identification
- VII. Manufacturer, importer, or distributor contact information

As you can see, you can get a lot of information about a chemical from the main packaging itself! Even more can be learned from the Safety Data Sheets ([see 2.3.2](#)).

4.5 Safety Data Sheets

Under the EU REACH Regulation 2021, all chemicals need to be supplied with an up-to-date **Safety Data Sheet** (SDS).

The Safety Data Sheet describes the chemicals in the product, and gives information on safe handling, storage and emergency measures. Under the Control of Substances Hazardous to Health Regulations 2002, one is required to **use** the Safety Data Sheets to make a risk assessment.

PLEASE NOTE: THEY ARE THERE TO HELP WITH THE RISK ASSESSMENT, THEY ARE NOT THE RISK ASSESSMENT ITSELF. The information relates to the substance, and not to the way it is used in the workplace. Every business uses the chemicals in a different way!

All Safety Data Sheets must include the following sections:

1. Identification
2. Hazard(s) identification
3. Composition/information on ingredients
4. First-aid measures
5. Fire-fighting measures
6. Accidental release measures
7. Handling and storage
8. Exposure controls/personal protection
9. Physical and chemical properties
10. Stability and reactivity
11. Toxicological information
12. Ecological information
13. Disposal considerations
14. Transport information
15. Regulatory information
16. Other information

Every salon must supply staff with easy access to the safety data sheets.



4.6 Chemical hazards in the salon

Workers in the hair industry may be exposed to a wide range of products containing hazardous chemicals, including:

- ❖ bleaches/powder lighteners
- ❖ brow and lash tints
- ❖ chemical peels
- ❖ disinfectants and cleaning products
- ❖ hair colouring products
- ❖ hair styling products

- ❖ permanent wave solutions
- ❖ peroxides
- ❖ henna
- ❖ shampoos
- ❖ smoothing systems
- ❖ straightening systems
- ❖ wax solvents

Exposure to some of these chemicals can increase the risk of various health problems. Some examples are shown in the following table:

<p style="text-align: center;">Dermatitis (inflammation of the skin)</p>	<p>There are two types of dermatitis:</p> <ol style="list-style-type: none"> 1) <i>Irritant contact dermatitis</i> results from contact with irritant substances, such as water and detergents in shampoo 2) <i>Allergic contact dermatitis</i> occurs when a person develops an allergic response to a chemical
<p style="text-align: center;">Asthma (a respiratory disease, which narrows the air passages and results in breathing difficulties)</p>	<p>Chemicals used in the hair industry may aggravate pre-existing asthma or cause occupational asthma</p>
<p style="text-align: center;">Cancer</p>	<p>Workers in the hair industry may be exposed to chemicals that are suspected of causing cancer. The precautionary approach is to limit exposure.</p>

4.7 Ventilation

Work involving hazardous chemicals, such as chemical restructuring, hair colouring, application of artificial nails or spray tanning should occur in a well-ventilated area, to prevent occupational asthma and/or other lung problems.

- Natural ventilation generally does not provide sufficient airflow to be suitable for use as a method for controlling exposure to airborne contaminants, such as chemical vapours, mists and dusts in hairdressing, nail and beauty salons
- Air-conditioning dilutes the contaminated air rather than removing it, and circulates airborne contaminants around the room. Unless there is uniform airflow, it is likely that pockets of air will remain contaminated for long periods of time

- Local exhaust ventilation (LEV) is a more reliable means for removing airborne contaminants at the source, before they can be breathed in. Care must be taken to ensure the system draws contaminated air away from, rather than past, a person's nose and mouth

As well as following the principles of good practice for the control of exposure to substances hazardous to health, you need to be aware that, for many substances, limits have been set on the amounts of substances that workers are permitted to be inhaled during a working day.

These limits are known as workplace exposure limits (WELs).

If the substance is known to cause cancer or asthma (check the label/safety data sheet), you must control exposure to as low a level as reasonably practicable.

4.8 Wet-working

Many hairdressers spend a lot of time with wet hands; e.g. when washing hair, colouring hair, cleaning, using aerosols etc. This puts them at a high risk of developing skin damage due to the frequent exposure to water and chemicals.

This can cause irritant contact dermatitis (or occupational dermatitis) or eczema. Research has shown that [up to 70%](#) of hairdressers suffer from work-related skin damage, mostly hand dermatitis, at some point during their career. This is due to wet work and occupational contact to irritants such as detergents or hairdressing chemicals, and allergens.

Products that are not normally considered irritants may become irritants to hair dressers due to the frequent interaction with them.

4.9 Carry out a risk assessment

To do this you need to consider:

- The hazards of substances or their ingredients – read the labels and safety data sheets. If in doubt contact your supplier. Remember that some hazardous substances can be produced by the process you use
- The route into the body (breathed in, swallowed or taken in through the skin) and the result of exposure by each of these routes
- The concentration or conditions likely to cause ill health

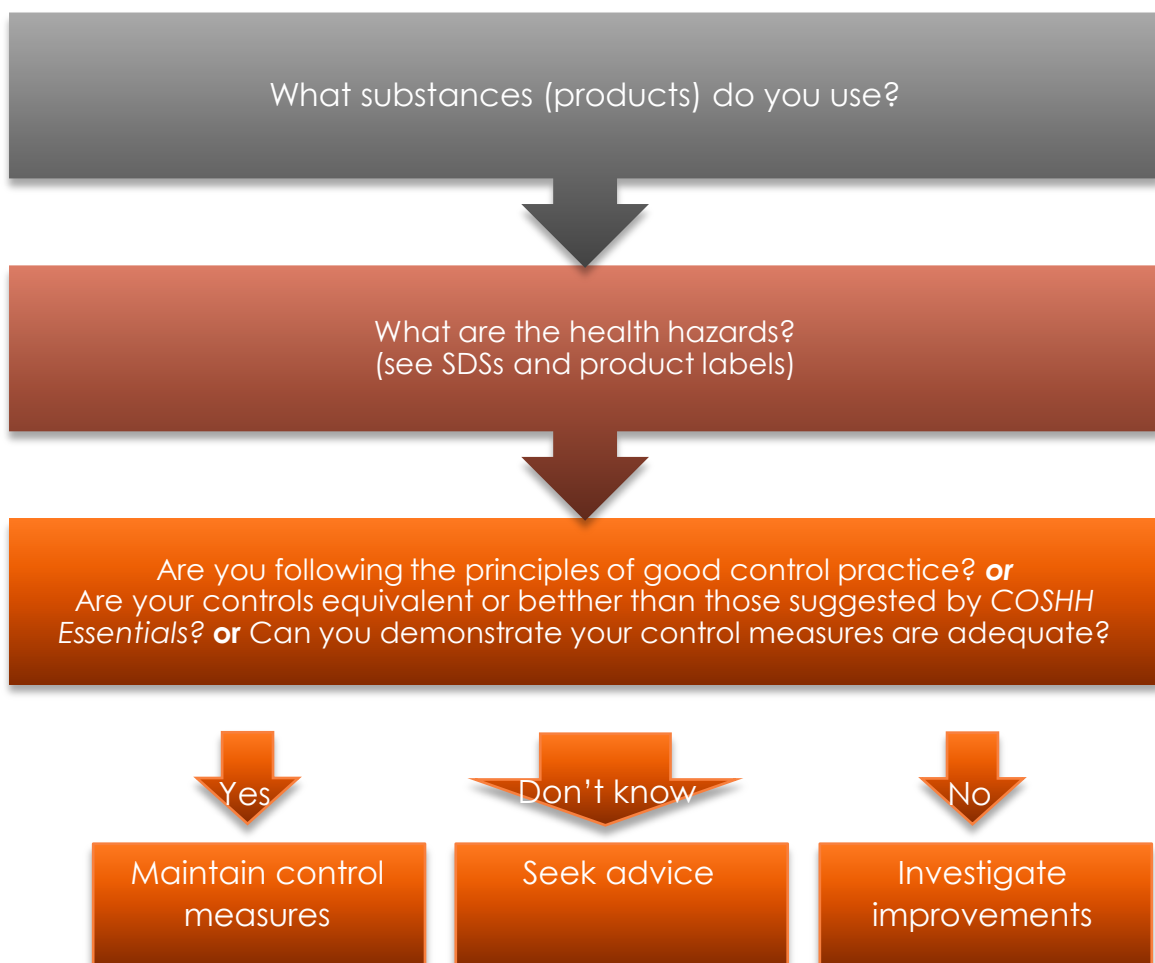
- The first symptoms of over-exposure and whether exposure could result in ill-health effects, eg asthma or dermatitis
- Who could be exposed. Don't forget maintenance workers, contractors and members of the public
- If people could be exposed accidentally, eg while cleaning, through spillage or if your controls fail
- How often people work with, or are exposed to, the substance
- How much people work with and for how long



See Section 2 Risk Assessments

4.10 Are your control measures adequate?

There are various ways of deciding. Probably the simplest way is to use this chart from the COSHH Regulations:



Every person in the workplace is responsible for health and safety in the workplace. An employer is required to ensure that appropriate controls are in place to prevent and manage those risks.

Employers are required to do regular and/or new risk assessments when information on work practices or control measures are changed or introduced and to keep a record about the risk assessment.

If a risk assessment shows that exposure to a hazardous chemical has taken place then the responsible person should prevent further exposures or reduce it as much as possible.

Where there is airborne exposure, the responsible person must ensure that the level of exposure is not above the workplace exposure standard.

4.11 Record and review

You should keep a record of what you have found out about the risks to health and the appropriate control measures and when they will be implemented and by whom. If you have more than 5 employees, you must write this down. If you don't, it's still best practice to record your significant findings.

Write down:

- Where exposures occur
- What the control measures are
- How you will maintain control

Keep an eye on things. Changes in equipment, materials or methods may require you to review your earlier decisions. In any case, each year review the risks and control measures

4.12 Hair industry – general control measures

Here is a list of general Hair industry control measures:

4.12.1 Substitution

- Replace a chemical with an alternative product that contains a less hazardous chemical. Health information found in a Safety Data Sheets may assist in the selection of a less hazardous chemical
- Replace pressurised aerosol containers with pump sprays e.g. pressurised wrap catalyst, hairsprays

4.12.2 Engineering Controls

- Make sure there is good ventilation so that exposure to airborne contaminants can be prevented or minimised, e.g. local exhaust ventilation tested to show adequate removal of the hazards
- Protect against eye splash by wearing safety glasses in areas where chemicals are mixed
- Make sure that the motors of machines within 3 metres of the nail stations or close to the chemical storage area are intrinsically safe (no spark or heat to ignite chemicals or vapour)

4.12.3 Administrative controls

- Make sure Safety Data Sheets are available for all chemicals used in the salon
- Make sure workers are provided with suitable information, training and supervision on the safe use of chemicals and PPE (personal protective equipment)
- Store chemicals away from energy sources, such as fuse boxes, naked flames, heat and intense light sources
- Store flammable chemicals in a cool place in a securely locked fireproof cabinet
- Make sure chemicals are out of reach of children and vulnerable adults
- Make sure procedures are in place for the clean-up of spills using a suitable absorbent material

- Clean up chemical spills promptly
- Make sure that spilled chemicals and equipment used for chemical clean-up are disposed of appropriately. Contact the Environmental Protection Authority for further advice
- Purchase chemicals in ready-to-use packages rather than transferring from large containers
- Do not eat, drink or smoke in areas that contain chemicals
- Wash hands with a pH neutral soap or barrier cream before eating, drinking or smoking

4.12.4 Personal Protective Equipment

- Provide disposable, non-latex gloves, glasses, aprons and respiratory protection as required on the Safety Data Sheets or chosen during your Hazardous Chemicals risk assessment
- Wash and dry hands thoroughly after use
- Change gloves between clients
- Provide workers with training on the fit, maintenance and use of personal protective equipment
- Apply barrier cream on exposed skin areas if bothered by skin irritation; do not use aqueous creams, as they can cause skin irritation such as burning, stinging, itching and redness
- Cover broken skin with a waterproof dressing
- Wear eye protection and covered shoes to protect against chemical splashes

4.13 Hair industry – specific control measures

Many products used in hairdressing salons are classed as Hazardous Chemicals. However, some products, such as shampoos, are not classified as 'hazardous' but may still cause adverse health effects such as dermatitis.

The following is a summarised list of specific control measures:

- Do not use products that are known to contribute to dermatitis or cause sensitivity (without adequate controls are available), such as:
 - p-phenylene diamine
 - Para toluene diamine (present in most hair colours and tints – also known as PPD and PTD)
 - glycerol monothioglycolate (present in some 'acid' permanent wave solutions – also known as GMTG)

- thioglycolic acid (present in some hair straighteners)
- Use the product at the recommended concentration only
- Do not use nickel-plated equipment with permanent wave solutions containing ammonium thioglycolate. Use high quality stainless steel or plastic equipment
- Use appropriate Personal Protective Equipment (PPE) during mixing or when there is elevated exposure potential
- Ensure workers wear gloves and safety goggles or glasses over contact lenses or replace contact lenses with prescriptive safety glasses with side protection when mixing or using the following:
 - Peroxides (mixed with eyelash and eyebrow tints)
 - Wax solvents
 - Methylated spirits
 - Turpentine
 - Essential oils
- Rotate those on cleaning and washing duties
- Carry out health surveillance - have a system in place for regular health inspections, of the skin and lungs

Always refer to the Safety Data Sheets for further information on these products.

In most cases, the concentration of Hazardous Chemicals in these products does not classify the product as hazardous for regulatory purposes. Workers with pre-existing skin conditions may need to take particular care when using these products.



4.13.1 Do's & Don'ts

- Do not use products containing liquid methyl methacrylate (MMA) monomer
- Work over a tested vented workstation to ensure the maximum of vapour and dust removal
- Use a metal, foot pedalled flip top bin and empty regularly
- Use dispenser bottles with small openings (only large enough for an application brush to enter) and pressure sensitive stoppers to reduce the amount of release of vapours
- Know that Low/No odour products do not mean Low/No Vapour. Vapours of these products can in actual fact contain more harmful fumes than their full odour counterparts
- Close product containers immediately after use
- Clean up any product spills and splashes quickly and efficiently

- Provide safe storage for all chemical products
- Remove reusable towels from the workstation. Use disposable towel products. Towels on the workstation will collect dust and bacteria and any movement will release these hazards back into the breathing zone
- Use disposable towels for cleaning brushes etc. & dispose of these into a sealed bin
- Respirators (P2) are protective against the fine dust that is produced from the filing of artificial nails but are NOT effective against many chemical vapours
- Remember that personal protective equipment (PPE), such as gloves and aprons, is the least effective and should always only be used as a last resort. When using PPE, other controls must be in place to control the hazards at their source

The PPE provided must be compatible, maintained and correctly stored. All workers must use the PPE properly following training and instruction in its use from their employer. If the PPE you provide is lost or becomes defective, the workers should report that to their supervisors

4.14 Resources

For more information, see

[INDG136, Working with substances hazardous to health. A brief guide to COSHH](#) (HSE)

[INDG330 Selecting protective gloves for work with chemicals](#) (HSE)

[SR0 COSHH essentials for service and retail - Advice for managers](#) (HSE)

[SR11 COSHH essentials for service and retail - Hairdressing](#) (HSE)

[SR24 COSHH essentials for service and retail – Storing chemical products \(small scale\)](#) (HSE)

[A guide to the health and safety of salon hair products](#) (HBSA)

[HSG97, A step by step guide to COSHH assessment](#) (HSE)

[HSG167 Biological monitoring in the workplace](#) (HSE)

[HSG262, Managing skin exposure risks at work](#) (HSE)

[L5, The Control of Substances Hazardous to Health Regulations 2002 \(as amended\). Approved Code of Practice and guidance](#) (HSE)

[L25, Personal protective equipment at Work Regulations 1992 \(as amended\)](#) (HSE)

[EH40/2005, Workplace exposure limits](#) (HSE)

