

Use chemicals safely in schools

This information sheet is written for primary and post primary school staff and post primary school students to raise awareness of the safe use and management of chemical in schools. This aims to enable staff and students to recognise the dangers associated with chemicals and how to protect themselves from these dangers.



What chemicals are used in schools?

In a school and classroom setting, when you think about chemicals, it's important to remember that chemicals may be present in all areas. However, extra care should be taken when with:

- **Cleaning products** (e.g., detergents, floor cleaning products, etc).
- **Chemicals used in science experiments and demonstrations** (e.g., solvents, reagents, etc).
- **Art, Craft and Design supply** (e.g., art supplies, glosses, paint remover, glue, etc).
- **Technology subject supplies** (e.g., 3D printing material, wood dust, soldering materials, etc).
- **Home Economics supplies** (e.g., cleaning products, cooking products, etc).

How can chemicals cause harm?



Important information!

Any chemical that causes harm is referred to as a Hazardous Chemical and needs to be risk assessed.

The potential of chemicals in your school to cause harm depends on several factors including how dangerous the chemicals are and how long and how often you are exposed to them.

Chemical exposure can result in burns, skin and eye irritation, skin rashes, dizziness, and a general feeling of being unwell.



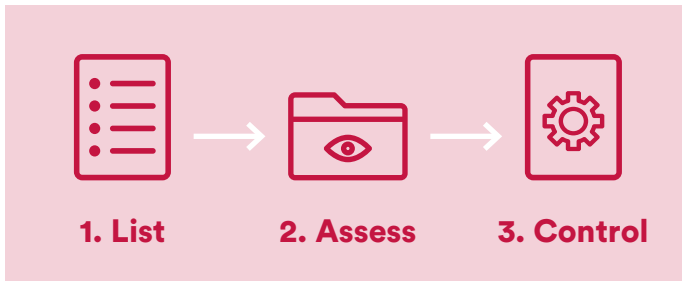
Using chemicals in schools

When using chemicals in your school, it is important that school staff know how dangerous the chemicals are during the life cycle of the chemical. The safety data sheet is a key tool and can be used when performing a risk assessment on the chemicals used. It is also important to ensure that the school staff read the label, use, and store the chemical product as advised to keep you, your students, and the environment safe.

How to protect my fellow classmates from chemicals

Students may be at an increased risk of injury or ill health as they may be less familiar with the chemicals used or generated. Chemical risk assessments and safety statements provide key information to chemical users to help protect themselves and others from workplace hazards. Some textbooks include risk assessments for class-based activities, these may need to be adapted for your specific use. These should be combined with instruction from the teacher and supervision on the safe use of chemicals.

How do I manage chemical hazards?



Chemical exposure can occur if:

- They are swallowed.
- They are inhaled.
- They come into contact with the skin or eyes.



Top tip!

The Safety Data Sheet (SDS) will tell you important information about chemicals you purchase. This can be gotten from your supplier.

1 Make a list

A list (chemical inventory) of the chemicals you use or generate (e.g. dusts).

The inventory might include:

- where and how much are stored,
- what it is used for,
- how it can cause harm (from label or SDS), and
- supplier details.

2 Assess the risk

Look at each chemical and consider the following:

- How is it used or generated (e.g., sprayed, poured, painted)?
- How often and for how long is the chemical used?
- Who and how many people use the chemical?
- Could vulnerable people be exposed, e.g. pregnant, post-natal and breastfeeding employees?
- How could someone be exposed (e.g. by breathing in or skin contact)?

- How much is used, stored and disposed of?
- Could people nearby be exposed?
- What control measures are in place and are these enough?
- Where is the chemical delivered on-site, and how and when is it moved to storage?
- What first aid measures (e.g. eye wash) and spill kits are available?
- How is chemical waste disposed of?

3 Control the risk

New control measures might be needed to reduce the likelihood of harm.

For example:

- Not using the chemical anymore.
- Replacing the chemical with a less harmful one.
- Using a fume cupboard or Local Exhaust Ventilation (seek expert advice).
- Providing training.

Reading the label and Safety Data Sheet (SDS) will guide you on:

- handling,
- storage, and
- emergency measures.



Important information!

Chemicals generated, e.g., dusts and fumes, and cosmetic products do not have labels or Safety Data Sheets but must be risk assessed.

How to protect high risk groups

Students and particularly new employees may be at an increased risk of injury or ill health as they may be less familiar with the chemicals at work.

To help protect better protect these at-risk groups:

- update safety statement and risk assessments regularly,
- provide adequate training and supervision,
- investigate accidents and report them to the hsa where necessary (e.g. where a school employee is injured and is off sick for 3 or more days not including the day of the accident), and
- consult with employees and elect safety representatives.

Students need to understand how to manage chemical hazards. They will come across this in their future careers as employers, employees, or managers.

Use chemicals safely in schools

Do's & don'ts when using chemicals in schools



Do!

- Do risk assess chemicals before using them.
- Do request an SDS from the supplier.
- Do read and follow the manufacturer's instructions before use.
- Do swap hazardous chemicals with less hazardous chemicals.
- Do use any recommended PPE (Personal Protective Equipment) (e.g., gloves, respirator, safety glasses).
- Do source and maintain appropriate controls from a skilled person (e.g., local exhaust ventilation and fume cupboards).
- Do keep chemicals locked away and out of reach of unauthorised personnel.
- Do store the minimum amount of the chemical required.
- Do dispose of chemical waste using a licenced waste provider.
- Do train users in the safe use of chemicals.
- Do follow emergency procedures if an accident or incident occurs.

Important information!



In case of emergency, contact the National Poisons Information Centre:

www.poisons.ie

01 8092166 (8:00am - 10:00pm, 7 days a week)



Don't!

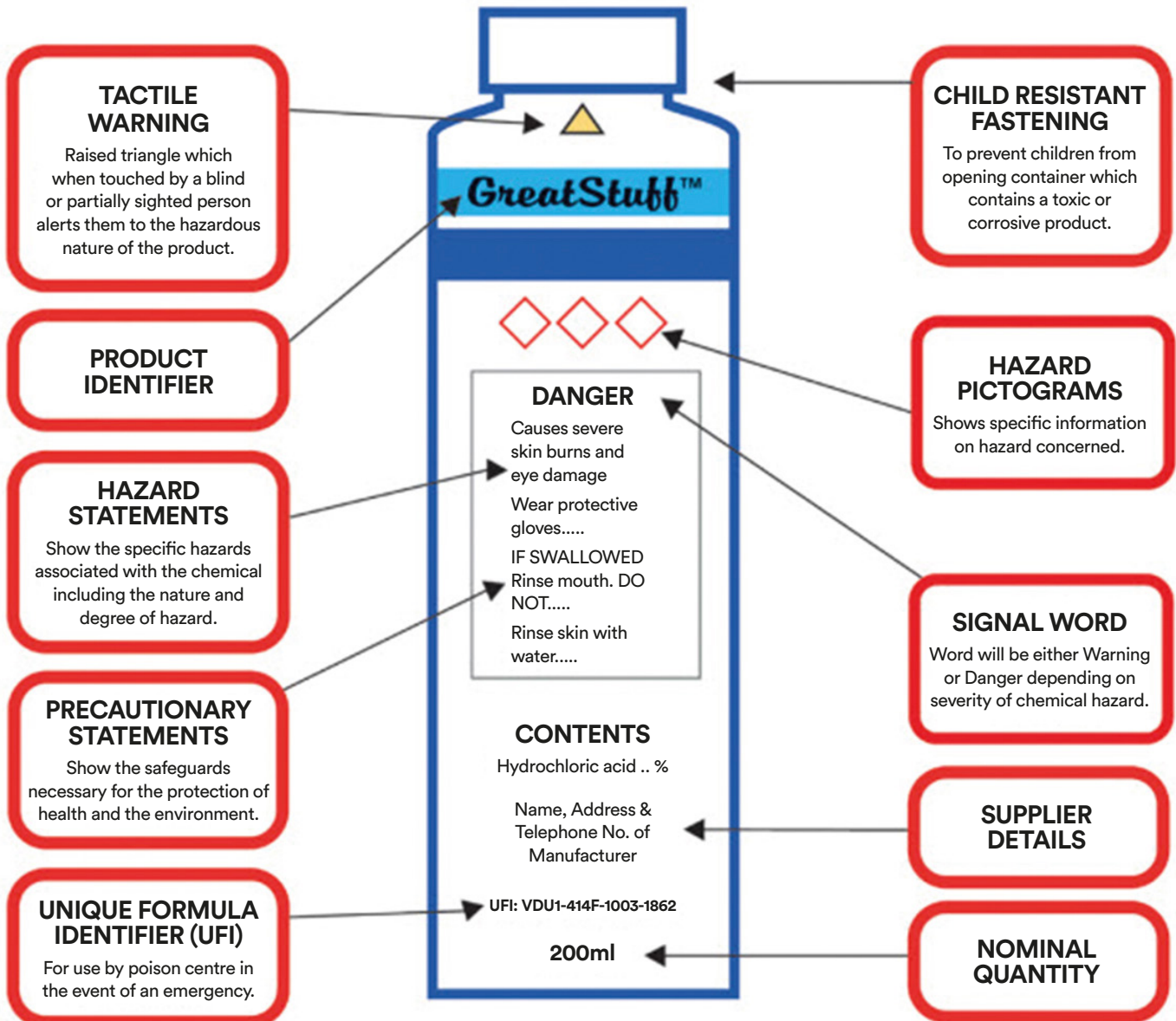
- Don't leave students unsupervised when chemicals are in use.
- Don't transfer chemicals into unmarked containers.
- Don't use flammable chemicals near sources of ignition.
- Don't mix chemicals unless you are sure they don't react.
- Don't store chemicals alphabetically or unsuitable chemicals together (e.g., acids and bases).
- Don't eat, drink, smoke or vape in areas where chemicals are present.














Use chemicals safely in schools

Understanding chemical labels

The label on the chemical container should indicate any dangerous properties of the chemical. Additional information may be found if there is a safety information leaflet or insert supplied with the product.



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DANGER		Life threatening even in small amounts and brief exposure	Handle with care
		Causes very serious long-term health effects	Never swallow or inhale
		Causes skin and eye burns	Avoid contact with skin
WARNING		Destruction of metals	Handle with care
		Skin and eye irritation	Don't swallow, touch or inhale
		Adverse health effects	Avoid release
DANGER		Damage to ozone layer	
		Explosive - sensitive to fire, heat, vibration and friction	Keep your distance
		Highly flammable - serious fires if exposed to sparks, flames, heat	Handle with care No ignition sources
WARNING		Causes or intensifies fire, increases fire risk	Wear protective clothing
		Container explodes if heated. Very cold liquid burns when touched.	Do not heat!
		Very toxic to aquatic life	Do not pour down drain

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Further information on managing chemicals

- www.hsa.ie
- **Information sheets**
 - Crystalline Silica Dust.
 - Wood Working.
 - Safety Data Sheets for Hazardous Chemicals.
 - And more...
- hsalearning.ie
 - 'Workplace Safety, Health and Welfare Induction'.
 - 'Chemicals In the Workplace'.
- BeSMART.ie



Contact our HelpDesk:
Email: contactus@hsa.ie
Phone: 0818 289 389
or visit: www.hsa.ie/education



HSA

An Údarás Sláinte agus Sábhálteachta
Health and Safety Authority