

November 2017

Hazardous substance signage

KEY FACTS

If you have hazardous substances over specific amounts in your workplace, you must display signs to let workers, other people in the workplace and emergency service workers know the substances are there and to inform them of the associated hazards.

Make sure signs give people the information they need about the substances before they get too close to them. Generally:

- if the substances are in a dedicated room, put a sign outside the room
- if the substances are in a building, but not in a dedicated room in that building, put a sign outside the building
- if the substances are outside, put a sign immediately next to the storage area
- if you have hazardous substances in any of the above places on your land, put a sign at every entrance to your land.

Signs must be visible in different weather conditions.

Signs must be easy to understand.

Make sure your signs say what they need to say - generally this is:

- that hazardous substances are present
- the general type of hazard of each substance present
- the first response in an emergency.

If the substances in your workplace change, think about whether you need to change your signs too.

Introduction

Signs help keep workplaces, workers and other people safe where hazardous substances are used, handled, manufactured or stored. They let workers, emergency service workers and visitors know which hazardous substances are in the workplace, the hazards associated with them, and the first actions to take in an emergency.

You must display signs if you have hazardous substances in your workplace over specific amounts. To check if you need signs, enter your substances and the amounts you have into the *Hazardous Substances Calculator* (the Calculator) available at: www.hazardoussubstances.govt.nz

The content and location of signs depend on the workplace, substances and storage. This guide helps you check that your signs tell people what they need to know and that your workers understand them. It describes the content required on signs for different types of substances and storage areas.

'You' – the PCBU

This guide is written for persons conducting a business or undertaking (PCBUs) as they have a duty to display signs in workplaces that use, handle, manufacture or store hazardous substances. In this guide, 'you' means the PCBU.

In simple terms, a PCBU is an individual or a company carrying on a business, but it can also be other types of organisation. More information on the PCBU and other duty holders in the workplace and their duties is available on our website: www.worksafe.govt.nz

Put the right signs in the right place

Signs must be able to be seen and understood.

Signs must also have the correct information for your workplace and the substances you have there.

Signs from safety equipment suppliers should meet the requirements in this guide, but you also have a duty to make sure that signs contain the information that they are required to display.

Make sure your signs can be understood, are clear, and stand up to the elements

This means making sure signs:

- are in English and readily understandable (see below)
- do not use abbreviations and acronyms unless people commonly understand them and you use the term in full at least once on the sign
- make all required information clearly visible and legible at a distance from no less than 10 m in varying conditions (eg in the rain or changing light)
- are made of durable materials that are resistant to sunlight and require minimal maintenance.

Are your signs readily understandable?

You must make sure that the people who are likely to read the signs can understand them. Think about whether the signs:

- give people the information they need quickly and easily
- display the information without clutter or unnecessary information.

If you think workers may not understand your signs, give them additional training by:

- explaining the signs that they will see in your workplace and their content, such as:
 - the pictograms they are likely to see and what they mean
 - the precautionary statements and what they mean
- asking them to think about when they could need to use the emergency contact information.

Where do you need to display signs?

Your signs need to be near the substances, but not too close, because people need to know about the danger before it's too late. Don't put signs:

- where objects may hide or cover them
- beside doors or gates that could cover them when open
- above doors
- where smoke could conceal them.

If you are not sure signs are in the right place, look around the places where you store hazardous substances (eg storage cabinets, dangerous goods stores). Make it as easy as possible for workers and emergency service workers to know about the hazards.

In the explanation for each specific type of sign below there is more information about where to display signs, but as a general rule if hazardous substances are:

- in a room, put a sign at the entrance to the room
- in a building, put a sign at every entrance to the building
- in a building on your land, put a sign at every entrance to the land
- outdoors, put a sign immediately next to the storage area.

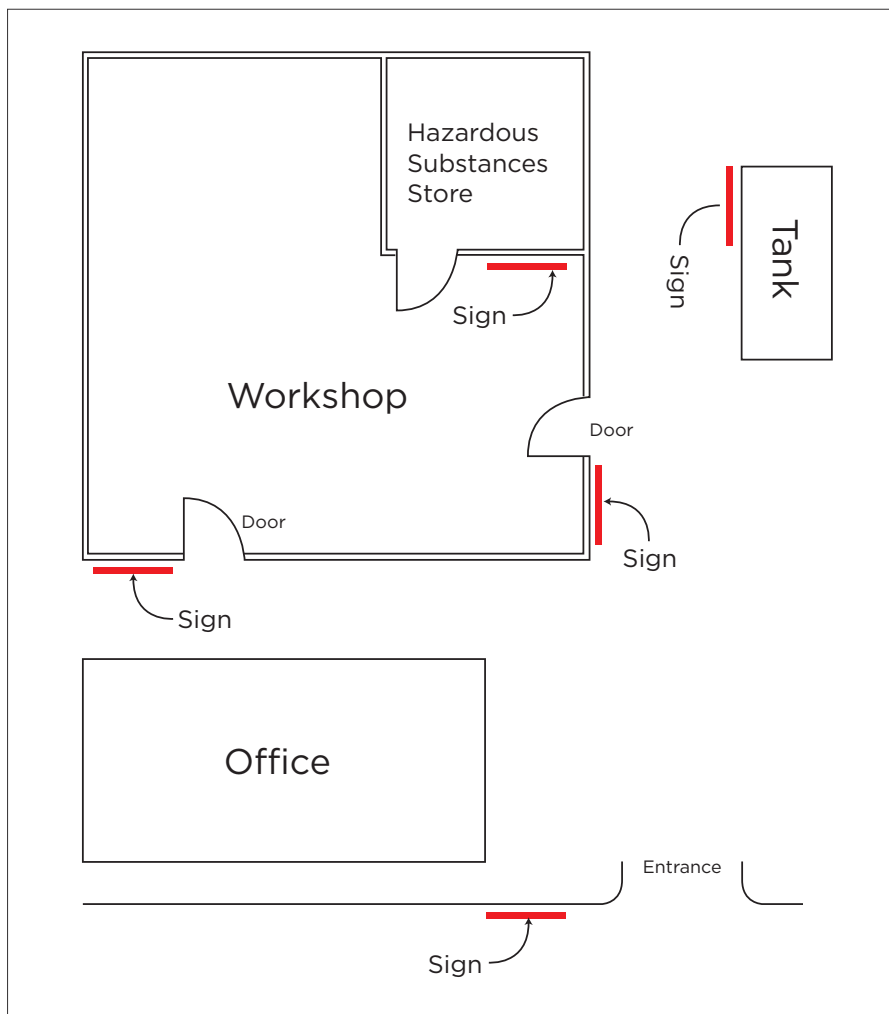


FIGURE 1:
Where signs should be placed at a site

There is more detailed information about where to place the signs for different substances and storage locations further on in this guide.

Where can you get signs?

Safety equipment suppliers can provide you with the right signs.

Check the Yellow Pages or the internet for safety equipment suppliers in your area.

Maintaining signs

Because signs let workers and other people inside and outside the workplace know about the substances and risks inside a workplace, you must make sure the information on signs is clear and correct. This means:

- changing signs as soon as possible when the type, class or quantity of hazardous substances at your workplace changes and this change affects the information you need to display on your signs
- making sure that signs are clean, in good repair and not covered or obscured.

What's on the signs?

Signs present information about substances that people need to keep themselves and others safe and respond to emergencies. The difference between signs for different substances and locations is in how they present the following key features:

- A warning that **hazardous substances are present** – this must use the words:
 - EXPLOSIVES for class 1 substances or
 - HAZCHEM for class 2, 3, 4, 5, 6, 8 or 9 substances on signs outside rooms or compartments inside buildings.
- A description of the **hazardous property** and **general type of hazard** of the substances that are present.
 - The **hazardous property** means the class of the substance, represented by pictograms (see Figure 2 below for an example) and/or a hazard statement (eg flammable liquid).
 - The **general type of hazard** means the substance subclass, represented by pictograms or a hazard statement (eg 'dangerous when wet').
- **Precautionary measures** to prevent the hazards of explosives, flammables and oxidisers or organic peroxides, such as:
 - unintended explosion
 - unintended ignition
 - unintended combustion, acceleration of a fire or thermal decomposition.

Some examples of precautionary measures are warnings like 'No smoking', 'No naked flames', 'Avoid shock.'

- The **immediate emergency response action**

This is the first action to take in an emergency:

- For explosives, the response action could be 'in an emergency, EVACUATE'.
- For flammable, oxidising, toxic or corrosive substances, the response action is generally to contact emergency services (ie in an emergency, dial 111 for Fire, Police, Ambulance).

If you store flammables, oxidisers, toxics or corrosives in bulk, the emergency response action could be represented by the **HAZCHEM code**.

The HAZCHEM code is used on signs and on containers for transporting hazardous substances and bulk storage containers so emergency service workers know which equipment to use in an emergency.

- An example of a HAZCHEM code is '3YE':
 - '3' recommends firefighters use foam.
 - 'Y' means the substance must not enter waterways and recommends breathing apparatus when fighting a fire involving this substance.
 - 'E' means emergency responders should consider evacuating occupants or residents of surrounding buildings in built-up areas.
- Other information:

For pesticides, vertebrate toxic agents (VTAs) or fumigants you may need to show the date (and sometimes time) you applied the substance or when the restricted entry interval (REI) ends, and the contact details for the person who is applying the substance.

General duty to display signs

You must display signs whenever you store hazardous substances over a specified amount (threshold) in your workplace.

Use the Calculator or see [Schedule 3](#) of the Health and Safety at Work (Hazardous Substances) Regulations 2017 (the Regulations) to find out the thresholds for your substances.

The content of these signs depends on whether the hazardous substances are in a building or in a room or compartment inside the building.

All the sample signs included below are examples of the **MINIMUM CONTENT** for signs as specified in the Regulations **ONLY**.

Signs supplied by signage suppliers will contain all of the required content, plus other additional warnings and information.

Signs for substances in buildings

If you have hazardous substances above the threshold for displaying signs in a building (but not a dedicated room or compartment in that building), your signs must state:

- that hazardous substances are present
- the general type of hazard of each hazardous substance present
- the immediate emergency response action – the first action in an emergency.

You must display your signs at every vehicular and pedestrian entrance:

- to the building
- to the land where the building is located.

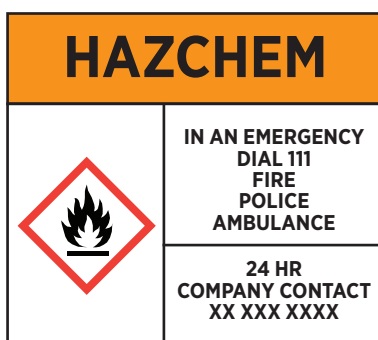


FIGURE 2:
Sample sign for substances in a building (but not a dedicated room/compartment)

If you store class 1 hazardous substances (except fireworks and safety ammunition) in a building (but not a dedicated room or compartment in the building), you must also display signs at each approach to the building in your property that emergency services could use.

Substances in a dedicated room or compartment in a building, or in an outdoor area

When you store your hazardous substances in a dedicated room or compartment in a building or an outdoor area at your workplace, your signs must include:

- a warning that hazardous substances are present – use the word 'HAZCHEM' for class 2, 3, 4, 5, 6, 8 or 9 substances or 'EXPLOSIVES' for class 1 substances
- the general type of hazard of each substance – use hazard pictograms or hazard statements reflecting the classification of the substance
- the immediate response action to take in an emergency involving the substances.

The signs must also include precautionary statements to prevent:

- unintended explosion for explosives (eg 'explosion risk in case of fire')
- unintended ignition of the substance for flammables (eg 'no smoking')
- unintended combustion, acceleration of fires, or thermal decomposition for oxidisers or organic peroxides (eg 'keep away from sparks').

You must display your signs:

- at each entrance to the room or compartment
- immediately next to the outdoor area.

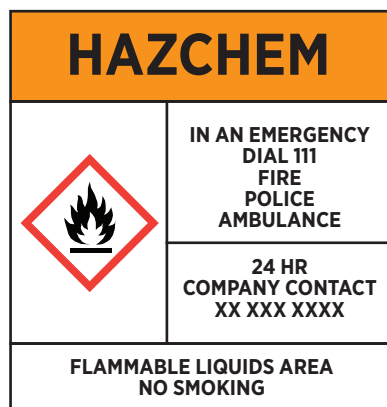


FIGURE 3: Sample sign for substances in a dedicated room or compartment or outdoors

Specific substances and locations

Transit depots

Transit depots have specific signage because the substances they hold vary and remain in closed containers. For transit depots, your signs must:

- contain the word HAZCHEM
- identify the site as a transit depot
- warn people that hazardous substances may be present.

You must display your signs at every vehicular and pedestrian entrance to the land where the transit depot is located.



FIGURE 4: Sample sign for transit depot

Fireworks and safety ammunition

If you store fireworks or safety ammunition in a building at a workplace (but not in a dedicated room or compartment in the building), your signs must:

- warn that fireworks or safety ammunition are present
- state the general type of hazard using pictograms or hazard statements
- indicate the classification of the substances inside the building
- indicate the immediate response action to take in an emergency.

You must display your signs at primary points of vehicular and pedestrian entry:

- to the building
- to the land where the building is located.



FIGURE 5:
Sample sign for fireworks and safety ammunition

Other substances and workplaces

INDOOR APPLICATION OF AGRICHEMICALS

If you apply an agrichemical indoors, for example in a greenhouse, your signs must:

- warn that a substance toxic to humans is being applied
- warn that entry is not permitted without personal protective equipment (PPE)
- identify the PCBU who has management or control of the area
- state the day the application commences and the time and date the REI ends.

You must display signs at every routine point of entry to the area from the start until the end of the application or REI, and remove them no later than 72 hours after the application or the end of the REI.

OUTDOOR APPLICATION OF VERTEBRATE TOXIC AGENTS (VTAS)

If you apply or lay a class 6.1A, 6.1B or 6.1C VTA outdoors in bait form to kill or control pests, or apply or lay any other class 6 VTA in a workplace where the public has access, you must display signs that state:

- the job title of the person in control of applying or laying the substance
- contact details for that person during normal business hours
- the substance name and a warning that it is toxic to humans and ecotoxic to vertebrates
- the date(s) the substance is going to be applied or laid.

The signs must meet the same comprehensibility and clarity requirements as the other types of signs, but need to be visible from 2 m rather than 10 m.

You must display the signs at every normal point of entry to the area where you are applying or laying the substance.

Depending on the substance, WorkSafe can specify how long you need to display the sign, otherwise signs need to be displayed until the substance has been removed from the place it was applied or it is no longer toxic.

You do not need to display signs when you store class 6.1A, 6.1B or 6.1C VTAs or agrichemicals outdoors at a temporary storage site, such as a temporary site for handling field bait or for loading aircraft.

WARNING POISON
Toxic to people, pets and stock
(Substance name, eg cyanide) baits have been placed in this area on (date)
Person in control: _____
Company: _____
Daytime phone number: _____

FIGURE 6:
Sample sign for VTAs

FUMIGANTS

You must display signs when you fumigate using class 6.1A, 6.1B, 6.1C fumigants. Depending on the type and location of fumigation, your signs must:

- warn people the area is being fumigated, stating the name of the fumigant and that it is toxic to humans
- describe the general type of hazard
- state precautions to prevent unintended ignition for flammable fumigants
- identify the PCBU who is directing the fumigation and provide contact details for that person during business hours
- state the date fumigation will start
- state actions to be taken in emergency
- be illuminated at night.

Depending on the type and location of the fumigation, you must place your signs:

- at every entrance to the area where you will fumigate
- at the perimeter of the risk area able to be seen by anyone approaching it
- at each entrance to the room or compartment if you fumigate in a room or compartment in a building or other enclosed space.

You must remove the signs immediately after fumigation.


WARNING POISON

This building is being fumigated using: (fumigant) _____
This fumigant is toxic to people and animals.
Person directing fumigation: _____
Daytime phone number: _____
APPLIED ON: (enter date) _____
NO SMOKING
IN AN EMERGENCY, DIAL 111 IMMEDIATELY

FIGURE 7:
Sample sign
for fumigants

INDOOR STORAGE OF LPG, PROPANE, BUTANE AND ISOBUTANE

You must display signs if you store more than 50 kg of LPG, propane, butane or isobutane in a building. This threshold is lower than when these substances are stored in other locations.

You must also display signs if you have **any** quantity of these substances in refrigeration systems contained in machinery rooms.

In any other case, the normal signage thresholds for these substances apply.

Follow the applicable rules about sign content and location for hazardous substances in buildings or in dedicated rooms or compartments inside buildings.

ANHYDROUS AMMONIA

You do not have to display signs for anhydrous ammonia contained in equipment where it is used as a refrigerant.

FUELS (E10 AND E85, PETROL, OR DIESEL)

There are different visibility and legibility rules for signs for ethanol and gasoline fuel mixtures like E10 and E85, or petrol or diesel, because they are usually stored in places like petrol stations.

If they are being stored for refuelling vehicles belonging to the general public, signs only need to be clearly visible and legible at the point of refuelling, not from 10 m from the substance.

MILKING ANIMALS

If your hazardous substances are teat sanitising products or dairy maintenance compounds in a building where you milk animals, you must display a sign at each vehicular or pedestrian entrance to the building, but not at every entrance to the land where the building is located.

Further information

The following resources are available at: www.hazardoussubstances.govt.nz

The *Hazardous Substances Calculator*, where you can enter the hazardous substances in your workplace to see the controls you have to put in place, including signage.

Your Practical Guide to working safely with hazardous substances.

Abbreviations

TERM	DEFINITION
PPE	Personal protective equipment
PCBU	Person conducting a business or undertaking
REI	Restricted entry interval
VTA	Vertebrate toxic agent