HAZARDOUS SUBSTANCE INFORMATION

LABEL ALL HAZARDOUS SUBSTANCES
SYMBOLS ON LABELS
SAFETY DATA SHEETS
SIGNS
HAZARDOUS SUBSTANCE INFORMATION

Labels, safety data sheets and signs are all sources of information that warn people about the risks of the hazardous substances at your workplace.

LABEL ALL HAZARDOUS SUBSTANCES

Manufacturers and suppliers must sell you products that are correctly labelled, but you must make sure that the label stays on the container and continues to be readable.

If a hazardous substance is decanted from one container into another, the receiving container must also be labelled. It’s never safe to have hazardous substances in unlabelled containers because people may become confused about what hazardous substance they are using and not take the necessary safety precautions.

Never put hazardous substances in food or drink containers because people may eat or drink it by mistake.

Staff must always read the label before using a hazardous substance so they know what they are dealing with.

SYMBOLS ON LABELS

Many countries are adopting the GHS system\(^1\) of labelling hazardous products. Part of this system includes the use of symbols (pictograms) to immediately warn people about the hazards of products. You are likely to see these symbols or the transport of dangerous goods symbols more and more often on the labels of your products.

The symbols to look out for on products are shown in the table on pages 25-28. Learn what these symbols mean so that you can immediately recognise the hazards of the products you use.

The *Know the Hazards Poster* in the Toolbox will also help your staff to become familiar with these symbols.

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\(^1\) Globally Harmonised System of Classification and Labelling of Chemicals
## PHYSICAL HAZARDS

<table>
<thead>
<tr>
<th>Type of hazard</th>
<th>GHS symbol</th>
<th>Transport of Dangerous Goods symbols</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>These pictograms refer to flammable substances.</td>
<td><img src="image" alt="Flammable gases" /></td>
<td><img src="image" alt="Flammable gases" /> or <img src="image" alt="Flammable gases" /></td>
</tr>
<tr>
<td>Flammable gases</td>
<td><img src="image" alt="Flammable gases" /></td>
<td><img src="image" alt="Flammable gases" /> or <img src="image" alt="Flammable gases" /></td>
</tr>
<tr>
<td>Flammable liquids</td>
<td><img src="image" alt="Flammable liquids" /></td>
<td><img src="image" alt="Flammable liquids" /> or <img src="image" alt="Flammable liquids" /></td>
</tr>
<tr>
<td>Flammable solids</td>
<td><img src="image" alt="Flammable solids" /></td>
<td><img src="image" alt="Flammable solids" /></td>
</tr>
<tr>
<td>Spontaneously combustible</td>
<td><img src="image" alt="Spontaneously combustible" /></td>
<td><img src="image" alt="Spontaneously combustible" /></td>
</tr>
<tr>
<td>Dangerous when wet</td>
<td><img src="image" alt="Dangerous when wet" /></td>
<td><img src="image" alt="Dangerous when wet" /> or <img src="image" alt="Dangerous when wet" /></td>
</tr>
</tbody>
</table>
### Physical Hazards

<table>
<thead>
<tr>
<th>Type of hazard</th>
<th>GHS symbol</th>
<th>Transport of Dangerous Goods symbols</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oxidisers</strong></td>
<td><img src="image" alt="Oxidiser Symbol" /></td>
<td><img src="image" alt="5.1 Symbol" /></td>
</tr>
<tr>
<td>These symbols are for products with oxidising properties. The products could be gas, solid or liquid and can cause or intensify fire and explosion. Keep products with these symbols well away from flammable products.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Organic peroxides</strong></td>
<td><img src="image" alt="Peroxide Symbol" /></td>
<td><img src="image" alt="5.2 Symbol" /> or <img src="image" alt="5.2 Symbol" /></td>
</tr>
<tr>
<td>Organic peroxides may contribute to fire, explosion or chemical decomposition.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Corrosives</strong></td>
<td><img src="image" alt="Corrosive Symbol" /></td>
<td><img src="image" alt="8 Symbol" /></td>
</tr>
<tr>
<td>Products with these symbols are corrosive and can cause severe skin burns and eye damage. They may also be corrosive to metals.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gases under pressure</strong></td>
<td><img src="image" alt="Gaseous Symbol" /></td>
<td><img src="image" alt="2 Symbol" /> or <img src="image" alt="2 Symbol" /></td>
</tr>
<tr>
<td>Products with these symbols are products where gas is kept under pressure. These products may explode when heated. If they are refrigerated gases they may cause cryogenic burns or injuries. Even normally safe gases can be dangerous when pressurised.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
HEALTH HAZARDS

<table>
<thead>
<tr>
<th>Type of hazard</th>
<th>GHS symbol</th>
<th>Transport of Dangerous Goods symbols</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute toxicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Products with these symbols are acutely toxic. If you see these symbols on the label you need to be aware that you are handling very dangerous products that could cause death if they come into contact with skin or you inhale or ingest them.</td>
<td><img src="image" alt="Acutely toxic gas" /></td>
<td><img src="image" alt="Toxic gas" /></td>
</tr>
<tr>
<td><strong>Less severe acute health hazards</strong></td>
<td><img src="image" alt="Caution symbol" /></td>
<td><img src="image" alt="No dangerous goods symbols" /></td>
</tr>
</tbody>
</table>
| Products with this symbol may cause one or more of the following:  
  ➤ skin sensitisation, skin and eye irritation  
  ➤ respiratory irritation, or  
  ➤ drowsiness or dizziness. | ![Caution symbol](image) | ![No dangerous goods symbols](image) |
| **Chronic (long term) health hazards** | ![Caution symbol](image) | ![No dangerous goods symbols](image) |
| Products with this symbol can cause chronic health issues if people are exposed to the product. These products can:  
  ➤ cause cancer  
  ➤ cause mutations  
  ➤ affect fertility  
  ➤ cause damage to an unborn child, and  
  ➤ cause allergies, asthma or breathing difficulties when inhaled. They can also be respiratory sensitisers. | ![Caution symbol](image) | ![No dangerous goods symbols](image) |
ENVIRONMENTAL HAZARDS

<table>
<thead>
<tr>
<th>Type of hazard</th>
<th>GHS symbol</th>
<th>Transport of Dangerous Goods symbols</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental hazard</td>
<td><img src="image.png" alt="Tree Symbol" /></td>
<td><img src="image.png" alt="Tree Symbol" /></td>
</tr>
</tbody>
</table>

Products with this symbol are toxic to the environment (ecotoxic).

SIGNAL WORDS

You may also see signal words on the label such as DANGER and WARNING. DANGER is used for the most dangerous substances, while WARNING is used for less dangerous substances. Products imported from Australia might use the signal words CAUTION, POISON or DANGEROUS POISON. CAUTION is used for the least dangerous while DANGEROUS POISON is used for the most dangerous substances.

HAZARD STATEMENTS

Hazard statements may also be on the label. These statements alert you to the harm that the product can cause for example, MAY CAUSE MILD SKIN IRRITATION.

PRECAUTIONARY STATEMENTS

Precautionary statements are phrases on the label that describe the recommended measures that should be taken to minimise or prevent adverse effects resulting from exposures to a hazardous product, or from improper storage or handling of a hazardous product, for example, KEEP OUT OF REACH OF CHILDREN, or, USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA.
THE GHS LABEL SHOWN BELOW IS AN EXAMPLE OF WHAT TO LOOK FOR

**Mineral Turpentine**

**DANGER**

**Signal Word**

**KEEP OUT OF REACH OF CHILDREN**

Flammable liquid and vapour
May be fatal if swallowed and enters airways
Causes mild skin irritation
Toxic to aquatic life with long lasting effects

**Hazard Statements**

**PREVENTATIVE MEASURES**
Read label before use.
Keep away from heat and ignition sources. No smoking.
Keep container tightly closed when not in use. Avoid inhaling vapour, use only with adequate ventilation.
Wear rubber gloves and safety glasses when using or handling this product.

**FIRST AID**
If skin rash or irritation occurs get medical attention. Remove contaminated clothing and rinse skin with plenty of soap and water.
If swallowed, immediately call Poisons Centre (0800 POISON) or get medical attention.
Do NOT induce vomiting.
If medical advice is needed, have product or label at hand.

**EMERGENCY RESPONSE MEASURES**
In case of fire use CO₂ dry chemical or foam extinguisher.
Absorb spilled liquid with sand or inert material.

**STORAGE**
Store locked up, in a well-ventilated place and keep containers cool.

**DISPOSAL**
Avoid release to the environment. Do not allow to enter drains or waterways.
Dispose of this material and its container to a hazardous or special waste collection point.

**Supplier information including emergency phone number**

**HSNO approval number: HSR001482**
SAFETY DATA SHEETS

Having a current safety data sheet (SDS) for each hazardous substance and understanding it is essential. If you don’t have an SDS ask your supplier to give you one. Also ask your supplier to give you an updated SDS if the one you have is more than five years old. Your supplier has a legal obligation to provide you with information about the substances they sell you.

An SDS provides important information about the hazards of a substance and how to handle, store, transport and dispose of it safely. Safety data sheets also provide first aid information, information about the personal protective equipment that the person handling the substance should wear and what to do in the event of an emergency, such as a spill or fire.

Safety data sheets usually include the following 16 headings:

- **Section 1**  Product name and emergency telephone number of the manufacturer/supplier
- **Section 2**  Hazards identification (this is where the classification should be found)
- **Section 3**  Composition/information on ingredients
- **Section 4**  First aid measures
- **Section 5**  Fire fighting measures
- **Section 6**  Accidental spill/release measures
- **Section 7**  Handling and storage
- **Section 8**  Exposure controls/personal protective equipment
- **Section 9**  Physical and chemical properties
- **Section 10**  Stability and reactivity
- **Section 11**  Toxicological information (this is where information on health effects can be found)
- **Section 12**  Ecological information (this is where information on environmental effects can be found)
- **Section 13**  Disposal considerations
- **Section 14**  Transport information (this is where the UN class and packing group can be found)
- **Section 15**  Regulatory information (information specific to HSNO may be found here)
- **Section 16**  Other information.

As the employer, you need to read the SDSs to find out the harm the hazardous substances used at your workplace can cause and how you can protect your staff.
You then need to explain to staff handling hazardous substances the hazards of the substances they use and how they can protect themselves. Safety data sheets can be difficult for people to understand, particularly if they have reading problems or where English is a second language. So, it’s important that you take the time to explain this information to your staff and don’t leave them to read the SDSs on their own.

Staff also need to know where the SDSs are stored and be able to access them quickly in the event of an emergency.

**SIGNS**

Signs are required when you have amounts of hazardous substances over certain limits. Use the HSNO Calculator to help you work out whether you are required to have signs in place.

Even if you aren’t required to have signs, it’s best practice to always have them as they warn visitors and emergency services that hazardous substances are present. Emergency services rely on signs when they respond to an emergency to decide on the course of action they will take and the protective equipment they will wear.

**WHAT TO PUT ON THE SIGN**

Signs must be made out of a durable material and clearly show in plain English or in pictograms:

1. **That hazardous substances are present.**
   
The word “HAZCHEM” is recognised worldwide to warn that hazardous substances are present. **DANGER** or **WARNING** can also be used to warn that hazardous substances are present.

2. **The hazardous property of the substance and the type of hazard of each substance present.**
   
The hazardous property of a substance indicates the harm that the substance could cause, for example, the substance might be a flammable liquid. It’s important to note that most hazardous substances have multiple hazard classifications and you might be over the limit for more than one hazard classification. If you are, you will need to show more than one hazard on your sign. The example signs for diesel on page 32 help illustrate this.

3. **For flammable or oxidising substances, precautions such as ‘keep away’ or ‘no smoking’, to prevent unintended ignition, combustion, or thermal decomposition.**

4. **Emergency actions such as “Call Emergency Services – Dial 111”, or for ecotoxic substances, “In an emergency protect waterways”**.
THE SIGN BELOW GIVES AN EXAMPLE OF EACH OF THESE REQUIREMENTS

EXAMPLE SIGNS FOR DIESEL

Diesel has the following classifications: 3.1D, 6.1E, 6.3B, 6.7B and 9.1B.

Only the 3.1D and 9.1B classifications trigger the requirement to have signs. HSNO requires you to state on your sign that you store flammable substances when you have 10,000 L or more of a 3.1D substance. HSNO also requires that you state that you have ecotoxic substances on your site when you have 1,000 L or more of a 9.1B substance.

So if you are storing 1,000 L or more of diesel your sign would look like the following:

If you are storing 10,000 L or more of diesel your sign would look like the following:
WHERE TO PUT SIGNS

Signs need to be put close to where the hazardous substances are stored, but not too close. People need to be warned of the danger before coming across the hazardous substances. Signs mustn’t be put in places where they may be hidden. For example, do not put them:

- beside doors or gates that cover the sign when the doors or gates are opened, or
- above doors, or anywhere the sign may be concealed by smoke in an emergency.

When hazardous substances are stored inside a building, signs must be put at each entrance to the building. If the hazardous substances are in a particular room within a building, the entrance to that room must also have a sign. You must also place a sign at the entrance to the land where the building is located.

If the hazardous substances are located outdoors or in a tank, a sign must be positioned immediately next to that area or tank.

A key test is to look at the outside of your workplace building or inside your building where your hazardous substances are stored (such as your storage cabinet or dangerous goods store) and ask yourself: “What will tell emergency services about the hazards lurking inside?”.
WHERE TO GET A SIGN
Safety equipment suppliers can provide you with the right signs. Check the Yellow Pages or the internet for safety equipment suppliers in your area.

FURTHER INFORMATION

Signs
The code of practice *Signage for Premises storing Hazardous Substances (HSNOCOP 2)* explains the requirements for signs and can be purchased from Responsible Care New Zealand (RCNZ), in hard copy or CD format. See [www.responsiblecarenz.com](http://www.responsiblecarenz.com).

A copy of the code is available for viewing at the EPA office in Wellington.