



Hazardous substances in transit depots

Substances that are in transit and are awaiting delivery to their final destination are held at transit depots. This could include circumstances where substances are awaiting customs clearance or are awaiting transfer to a different mode of transport. Substances at transit depots are not sold or stored for supply.

Transit depots often hold large quantities of hazardous substances that have explosive, flammable, oxidising, toxic, corrosive and ecotoxic properties. Substances with these properties are regulated under the Hazardous Substances and New Organisms Act (HSNO) 1996.

Under HSNO, substances are classified (put into groups) to determine how the risks can be managed. The controls that are put in place to limit the risks associated with a substance depend on its classifications. Most hazardous substances have more than one hazardous property and therefore have more than one classification.

At transit depots, hazardous substances must remain in closed containers and are subject to HSNO controls. Because depots could hold substances with various classifications it is particularly important that you know all the substances that are likely to be present at your transit depot. You also need to know the maximum quantity of any substances that you are likely to hold at any one time.

Your responsibilities

What you need to do to comply with HSNO will depend on the hazardous substances you hold at your transit depot.

Person in charge

Each transit depot must have a person in charge - a person who is in control of the part of the transit depot that stores hazardous substances. This could be an

owner, a lessee, or anybody in control or possession of the transit depot. In a small transit depot, this would typically be the manager or owner. In a larger operation with multiple locations and activities, several people could be designated persons in charge.

If you are a person in charge of a transit depot you need to be trained to manage the hazardous substances you have on site and you need to make sure the relevant HSNO controls are complied with. Knowing what substances are moving in and out of your transit depot is important to help you manage your substances safely.

Before commissioning a transit depot, the person in charge must give 30 working days notice to the local office of the Ministry of Business, Innovation and Employment. Information about the quantity of hazardous substances the depot is likely to hold and the hazard classifications of these substances must be provided.



This document has been written for the owners and operators of transit depots. It gives you information about how to safely manage hazardous substances at transit depots.

Using transit depots

You only need to hold hazardous substances at a transit depot if the quantity of the hazardous substances exceeds the amounts specified in Table 1 and these substances are held:

- for two hours or more if they are tracked substances
- for 18 hours or more if they are not tracked substances.

You must not hold a substance at a transit depot for more than three days. After this time the substance must be transferred to another transit depot or to a hazardous substance location. A hazardous substance location is a place that is certified to store flammable or oxidising substances for more than three days.

A tank wagon containing a liquid or gaseous hazardous substance must be left at a transit depot or hazardous substance location if it will be unattended for more than five minutes.

Table 1: Hazardous substances exceeding the limits below must be held in either a transit depot or a hazardous substances location

Hazard classification	Quantity
2.1.1A & 2.1.1B For example, flammable gas	100 kg or 100 m ³ where a permanent gas
2.1.2A For example, flammable aerosol	3,000 L (aggregate water capacity)*
3.1A For example, flammable liquid – very high hazard	20 L
3.1B For example, flammable liquid – high hazard	100 L in containers >5 L 250 L in containers ≤ 5 L
3.1C For example, flammable liquid – medium hazard	500 L in containers > 5 L 1,500 L in containers ≤5 L
3.2A For example, liquid desensitised explosives	1 L
3.2B & 3.2C For example, liquid desensitised explosives	1 L
4.1.1A For example, readily combustible solids and solids that may cause fire through friction – medium hazard	1 kg
4.1.1B For example, readily combustible solids and solids that may cause fire through friction – low hazard	100 kg
4.1.2A & 4.1.2B For example, self-reactive substances	1 kg

Hazard classification	Quantity
4.1.2C & 4.1.2D For example, self-reactive substances	25 kg
4.1.2E, 4.1.2F, & 4.1.2G For example, self-reactive substances	50 kg
4.1.3A For example, solid desensitised explosives – high hazard	1 kg
4.1.3B & 4.1.3C For example, solid desensitised explosives – medium and high hazards	1 kg
4.2A For example, spontaneously combustible substances: pyrophoric substances – high hazard	1 kg
4.2B & 4.2C For example, spontaneously combustible substances: self-heating substances – medium and low hazards	25 kg
4.3A For example, solids that emit flammable gas when in contact with water – high hazard	1 kg
4.3B For example, solids that emit flammable gas when in contact with water – medium hazard	25 kg
4.3C For example, solids that emit flammable gas when in contact with water – low hazard	50 kg
5.1.1A For example, oxidising substances that are liquids or solids – high hazard	50 kg or 50 L
5.1.1B For example, oxidising substances that are liquids or solids – medium hazard	500 kg or 500 L
5.1.1C For example, oxidising substances that are liquids or solids – low hazard	1,000 kg or 1,000 L
5.1.2A For example, oxidising substances that are gases	100 kg (where a non-permanent gas) or 200m ³ (where a permanent gas)
5.2A For example, organic peroxides	Any quantity
5.2B For example, organic peroxides	> 1kg
5.2C or 5.2D For example, organic peroxides	>10 kg
5.2E or 5.2F For example, organic peroxides	>25 kg

*Aggregate water capacity refers to the volume of space that would be occupied by a given amount of water.

Knowing your substances

The best way to manage hazardous substances at a transit depot is to have a list (inventory) of all the substances you are likely to hold. What you need to do to comply with HSNO will depend on the substances you store and the amount you are likely to have at your depot at any one time. You also need to know the hazardous properties of each substance. The supplier, importer or manufacturer is responsible for making sure the substances have the right classification and approval.

Product labels

A label describes the hazardous nature of the substance and how to handle, dispose of and store a hazardous substance safely.

If product labels are not visible in transit, transport labelling and documentation as required by the Land Transport Rules must be visible.

Safety data sheet

Safety data sheets (SDS) are required for every hazardous substance you hold at a transit depot. A SDS provides important information about the hazards of a substance and how to handle, store, transport and dispose of it safely. They 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.



If a person uses your transit depot they are required to supply you with a SDS for each of the substances they store at your depot. Ask them to give you an updated SDS if the one you have is more than five years old.

Staff at a transit depot need to be aware of where the SDSs are located and the contents of them. SDSs must be available within 10 minutes in the event of an emergency.

Signs

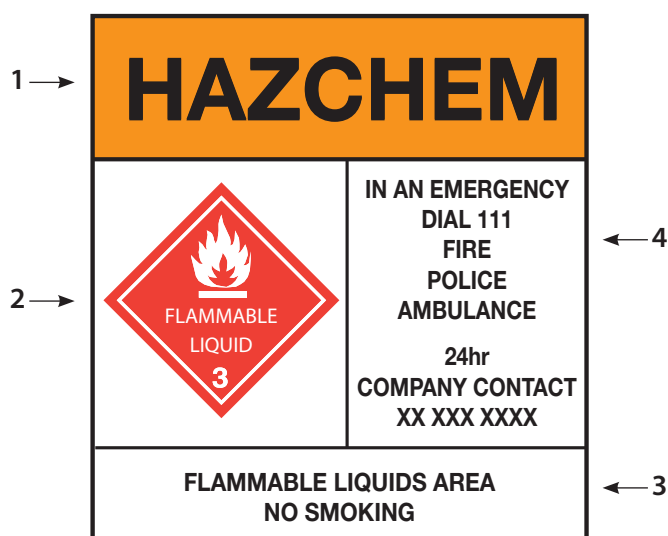
Transit depots are likely to hold large quantities of hazardous substances and will require signage. Signs need to be displayed at every vehicle and pedestrian entrance to a building. Signs need to be in English, be clear, easily understood and not be positioned in places where they may be hidden. Signs must show the following:

1. **That hazardous substances are present with the use of signal words such as 'HAZCHEM', 'DANGER' or 'WARNING'.**
2. **The hazardous properties of the substances and the type of hazard of each substance present.**
If you hold hazardous substances with multiple hazard classifications you might require signage for more than one hazard classification. If you do, you will need to show more than one hazard on your sign. If your transit depot holds substances with toxic or ecotoxic classifications these hazards must also be identified on your signs.
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 Service – Dial 111'; or for ecotoxic substances, 'In an emergency protect waterways'.**

Signs are also required to identify areas set aside for holding any leaked or spilled material or damaged packages.

Figure 1 gives examples of each of these requirements.

Figure 1: A sign warning of the presence of flammable liquids



Handling your hazardous substances

Approved handler training

Very hazardous substances are required to be under the control of an approved handler. Whether or not an approved handler is required depends on the hazard classification of the substances and the amounts that are held at your transit depot. To see if you require an approved handler check the safety data sheet, the relevant HSNO approval or ask your supplier.

Transit depots are likely to hold hazardous substances in quantities that will require an approved handler. You must have an approved handler that is certified for all the very hazardous substances your transit depot is likely to hold. Not everyone handling these substances needs to be an approved handler. A flammable or oxidising substance that is not acutely toxic may be handled by a person that has been given guidance by an approved handler. In these instances, an approved handler must be available to assist within a reasonable time if needed, for example contactable by telephone.

In the case of acutely toxic substances, another person can only handle the substance if they have been given guidance by the approved handler and the approved handler is present. If the approved handler is not present, the substance must be securely locked away.

Becoming an approved handler

An approved handler test certificate shows the classes of substance the person may handle and whether that person is qualified to handle the substance during manufacture, use, storage or disposal. An approved handler certificate is issued by a test certifier. A test certifier is a private service provider who is recognised as an industry expert and has been approved by the Environmental Protection Authority (EPA) to issue test certificates.

To obtain an approved handler test certificate, you must show to a test certifier that you know about:

- ▶ the hazardous substances you deal with and how to protect people and the environment
- ▶ the operating equipment you use and the protective clothing and safety equipment required to handle the hazardous substances
- ▶ what to do if an emergency involving the hazardous substances were to occur

- ▶ the obligations and liabilities of an approved handler under the HSNO legislation.

The evidence for this would usually be a written record from a training provider or an assessment of practical handling skills and experience from a work supervisor. Training courses must cover all the elements you will be assessed upon.

Getting an approved handler test certificate

If you are doing a formal training course, check with your trainer to see if they will arrange for your training material to be assessed by a test certifier.

Renewing test certificates

Approved handler test certificates last for five years. To renew a test certificate you will need to contact a test certifier. You will need to satisfy the test certifier that you have kept up to date with any changes in work practices and the HSNO regulations.

A list of test certifiers is available at: www.epa.govt.nz. To find a test certifier operating in your area, choose the *Search Our Records* tab on the homepage, and click on *HSNO Test Certifiers*. In *Type*, click on *Approved Handlers*, then filter the list by your region. Click *Search*.

Storage

Hazardous substances at transit depots must be stored correctly. This will reduce the risk of emergencies and limit the damaging effects of leaks or spills.

Before you can decide what type of storage is needed, make sure you know the substances you are likely to hold and the quantities you are likely to have at any one time.

Segregation of substances

Hazardous substances with different properties can react if they come into contact with each other and can cause a fire or explosion. These substances are often described as incompatible. You must store incompatible substances separately from each other.

The SDS for a hazardous substance will tell you which substances and materials should be kept separate from each other. Table 2 provides general guidance on some of the more common incompatible substances that must be separated.

Table 2: Incompatible substances

Hazardous substance type...	Must be separated from...
Flammable gases (class 2.1.1)	Flammable aerosols (class 2.1.2); flammable liquids (class 3); class 4 substances; oxidising substances; organics peroxides (class 5); explosives (class 1).
Flammable liquids (class 3)	Flammable gases and aerosols (class 2); class 4 substances; oxidising substances; organic peroxides (class 5); explosives (class 1); flammable solids (class 3.2).
Oxidising substances (class 5.1)	All other types of hazardous substances (including organic peroxides).
Organic peroxides (class 5.2)	All other types of hazardous substances (including oxidising substances).

Road vehicles containing flammable or oxidising substances must be separated:

- by at least three metres from compatible substances held at a depot or on any other vehicle
- by at least five metres from incompatible substances held at a depot or on any other vehicle.

Flammable or oxidising substances held at transit depots must be separated by at least five metres from any other containers of incompatible substances.

Acutely toxic (class 6.1) substances, corrosive (class 8) substances and ecotoxic (class 9) substances should be separated from all foodstuffs by a minimum distance of five metres. Corrosive (class 8) and toxic (class 6) substances should also be kept separate from each other by a distance of at least three metres.

Tracking hazardous substances at transit depots

You need to know what substances are moving in and out of your transit depot. Very hazardous substances must be "tracked". Tracking means keeping a record of what happens to and who is responsible for a hazardous substance from when it was imported or manufactured, through to distribution and transport, use or disposal.

If your transit depot holds substances that require tracking, these need to be under the control of an approved handler

or they must be locked away securely. If the substance is transferred to another place then the conditions and circumstances for the transfer must be recorded and an approved handler at the other place must be identified.

All tracked hazardous substances moving into and out of the transit depot must be recorded. Transit depots must record the following data and retain it for 12 months:

- the name and amount of the substance
- the exact location of the substance
- the name, position in the organisation and contact details of the approved handler in control of the substance
- details of any transfers of the substance to another location
- details of any disposal of the substance.

When a tracked substance is transferred to another location or disposed of, you should update your records so that you know how much is on site at any one time. Keep your records in a safe place where they can be easily accessed if needed.

Table 3: Substances with the following classifications must be tracked

Substance	Hazard classification
Flammable liquids	3.1A & 3.2A
Flammable solids	4.1.2A & 4.1.2B 4.1.3A 4.2A 4.3A
Oxidising substances	5.1.1A 5.2A, & 5.2B
Toxic substances	6.1A, 6.1B & 6.1C

Protecting surrounding properties

Separation distances

The area in the transit depot where the hazardous substances are located must be separated from neighbouring properties and site boundaries. This will ensure that the public is provided with reasonable protection from the adverse effects of hazardous substances that might occur in the event of an accident such as a fire.

Separation distances are measured from the perimeter of the storage area if the hazardous substances are located in the open or from the outer wall if the hazardous substances are located in a building.

The required separation distance depends on:

- the hazard classifications of your substances
- the maximum quantity of the substances you are likely to hold
- the activities of your neighbouring environment
- if located in a building, the nature of that building.

Separation distances should be specified on a site plan. The extent of separation between your transit depot and the neighbouring properties will determine the amount of substances you may hold. For example, if your transit depot holds a large quantity of flammable liquids and there is insufficient separation from neighbouring properties, you will need to reduce the amount of flammable liquids you hold at any one time or increase the fire resistance of the building in which they are located in.

Standalone buildings of type A, B, C or D are recognised for the storage of flammable liquids.

If you are unsure how to establish separation distances or building types, seek expert advice. The New Zealand Institute of Hazardous Substances Management has a list of expert advisers.



Building Types A, B, C, and D describe standalone buildings that must be used for the storage of flammable liquids only.

Type A buildings are for storage in the open air or on platforms constructed from structurally sound non-combustible materials. These are located outside and may or may not have a sheltered roof.

Type B buildings must have floors, walls and a roof constructed from non-combustible materials.

Type C buildings are constructed of fire resistant walls with a Fire-Resistance Rating (FRR) of at least 120/120/120. Any opening such as a door must also have a FRR of -/120/60. The roof must be constructed of non-combustible materials.

Type D buildings are constructed of fire resistant walls of a FRR of at least 240/240/240. Any opening such as a door must also have a FRR of -/240/60. The roof must also have a 240/240/240 FRR.

Hazardous atmosphere zone

Hazardous atmosphere zones surround a hazardous substance location and identify the extent of any source (or potential source) of flammable gas or vapour. Within the zone, special precautions need to be taken to prevent ignition of these vapours.

The extent of the zone depends on factors which include the types of hazardous substances and the quality of ventilation in place. Within each zone, specific restrictions are placed on the types of electrical fittings you may use. You must ensure that your electrical wiring and fittings are inspected at least every four years by a registered electrician or electrical inspector. Areas where substances are held awaiting disposal may require more stringent controls.

Your transit depot will need hazardous atmosphere zones to be identified and managed if your depot is likely to hold flammable substances in excess of the quantities specified in Table 4.

Table 4: Quantities of flammable substances held in closed containers that will require a hazardous atmosphere zone

Substance/class	Threshold Quantity
Flammable gases (2.1.1A or 2.1.1B)	100 kg (where a non-permanent gas) 30 m ³ (where a permanent gas)
Flammable aerosols (2.1.2A)	3,000 L aggregate water capacity
Flammable liquids (3.1A, 3.1B or 3.1C)	100 L

Each hazardous atmosphere zone must be clearly delineated on a site plan, which must be made available to an enforcement officer. Zones may surround packages, containers, cargo transport units, vented tank wagons and intermediate bulk containers (IBCs).

A forklift truck may present an ignition source. If you use a forklift, consider the type of flammable substances you store, the quantity, the packaging, and the quality of the ventilation. Make sure any leaks or spills are cleaned up before using a forklift.



Emergency management

Being properly prepared for a hazardous substance emergency can greatly reduce damage to property, the environment and help to protect people's health and safety.

To prepare for an emergency, you need to know the type and amount of hazardous substances your transit depot is likely to hold at any one time. Transit depots hold substances with different properties and therefore you need to be prepared for different types of emergencies that could occur. This means you might require equipment to deal with fire, inhalation and ingestion of toxic substances, chemical burns and spills of hazardous substances.

Risks from hazardous substances are influenced by a combination of the hazardous properties and the quantities of the substances that are held. The best way to prepare for an emergency is to know the hazardous substances you are likely to have at your transit depot and the maximum quantity you are likely to hold at any one time. Check product labels and safety data sheets so that you know the hazardous properties of all your substances.

Fire extinguishers

Transit depots will often be required to have two fire extinguishers when they hold quantities of flammable or oxidising substances above certain thresholds.

If you require fire extinguishers ensure that:

- you have the correct number of fire extinguishers
- your fire extinguishers are within 30 metres of your flammable substances
- your fire extinguishers are of a sufficient standard. Generally, a fire extinguisher with a 30B rating will be suitable for your needs. Ask your equipment supplier for help.

You should discuss the types and location of your extinguishers with a fire engineer or your emergency equipment supplier. Building legislation may require additional fire fighting equipment.

Controlling spills

You need to be prepared to deal with a spill or leak of the hazardous substances you store. You will need to identify what equipment and training will be needed so staff can safely and quickly contain, clean up, recover or dispose of spilled chemicals.

If your depot holds small quantities of hazardous substances a spill kit might be sufficient to contain any spills that might occur. You can purchase spill kits from safety equipment suppliers or you can make a kit to suit your need. The equipment needed in your spill kit will depend on the hazardous substances your transit depot is likely to hold and the amount that could possibly be spilled.

You need to make sure that your staff know where the spill kit is kept and how to use it. Personal Protective Equipment (PPE) is an important part of your spill kit, and will provide you with short-term protection in the event of a spill.

Remember, many commercial spill kits are only designed for one-off use. In this case, immediately dispose and replace the equipment you used to clean up a spill.

If you store large amounts of hazardous substances, a spill kit will not be sufficient to clean up a large spill. Transit depots that hold large quantities of hazardous substances will need a secondary containment system to make sure those liquid substances can be contained if they leak or spill from the container in which they are stored. The system should also enable recovery of the spilled substance.

Remember to ring your regional council pollution hotline if a spill enters drains and contaminates waterways.



A spill kit should contain:

- personal protective equipment like overalls, gumboots, rubber boots, gloves, goggles, face shields, disposable filter dust masks and a chemical resistant apron
- spill handling equipment
- containment equipment
- absorbent materials
- a disposal container
- information on what to do when a spill occurs.

Emergency response plan

Transit depots are likely to require an emergency response plan. This plan should be based on the types and amount of hazardous substances you hold.

Your response plan must cover all the emergencies that might arise for the hazardous substances you have and it must be practiced with your staff. The plan must also give information on how to contact trained staff, as well as the emergency services who would respond to any call for assistance.

Test your emergency response plan at least once a year to check that it works and is effective. Testing your plan could be a desk-top exercise. If any problems are identified you need to update your plan. You need to keep records of testing for at least two years.

The plan must also be updated if there are changes to the hazardous substances stored at your depot, or if there are changes to the staff that have specific emergency responsibilities. If the plan is updated, it must be tested within three months of the change.

A template of an emergency response plan, the [Emergency Procedures](#) flipchart, is available from the EPA. This flipchart sets out the basics of what you need to do. You can obtain a free copy of the flipchart online at www.hazardoussubstances.govt.nz or by calling 0800 376 234.

Working together with other legislation

The Ministry of Business Innovation and Employment is responsible for enforcing the HSNO Act at a transit depot. The HSNO Act works alongside other legislation to ensure hazardous substances are well managed. If you are in charge of a transit depot you need to be familiar with all the legislation that applies to you.

The following acts apply to transit depots:

- ▶ The Customs and Excise Act
- ▶ Health and Safety in Employment (HSE) Act
- ▶ Resource Management Act.

Disclaimer

The Environmental Protection Authority (EPA) has made every endeavour to ensure the information in this document is accurate and current. However this information sheet is a summary only and does not specify all of the requirements that you may need to comply with. You need to check the rules that apply to the hazardous substances that you are responsible for.

For a full list of the controls that apply under the Hazardous Substance and New Organisms Act 1996 and associated regulations see the *Controls for approved substances* database on the EPA website www.epa.govt.nz. To generate a list of controls that apply to any of your substances enter the HSNO approval number (HSR) for a substance into the database. The approval number should be on your SDS.

If you find any information in this document that you believe may be inaccurate, or you would like to provide any feedback, please email hsinfo@epa.govt.nz.



Contact Us

For more information visit our website: www.epa.govt.nz or call our hazardous substances information line during business hours on 0800 376 234.