

Alcohol-based hand sanitiser – Work Health and Safety responsibilities

This technical guide is targeted at businesses intending to manufacture, decant, import, supply or store alcohol-based hand sanitisers. It contains important WHS information.

About alcohol-based hand sanitiser

Alcohol-based hand sanitisers generally contain between 60%-95% of ethanol or isopropyl alcohol. They are hazardous chemicals under the Work Health and Safety Regulation 2017 (WHS Regulation).

For the purposes of this guide it is assumed they are classified as Category 2 flammable liquids under the [Globally Harmonised System of Classification and Labelling of Chemicals \(GHS\)](#). You should verify the classification of your products in the Safety Data Sheet (SDS), or according to GHS classification criteria.

Potential hazards of alcohol-based hand sanitisers include fire, explosion, and serious eye irritation. Even small quantities of flammable vapours may ignite and cause serious injury and damage. Vapours that accumulate in poorly ventilated rooms or closed containers may explode.

Managing hazards

You must manage all risks to health and safety associated with handling alcohol-based hand sanitisers, and ensure safe packaging, labelling and the provision of information about the product, including safety data sheets.

Responsibilities of manufacturers and suppliers

For the purposes of this guide, manufacturing includes repacking or blending alcohol with fragrances, moisturisers or other additives to produce a hand sanitiser.

Manufacturers and importers must:

- classify their product as a hazardous chemical (it is expected that most alcohol-based hand sanitisers are classified as Category 2 flammable liquids)
- prepare an SDS that meets Australian requirements, and,
- pack products in robust packaging.

Depending on the volume of the product, the packaging may need to comply with the

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code).

Suppliers of alcohol-based hand sanitisers must provide a copy of the SDS when the product is first supplied to a workplace, and upon request by a person at the workplace. Learn more about manufacturers' and importers' responsibilities.

Hazardous chemical registers

All sites handling hazardous chemicals must prepare and maintain a register of hazardous chemicals.

The register is a list of the product names of all hazardous chemicals used, handled or stored at the workplace accompanied by the current SDS for each hazardous chemical. It can be electronic or hard copy provided it is readily accessible to all workers.

More information about hazardous chemical registers can be found on the Safe Work Australia website including Safework Australia's Hazardous chemical register template.

Placarding

Placards must be displayed at the workplace to warn workers, visitors and emergency services of the hazard when more than 250 litres of Category 2 flammable liquids are used, handled or stored at the workplace.

There are multiple places you must display placards:



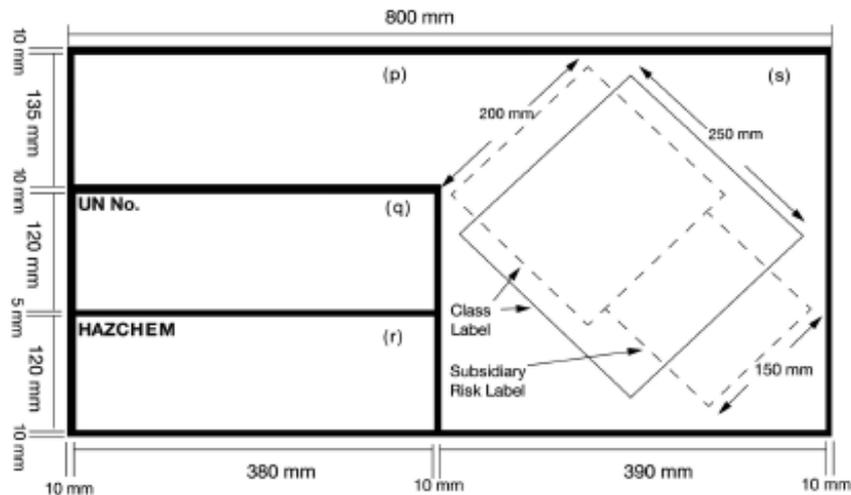
Sample HAZCHEM card

1. Outer warning 'HAZCHEM' placards must be displayed at the street entrances to your premises.



Sample bulk placard

- Bulk placards must be attached to containers with a capacity of more than 500 kg or 500 litres. Bulk placards must also be displayed at the main entrances to any building housing a bulk container, unless the bulk container is an Intermediate Bulk Container (IBC).



Required dimensions for bulk placard

- Packaged store placards are required at the main entrances to any building where more than 250 L of alcohol-based hand sanitisers are present in packages or IBCs. The minimum dimensions of the placards are 100mm x 100mm.



Package store placard

Packaged store placards are required at the main entrances to any building where more than 250 L of alcohol-based hand sanitisers are present.

Find out more about [placarding for storage of hazardous chemicals](#).

Manifests and notification

If you use, handle, or store 2500 litres or more of Category 2 flammable liquids you must prepare a manifest document and notify SafeWork NSW of the quantity you are storing.

The manifest must contain a site plan and a list of all *WHS Regulation* Schedule 11 hazardous chemicals above placard quantities. It must be kept in a manifest box at the entrance to your premises. A manifest template can be found on the Safe Work Australia website.

In addition to a manifest, an [emergency plan](#) must be prepared and [lodged with Fire and Rescue NSW](#) (FRNSW).

For more detailed information on placarding and manifest requirements please refer to guidance from SafeWork NSW and FRNSW.

- Safe Work Australia: [Example of a Manifest \(Template\)](#)
- SafeWork NSW: [Notifications for Schedule 11 Hazardous Chemicals and Abandoned Tanks – Guidance Material](#)
- Fire and Rescue NSW: [Hazardous Chemicals Manifest](#)

Labelling

Cosmetics and therapeutic goods

Alcohol-based hand sanitisers of a size and type marketed to consumers must be labelled in accordance with the Australian Competition and Consumers Commission's mandatory standard for [cosmetics ingredients labelling](#).

Products packaged in a form to be used by health workers in a hospital or medical environment must be labelled as therapeutic goods. Refer to the [guidance from the Therapeutic Goods Administration](#) on labelling of alcohol-based hand sanitisers, including a determination issued in March 2020 about labelling of certain approved formulations.

All other products

Alcohol-based hand sanitisers that do not fit in the previous two categories, such as non-consumer quantities and raw materials, require workplace labels that comply with Schedule 9 of the *WHS Regulation*.

It is recommended to consult the SafeWork NSW [Code of practice labelling of workplace hazardous chemicals](#). Refer to Appendix D for hazard and precautionary statements, and Appendix H for examples of compliant labels. Below is a sample of a workplace label that complies with the *Work Health and Safety Regulation*.

Read label before use. Keep out of reach of children

Alcohol Hand Sanitiser

Ethyl Alcohol Solution

UN 1170

Packing Group II

5 L

Contains:

Ethanol 80%, Water, Glycerine, Hydrogen peroxide.



DANGER

Highly flammable liquid and vapour
Causes serious eye irritation

Keep away from heat/ sparks/open flames/hot surfaces. No smoking.

If medical advice is needed, have product container or label at hand.

Keep container tightly closed.

Ground/bond container and receiving equipment

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment

Store in a well-ventilated place. Keep cool.

If eye irritation persists: Get medical advice/attention.

Wear eye protection.

May cause drowsiness or dizziness.

POISON Schedule: S5. Caution

Dispose of contents/container in accordance with local, regional, national and international regulations.

In case of fire: Use water spray, fog or alcohol resistant foam or dry agents for extinction.

Refer to the Safety Data Sheet before use.

Madeup Chemical Company, 999 Chemical Street, Chemical Town, My State. Telephone: 1300 000 000

www.madeup-chemical-company.com.au

Sample workplace label

Alcohol-based hand sanitisers in containers of 1 litre or less are entitled to relaxed labelling and packaging as personal care products in consumer packaging under Section 3.12 of the ADG Code.

Transport labels

Products in containers of greater than 1 litre, for example 5 litre bottles in fibreboard boxes, or 1000 litre containers of ethanol, must be packed and labelled for transport as fully regulated dangerous goods. Packaging must be approved for dangerous goods, and

marked with the UN number, proper shipping name, manufacturer contact details, and a class 3 flammable liquids label. The example label above can be used for a fully regulated dangerous goods package by changing the flame pictogram for a class 3 flammable liquids label.

Refer to [guidance from the National Transport Commission](#) for further information.

Controlling ignition sources

When manufacturing, decanting, bottling or storing alcohol-based hand sanitiser you must control the risks of fire and explosion associated with the generation of flammable vapours.

Examples of potential ignition sources include:

- naked flames
- smoking
- sparks
- static electricity
- hot surfaces from vehicles or plant
- portable electrical equipment (e.g. tools, radios, fans), and
- fixed electrical equipment (e.g. power sockets and wiring).

Exclusion zones when opening or decanting

Opening packages or decanting flammable liquids should only be performed in an open area (such as outdoors) with a minimum 5-metre exclusion zone for ignition sources. When decanting indoors, ignition sources should be excluded from the entirety of the room and within 5 metres of any opening to the room.

Opening, decanting or bottling should not occur within 8 metres from the site boundary.

For manufacturing processes, or storage of greater than retail quantities, you should classify a hazardous area where flammable vapour may be present and exclude all ignition sources, unless the room has natural ventilation along all walls or a purpose-built extraction system at ground level.

Further guidance may be obtained from *AS/NZS 60079.10.1: Explosive atmospheres – classification of areas* or the SafeWork NSW Code of Practice [Managing risks of hazardous chemicals in the workplace](#).

Fire Protection

Even small amounts of flammable liquid require fire protection to control the spread and acceleration of a fire event.

Your fire protection system should have capacity to quickly control and put out any fires from flammable liquids. Any fire protection system must be compatible with the product stored and not cause a dangerous reaction.

When storing packaged alcohol-based hand sanitiser indoors, the modified table from *Australian Standard 1940* below should be followed for fire protection equipment:

| Quantity | Fire Protection |
|----------------------------|---|
| Less than 2000L | 1 x Powder-type extinguisher (minimum rating 2A 60B) 1 x Foam-type extinguisher (minimum rating 2A 20B) |
| 2000 to 10,000L | 2 x Powder-type extinguisher (minimum rating 2A 60B) 1 x Powder-type at each doorway (minimum rating 2A 60B) 2 x Foam-type extinguisher (minimum rating 2A 20B) Hydrants capable of 10L/s water supply |
| Decanting / bottling areas | At every fill point: 1 x Powder-type extinguisher (minimum rating 2A 60B) 1 x Foam-type extinguisher (minimum rating 2A 20B) |

For storage quantities greater than 10,000L and/or manufacturing facilities, you should seek specialist advice about fire protection systems.

Spill containment

You must control the risk of spills in each part of the workplace where alcohol-based hand sanitisers are used, handled, stored or generated. A spill containment system must ensure that any potential spill can be retained within the workplace and safely cleaned up. You must ensure that in the event of a spill or leak that different hazardous chemicals cannot interact to create a fire, explosion, or harmful reaction.

Detailed information about the design and construction of spill containment systems can be found in AS1940.

Ventilation

Vapours from alcohol-based hand sanitiser are heavier than air and may accumulate

along the ground and in drains or pockets of a building.

A manufacturing, decanting, or storage area without adequate ventilation creates a significant risk of fire or explosion and health hazards to workers.

Natural ventilation for indoor stores should at a minimum have vents located along the length of opposite walls, and immediately above the level of floor or spill containment. High level vents should be provided for temperature control.

Mechanical ventilation shall extract immediately above the level of the floor or spill containment and be located on opposite walls, and exhaust outdoors. Ventilation equipment must be purpose-built for flammable vapours. Use of equipment (e.g. fans) not designed for flammable liquids may ignite vapours.





If you are unable to meet the above requirements, it is recommended you do not decant or open hand sanitiser packages indoors.

In addition to having adequate ventilation, you should always try to minimise the risk of vapour release by:

- using enclosed systems for transfer and avoid open-top splash filling
- keeping the time for decanting and open containers to as short as possible
- immediately cleaning up spills or leaks.

Retailers

In a retail environment it is critical to safety that the quantities held in stock are kept at a volume that presents a minimum level of risk.

It is recommended you do not exceed the minor storage quantity as per AS 1940. This means no more than 2000 litres in packages of up to 20 litre containers. Greater quantities may be accommodated subject to guidance in AS 1940.

The following handling requirements and precautions apply:

- persons who handle the liquids shall be fully trained about the hazards involved
- packages shall not be placed where they could hinder escape from a building in an emergency
- care shall be taken when decanting or transferring flammable liquids. Dispensing pumps or self-closing metal taps should be used, in order to reduce the hazards of splash filling, spillage and vapour escape
- packages shall be kept closed when not in use. Packages containing flammable liquids should only be opened or decanted in well-ventilated areas and away from any potential ignition source

- the area in or around the minor storage shall be kept free of combustible materials and residues
- any materials that might react dangerously if mixed shall be kept apart so that the possibility of reaction is minimised, e.g. flammable liquids and pool chlorine
- liquids should not be stored near any hot surfaces (e.g. steam pipes, furnace walls or engines) or where they might be accidentally exposed to heat (e.g. from escaping steam).

If you intend to decant into a customer provided container you must ensure the container:

- is not of a capacity considered to be bulk
- is clearly marked with the product identifier or chemical identity and the hazard pictogram
- is in sound condition
- will safely contain the chemical for the time the chemical is likely to be packed
- is made of compatible material with, and will not be adversely affected by the chemical
- does not usually contain food or beverages and cannot be mistakenly identified as containing food or beverages.

Further assistance

SafeWork NSW can arrange for an inspector to come to your site to offer advice or assistance. You can [request an advisory visit online](#) or contact 13 10 50.

Codes and guidance

The following codes of practice provide further information on flammable and combustible substances:

- SafeWork NSW - code of practice: [Managing risks of hazardous chemicals in the workplace](#)
- SafeWork NSW: [Placarding for storage of hazardous chemicals](#)
- Safe Work Australia: [Globally Harmonised System of Classification and Labelling of Chemicals \(GHS\) information sheet](#)
- Safe Work Australia's [Hazardous chemical register template](#)
- SafeWork NSW: [Code of Practice Labelling of workplace hazardous chemicals](#)
- SafeWork NSW: [Preparation of Safety Data Sheets for hazardous chemicals](#)
- WorkCover Queensland: [A guide for flammable and combustible liquids](#)
- [Therapeutic Goods \(Excluded Goods—Hand Sanitisers\) Determination 2020](#)
- *AS1940:2017 The storage and handling of flammable and combustible liquids*
- *AS/NZS 60079.10.1: Explosive atmospheres – classification of areas*

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