Labelling of workplace hazardous chemicals

Code of Practice

NOVEMBER 2026

safe work australia

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Foreword

This Code of Practice on labelling hazardous chemicals is an approved code of practice under section 274 of the *Work Health and Safety Act* (the WHS Act).

An approved code of practice provides practical guidance on how to achieve the standards of work health and safety required under the WHS Act and the *Work Health and Safety Regulations* (the WHS Regulations) and effective ways to identify and manage risks.

A code of practice can assist anyone who has a duty of care in the circumstances described in the code of practice. Following an approved code of practice will assist the duty holder to achieve compliance with the health and safety duties in the WHS Act and WHS Regulations, in relation to the subject matter of the code of practice. Like regulations, codes of practice deal with particular issues and may not cover all relevant hazards or risks. The health and safety duties require duty holders to consider all risks associated with work, not only those for which regulations and codes of practice exist.

Codes of practice are admissible in court proceedings under the WHS Act and WHS Regulations. Courts may regard a code of practice as evidence of what is known about a hazard, risk, risk assessment or risk control and may rely on the code in determining what is reasonably practicable in the circumstances to which the code of practice relates. For further information see the Interpretive Guideline: *The meaning of 'reasonably practicable'*.

Compliance with the WHS Act and WHS Regulations may be achieved by following another method if it provides an equivalent or higher standard of work health and safety than the code.

An inspector may refer to an approved code of practice when issuing an improvement or prohibition notice.

Scope and application

This Code is intended to be read by a person conducting a business or undertaking (PCBU). It provides practical guidance to PCBUs on how to label hazardous chemicals that are being manufactured or imported for use, handling or storage in Australia.

This Code may be a useful reference for other persons interested in the duties under the WHS Act and WHS Regulations.

This Code applies to a person conducting a business or undertaking involved in the manufacture or import of hazardous chemicals that will be used, or could reasonably be expected to be used, in workplaces covered by the WHS Act.

How to use this Code of Practice

This Code includes references to the legal requirements under the WHS Act and WHS Regulations. These are included for convenience only and should not be relied on in place of the full text of the WHS Act or WHS Regulations. The words 'must', 'requires' or 'mandatory' indicate a legal requirement exists that must be complied with.

The word 'should' is used in this Code to indicate a recommended course of action, while 'may' is used to indicate an optional course of action.

1. Introduction

This Code describes the type of information that is needed on labels for various hazardous chemicals so that users of these chemicals in workplaces can identify any hazards associated with the correct classification of the chemical and take appropriate steps to eliminate or minimise the risks.

1.1 When is a label under the WHS Regulations not required?

In general, a label is required for any substance, mixture or article classified as a hazardous chemical under the WHS Regulations. However, there are several types of hazardous chemical that are excluded from the labelling provisions under Regulation 335 of the WHS regulations or exempted from coverage from all provisions in Part 7.1 of the WHS Regulations.

Chemicals labelled under the National Code of Practice for the Labelling of Workplace Substances

WHS Regulation 341

Labelling hazardous chemicals—general requirement

The 1994 *National Code of Practice for the Labelling of Workplace Substances [NOHSC: 2012 (1994)]* was used to label workplace hazardous chemicals prior to 2017. Chemicals do not need to be labelled in accordance with the WHS Regulations if they were manufactured or imported before 1 January 2017, labelled in accordance with the 1994 National Code of Practice at that time and retain that label.

Food and beverages

WHS Regulation 328

Application of Part 7.1

Food and beverage products that are packaged in a form intended for consumption do not require labelling under the WHS Regulations. However, large quantities must be labelled to meet workplace requirements. For example, a 100 L container of flammable alcoholic spirits must be labelled to meet WHS requirements, while a 750 mL bottle of the same spirits does not.

Therapeutic goods

WHS Regulation 328

Application of Part 7.1

Therapeutic goods are regarded as correctly labelled under the WHS Regulations when labelled in accordance with Therapeutic Goods Administration (TGA) requirements and in a form:

- intended for human consumption
- for intake or administration to or by a patient or consumer, or
- intended for use for therapeutic purposes.

When not in a form intended for intake or administration to or by a patient or consumer, or for therapeutic purposes, workplace labelling must be used.

For example, a pharmacist repacks a 1 kg container of formulated tablets in smaller containers for dispensing to patients. The 1 kg container must comply with TGA labelling requirements. However, a 1 kg container of the same material in powdered form used by a pharmacist in manufacturing or formulating products must be labelled according to workplace labelling requirements.

For more information about the labelling and packaging of therapeutic goods you should refer to the information published by the Therapeutic Goods Administration (www.tga.gov.au).

Agricultural and veterinary chemical products

WHS Regulation 335

Labelling hazardous chemicals

Agricultural and veterinary (agvet) chemicals must meet the labelling requirements of the *Agricultural and Veterinary Chemicals Code Act 1994*. Where an agvet chemical is also a workplace hazardous chemical, additional workplace labelling requirements apply under the WHS Regulations. The workplace labelling requirements for agvet chemicals are set out in section 3.10 of this Code.

Veterinary chemical products are not required to meet the additional workplace labelling requirements if they are:

- a veterinary chemical product within the meaning of the *Agricultural and Veterinary Chemicals Code Act 1994*, and
  - listed in the Poisons Standard, Part 4 of Schedule 4, and packaged and supplied in a form intended for the direct administration to an animal for therapeutic purposes, or
  - listed in the Poisons Standard, Part 4 of Schedule 8.

The labelling of agvet chemicals is regulated by the Australian Pesticides and Veterinary Medicines Authority (the APVMA), who should be consulted for more information about labelling agvet chemicals (www.apvma.gov.au).

Cosmetics and toiletries

WHS Regulation 335

Labelling hazardous chemicals

Under the WHS Regulations, cosmetics and toiletries packaged for consumer use are exempt from workplace labelling requirements. This includes sample bottles of cosmetics at retail stores and toiletries being used at a workplace.

However, when cosmetics or toiletries that are hazardous chemicals are stored, handled or used in the workplace and not packaged for consumer use, they must be labelled in accordance with workplace labelling requirements.

This includes cosmetics and toiletries in quantities that need to be repackaged, and any chemical intermediates and ingredients being used to manufacture cosmetics and toiletries.

Hazardous chemicals in transit

WHS Regulation 335

Labelling hazardous chemicals

A chemical is *in transit* if it is:

- supplied to, or stored at, a workplace in containers that are not opened at the workplace
- not used at the workplace, and
- kept at the workplace for not more than five consecutive days.

Hazardous chemicals that are in transit do not require labelling under WHS laws. The requirements for packaging and labelling of chemicals in transit are set out in various Australian transport laws and codes, including:

- the Australian Code for the Transport of Dangerous Goods by Road and Rail
- the Australian Code for the Transport of Explosives by Road and Rail
- the International Maritime Dangerous Goods Code, and
- the Civil Aviation Safety Regulations.

1.2 Who has duties in relation to labelling hazardous chemicals?

The WHS Regulations apply specific duties to various persons in relation to the correct labelling of workplace hazardous chemicals.

Where a chemical is regulated under more than one set of laws it will need to meet the labelling requirements placed upon it by all sets of laws. For example, workplace hazardous chemicals that are also agricultural and veterinary chemicals as defined in the Commonwealth's *Agricultural and Veterinary Chemicals Code Act 1994* must meet the requirements of both sets of laws.

Note that under the WHS Regulations, manufacturers and importers of a substance, mixture or article have an obligation to correctly classify that substance, mixture or article. To prepare a correct and accurate label for a hazardous chemical, you need to know the correct classification of the hazardous chemical.

The duties in relation to labelling hazardous chemicals are summarised below.

Manufacturers and importers of hazardous chemicals

WHS Regulation 335

Labelling hazardous chemicals

The manufacturer or importer of a workplace hazardous chemical must ensure that the chemical is correctly labelled as soon as practicable after manufacturing or importing the hazardous chemical. This means that the hazardous chemical must be labelled in accordance with:

- the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), as modified under Schedule 6 of the WHS Regulations for mixtures of substances, and
- Schedule 9 of the WHS Regulations.

A hazardous chemical is also labelled correctly if the label includes content that complies with another labelling requirement imposed by the WHS Regulations or by another law of a state/territory or of the Commonwealth and the content is the same, or substantially the same, as the content that is required by the WHS Regulations.

More information about correct labelling of hazardous chemicals is given throughout this Code.

Suppliers of hazardous chemicals

WHS Regulation 338

Supplier labelling hazardous chemicals

A supplier must not supply a hazardous chemical to a workplace if the supplier knows, or ought reasonably to know, that the chemical is not correctly labelled in accordance with regulation 335 of the WHS Regulations.

Persons conducting a business or undertaking that uses, handles or stores hazardous chemicals

WHS Regulations Part 7.1 Subdivision 3

Obligations of persons conducting a business or undertaking

A PCBU that uses, handles or stores hazardous chemicals must ensure that any hazardous chemical that is used, handled or stored at the workplace is correctly labelled in accordance with regulation 335 of the WHS Regulations.

Additionally, they must ensure:

- a hazardous chemical is correctly labelled if the chemical is manufactured at the workplace; or transferred or decanted from the chemical's original container at the workplace.
- so far as reasonably practicable, that containers are correctly labelled in accordance with regulation 335 of the WHS regulations while holding a hazardous chemical, and
- containers that are labelled for holding a hazardous chemical are used only for the use, handling or storage of the hazardous chemical.

The three duties directly above do not apply if the hazardous chemical is used immediately after being put into the container and the container is thoroughly cleaned after the chemical has been used, handled or stored so it is in a condition it would be in if the container had never contained the chemical.

A PCBU must also ensure, so far as is reasonably practicable, that a hazardous chemical in pipe work is identified by a label, sign or another way on or near the pipe work.

Note: a person who packages or re-labels a hazardous chemical with their own product name is considered to be a manufacturer and therefore will have the same obligations as the manufacturer or importer under the WHS Regulations to correctly label.

1.3 About the GHS in Australia

The United Nations' 'Globally Harmonized System of Classification and Labelling' (GHS), is a globally agreed method of:

- classifying chemicals by hazard type; and
- communicating chemical hazards through labels and safety data sheets (SDS).

On 1 January 2021, Australia began a two-year transition from the 3rd revised edition of the GHS (GHS 3) to the 7th revised edition of the GHS (GHS 7). This model Code of Practice has been updated to align with GHS 7 and all references to 'GHS' refer to GHS 7.

Manufacturers and importers

From 1 January 2023, manufacturers and importers can **only use GHS 7** to classify, label and prepare SDS for hazardous chemicals.

Manufacturers and importers do not need to re-label or dispose of existing products labelled with GHS 3. However, the SDS for such products must comply with GHS 7 from 1 January 2023, even if the label does not.

Suppliers

From 1 January 2023, suppliers must only supply hazardous chemicals to a workplace that are labelled in accordance with GHS 7 (if the hazardous chemicals were manufactured or imported after 1 January 2023). However, suppliers *can* continue to supply hazardous chemicals which were manufactured or imported *before* 1 January 2023 and were, at the time they were manufactured or imported, labelled in accordance with GHS 3. This enables suppliers to on-sell GHS 3 labelled stock already in the supply chain until their stocks run out. If the manufacturer or importer updates the SDS to reflect the hazard classifications in GHS 7, the supplier must supply that updated SDS with the GHS 3 labelled stock the first time they supply such stock after the SDS is amended.

Other persons conducting a business or undertaking

From 1 January 2023, a PCBU must ensure that hazardous chemicals used, handled or stored at the workplace are labelled in accordance with GHS 7 (if the hazardous chemicals are manufactured or imported after 1 January 2023). However, PCBUs *can* continue to use, store and handle hazardous chemicals:

- supplied *before* 1 January 2017 and labelled in accordance with National Code of Practice for the Labelling of Workplace Substances [NOHSC: 2012 (1994)]
- supplied before 1 January 2023 and labelled in accordance with GH3 3
- manufactured or imported before 1 January 2023 and labelled in accordance with GHS 3.

This means that PCBUs can continue to use any GHS 3 and NOHSC: 2012 labelled hazardous chemicals they already have until their stocks run out.

Further information

More information about the obligations of PCBUs following the GHS transition can be found on the Safe Work Australia website page about Classifying chemicals in Australia.

2. Labelling hazardous chemicals – general information

This chapter deals with the complete set of labelling elements that should be included on a container. A checklist for the preparation of a label is provided in Appendix B. In some situations it is not possible or reasonably practicable to legibly include the complete set of labelling elements on a label. Reduced label requirements are permitted in such situations. Guidance on the label requirements for these and other special situations is provided in Chapter 3 of this Code.

2.1 What information must be included on a label?

WHS Regulations Schedule 9

Classification, packaging and labelling requirements

A hazardous chemical is correctly labelled if the chemical is packed in a container that includes the following:

- is written in English
- the product identifier
- the name, Australian address and business telephone number of either the manufacturer or importer
- the identity and proportion disclosed, in accordance with Schedule 8 of the WHS Regulations, for each chemical ingredient
- any hazard pictogram(s) consistent with the correct classification(s) of the chemical
- any hazard statement(s), signal word and precautionary statement(s) that is consistent with the correct classification(s) of the chemical
- any information about the hazards, first aid and emergency procedures relevant to the chemical, which are not otherwise included in the hazard statement or precautionary statement, and
- the expiry date of the chemical, if applicable.

As a person conducting a business or undertaking (PCBU), you may include any information on the label that does not contradict or cast doubt on any other information that is required on the label.

The following additional information should also be included on the label, where available:

- an emergency phone number for specific poisons or treatment advice
- the overseas name, address and telephone number of the manufacturer or supplier
- a valid website or internet address
- reference to the safety data sheet, for example a statement on the label that says: ‘Additional information is listed in the safety data sheet’.

If an emergency information service or Poisons Information Centre phone number is provided on the label, this arrangement should be confirmed with the service beforehand and copies of the SDS should be provided to them.

2.2 Product identifier

A product identifier is a unique name or number by which the chemical is to be known, and which allows the product users to identify the hazardous chemical. The product identifier must be the same as that listed in the safety data sheet, and may be identical to the trade name.

The product identifier and details of ingredients should be grouped together and located at the most prominent position on the label, for example at the top or centre of the label, or on a front panel.

2.3 Disclosure of ingredients

WHS Regulation Schedule 8

Disclosure of ingredients in safety data sheet

The chemical identity of an ingredient must be disclosed on the label in accordance with Schedule 8 of the WHS Regulations (Disclosure of ingredients). In some cases, a generic name may be used.

Disclosure of ingredient names is not required by the WHS Regulations for those ingredients that meet only physical and/or environmental hazard classifications, or for non-hazardous ingredients.

The identity of ingredients for the following GHS health hazard categories do not need to be disclosed because they are outside the scope of the WHS Regulations:

- acute toxicity—Category 5 (oral, dermal and inhalation)
- skin corrosion/irritation—Category 3
- aspiration hazard—Category 2
- aquatic toxicity (all categories)
- flammable gases—Category 2, and
- ozone depletion.

Use of generic names

A generic name may be used to identify an ingredient if the identity of an ingredient is genuinely commercially confidential, and if:

- the ingredient is in any of the following health hazard categories:
  - acute toxicity—Category 4 (oral, dermal, inhalation)
  - aspiration hazard—Category 1
  - serious eye damage/eye irritation—Category 2
  - skin corrosion/irritation—Category 2, or
  - specific target organ toxicity (single exposure)—Category 3.

- the ingredient does not cause the correct classification of the hazardous chemical to include any other hazard class or category within table 8.1 of the WHS Regulations, and
- an exposure limit for the ingredient has not been established.

A guide for selecting generic names for ingredients is included in Appendix C of this Code.

Unknown or variable composition mixtures and complex reaction products

It may be difficult to identify the ingredients of certain complex mixtures. These include naturally occurring gases and oils, and complex reaction products. These products may contain several hundred unique ingredients and their composition may vary between batches.

A single technical name may be given to such chemicals, though as much ingredient information should be included on the label as is reasonably practicable. This may include the chemical families and subfamilies present in the hazardous chemical, and the ranges in which they are expected to be present.

Disclosing proportions of ingredients

For multiple ingredients, proportions should be listed in descending order by mass or volume. Ingredients not contributing to the hazard classification should also be listed, and where included, should be listed after the ingredients contributing to the hazard classification.

However, where the exact concentration of an ingredient is commercially confidential, the concentration of the ingredient can be disclosed using the following ranges:

- < 10%
- 10 – < 30%
- 30 – 60%
- > 60%

The proportion of an ingredient should normally be disclosed using a narrower range, for example, for an ingredient present at 35%, a range of 30–40% should be used instead of 30–60%.

Where possible, the percentage composition should add up to or indicate a total of 100%, even if an estimate of non-hazardous ingredients needs to be provided.

Where the chemical identity or generic name of an ingredient that makes up a hazardous chemical is disclosed, the proportions of the ingredients must also be disclosed in an SDS.

Example of how ingredients can be represented on a label

Flammable Liquid A contains the following ingredients:

- Toluene 55%
- Ethyl methyl ketone 40%
- Methanol 3.5%
- 2-butanol 1%
- Xylene 0.5%

As both xylene and 2-butanol are not hazardous to health at these concentrations, they are not required to be disclosed in the ingredients section of the label. However, as they both have exposure limits it is good practice to disclose them both on the label.

The ingredients and their proportions may be disclosed on the label using the exact proportions:

Flammable Liquid A contains:

- Toluene 55%
- Ethyl methyl ketone 40%
- Methanol 3.5%
- Non-hazardous ingredients 1.5%

If the ingredient proportions are commercial-in-confidence, they may be disclosed on the label using a range:

Flammable Liquid A contains:

- Toluene 30 – 60%
- Ethyl methyl ketone 30 – 60%
- Methanol < 10%

2.4 Manufacturer/importer information

The label must include the Australian contact details of the manufacturer or importer. The required contact details include the manufacturer or importer's name, Australian address and business telephone number.

Additional information, including details of an overseas manufacturer or supplier—for example a website or internet address—may be included on the label.

The manufacturer or importer identification may be provided in a less prominent position on the label, for example the back portion of the label. It should be grouped with the expiry date, where applicable.

2.5 Label elements

The combination of label elements required on the label of a hazardous chemical is directly linked to its hazard classification. Label elements apply to hazard categories and must be determined as specified in the GHS.

Appendix D includes tables listing all the elements that apply to each hazard class and category or division.

The signal word, hazard pictograms and hazard statements should be grouped together in a prominent position on the label, and located either immediately following or adjacent to the product identifier and chemical ingredients.

Some non-hazardous chemicals may still pose a risk to people or the environment, for example dry ice (solid carbon dioxide). These chemicals will not have hazard pictograms, hazard statements, signal words or precautionary statements; however, their labels for these products should include information on their hazards and safety precautions. For example, the label for dry ice should include information on the asphyxiation hazard and precautions for handling to avoid cryogenic burns.

Labels should be suitably durable to remain clear and legible throughout the expected life of the product, and to minimise the risk of labels being eroded by the contents of the container.

Signal words

Signal words are used to indicate the relative level of severity of a hazard. The GHS uses ‘Danger’ and ‘Warning’ as signal words. ‘Danger’ is used for a more severe or significant hazard, while ‘Warning’ is used for the less severe hazards.

Only one signal word should be present on any one label. If the signal word ‘Danger’ applies, then the signal word ‘Warning’ should not appear on the label.

Signal words should be represented in bold and upper-case text.

Hazard statements

Hazard statements describe the nature of a hazard, including the degree of hazard, where appropriate. A unique hazard statement is assigned to each hazard class and category. The hazard statements and corresponding hazard class and category are provided in Appendix D. All relevant hazard statements must appear on the label. Where a hazard classification results in hazard statements with duplicate information, the information should only appear once, in line with the rules of precedence outlined in Appendix E.

Additionally, Appendix D lists 12 non-GHS hazard statements that should be included on the label, where relevant.

A unique hazard statement code is assigned to each hazard statement. The hazard statement code is intended to be used for reference purposes only. It is not part of the hazard statement and should not be used to replace it or be included on the label.

Hazard statements should be represented in bold and sentence case text.

Precautionary statements

Precautionary statements describe the recommended measures that should be taken to minimise or prevent adverse effects resulting from exposure to, or improper storage or handling of, a hazardous chemical. Precautionary statements are assigned to each hazard class and category.

Precautionary statements are separated into five categories:

- **Prevention statements** refer to precautions to be taken to prevent an accident or exposure.
- **Response statements** refer to instructions in case of an accident.
- **Storage statements** refer to instructions for safe storage of the chemical.
- **Disposal statements** refer to appropriate disposal instructions.
- **General statements** are for use as appropriate.

The precautionary statements that correspond to each hazard class and category are provided in Appendix D. Not all precautionary statements relating to a particular hazard classification need to be used on the label. As a guide, a maximum of between six and ten precautionary statements should appear on the label, depending on the nature and severity of the hazards.

Where a hazard classification results in duplicate precautionary statements, the information should only appear once in line with the rules of precedence outlined in Appendix E.

A combination of precautionary statements may be used to save label space, improve readability and to provide flexibility in the application of precautionary phrases.

Related precautionary statements should be grouped together on a label to allow for ease of location. Precautionary statements should be printed in sentence case text.

A unique precautionary statement code is assigned to each precautionary statement. The precautionary statement code is intended to be used for reference purposes only. It is not part of the precautionary statement and should not be used to replace it or be included on the label.

The general precautionary statements refer to general precautionary measures to be taken, for example:

- If medical advice is needed, have product container or label at hand.
- Keep out of reach of children.
- Read carefully and follow all instructions.

Unlike other precautionary statements, general precautionary statements are not linked to particular hazard classes or categories and their inclusion on labels of workplace hazardous chemicals is not mandatory.

Where general precautionary statements are used, they should be located in a prominent position on the label, for example adjacent to the product identifier. General precautionary statements should be printed in sentence case text.

Hazard pictograms

The GHS specifies nine hazard pictograms, having regard to physical, health and environmental hazards. These are provided in Appendix F of this Code.

Hazard pictograms must be included on the label in most cases. In some circumstances however, pictograms may be omitted from the label in line with the rules of precedence outlined in Appendix E. In all other cases, where pictograms are required, all the relevant hazard pictograms must be included on the label.

Hazard pictograms should be in the shape of a square set at an angle of 45º (i.e. diamond-shaped) on its point. The hazard pictograms should have a black symbol on a white background with a red border or frame of sufficient width to be clearly visible. Pictograms with a black border may also be used.

Class labels required for the transport of dangerous goods as per the *Australian Code for the Transport of Dangerous Goods by Road and Rail* (the ADG Code) may be used instead of the relevant hazard pictograms specified in the GHS, where they are consistent. A comparison of the hazard pictograms as specified in the GHS and the ADG Code class labels is provided in Appendix G[1].

2.6 Expiry date

If a chemical has an expiry date it must be provided on the label. For example, where degradation or decomposition of the chemical may occur over time, with the result that the hazard classification of the chemical changes, or where the chemical is no longer within acceptable specifications for potency and stability. For example ethers may form explosive peroxides over time.

An expiry date may be provided in a less prominent position of the label, for example the back portion of the label. It should be grouped with any manufacturer or importer identification information. An expiry date should be represented in sentence case text.

2.7 Pipe work

WHS Regulation 343

Labelling hazardous chemicals—pipe work

You must ensure, so far as is reasonably practicable, that a hazardous chemical in pipe work is identified by a label, sign or another way on or near the pipe work.

The identification used should communicate information relevant to the identity of the chemical, its hazards and any necessary precautions to be observed.

Methods for identifying hazardous chemicals in pipe work may include:

- signs adjacent to pipe work
- markings on the pipe work, for example colour coding (refer to AS 1345–1995: *Identification of the contents of pipes, conduits and ducts* for guidance)
- schematic layouts displayed prominently.

[1] *GHS pictograms can be downloaded from the GHS page on the UNECE website. Transport of Dangerous Goods class labels can be downloaded from the National Transport Commission website*

3. Special labelling situations

This chapter outlines requirements and guidelines for labelling hazardous chemicals in special situations where the full requirements do not apply. As a person conducting a business or undertaking (PCBU), you should always aim to provide as much information on the hazards and safe use of the chemical on the label as possible.

Note that the information contained in this chapter may not be suitable for chemicals that are regulated under more than one set of laws (for example workplace hazardous chemicals that are also agricultural and veterinary chemicals as defined in the Commonwealth's *Agricultural and Veterinary Chemicals Code Act 1994* must meet the requirements of both sets of laws). The manufacturer or importer must ensure that the chemical is correctly labelled with respect to all applicable laws.

Under the WHS Regulations, reduced labelling is permitted for hazardous chemicals that are:

- supplied in small containers
- research chemicals or samples for analysis
- decanted or transferred
- not supplied to another workplace, and where the hazards are known to the workers using the chemical
- hazardous wastes
- classified into the explosives hazard class and are not explosive articles
- agricultural and veterinary chemicals.

This chapter also provides guidance on the acceptability of labels prepared in accordance with other labelling systems and handled in a workplace, specifically:

- hazardous chemicals classified in the explosives hazard class and labelled in compliance with the Australian Code for the Transport of Explosives by Road and Rail
- dangerous goods labelled in compliance with transport requirements[2]
- consumer products
- agricultural or veterinary chemical products that are labelled in accordance with the requirements of the Australian Pesticides and Veterinary Medicines Authority.

[2] *Dangerous goods that are labelled to comply with transport requirements and are stored in a workplace may also need to comply with requirements as specified in the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code).*

3.1 Small containers

WHS Regulations Schedule 9

Classification, packaging and labelling requirements

Where a hazardous chemical is packaged in a container that is too small to attach a label with all the information that is required of hazardous chemical labels, then the label must be written in English and include the following:

- the product identifier
- the name, Australian address and business telephone number of either the manufacturer or importer
- a hazard pictogram or hazard statement that is consistent with the correct classification of the chemical, and
- any other information required for hazardous chemicals labels in general that is reasonably practicable to include.

Priority should be given to the inclusion of those labelling elements relating to the most significant hazards of the hazardous chemical.

The most significant hazard will vary from chemical to chemical, and will be dependent upon, for example, likely routes of exposure based on its physical state (i.e. whether it is a gas, liquid or solid), its packaging and its intended use.

Examples of 'the most significant hazard'

The information relating to a hazardous chemical's inhalation hazard properties may be considered most significant for a paint that is intended for application using a spray gun, but not where it is intended for application using a brush.

The information relating to dermal toxicity may be considered most significant for a chemical that is packaged in an ampoule (i.e. where spillage could occur during opening), but not where the chemical is packaged in a ready-to-use syringe.

For hazardous chemicals with multiple hazard categories, the most stringent set of precautionary statements should be selected. This is appropriate for situations where rapid action or response may be crucial following accidental exposure, and therefore information relating to these actions should be included in preference to non-critical information.

Example of 'the most stringent set of precautionary statements'

If a chemical can cause long-term systemic effects, and is also acutely toxic, then the first aid measures for acute toxicity will normally take precedence over those for longer term effects. However, medical attention for the delayed health effects may take precedence in some cases, even if it is not associated with immediate symptoms of exposure.

Where certain hazard or other information has been omitted from the label, it is recommended that alternative means for communicating the information should be used. The complete set of hazard and other information may be included on an outer box (for example for a box containing several very small ampoules), a swing tag, insert or leaflet inside a box.

Examples of acceptable labels for small containers are provided in Appendix H.

3.2 Research chemicals or samples for analysis

A research chemical is a substance or mixture that is manufactured in a laboratory for the purposes of genuine research and not for use or supply to others for a purpose other than genuine analysis or research. A chemical that is supplied commercially to another workplace is not included under the meaning of ‘research chemical or samples for analysis’ under any circumstances.

WHS Regulations Schedule 9

Classification, packaging and labelling requirements

If a hazardous chemical is a research chemical or sample for analysis, the label must, at a minimum, be written in English and include the product identifier and a hazard pictogram or hazard statement that is consistent with the correct classification of the chemical.

A research chemical or sample for analysis must be correctly classified and the identity of the substance or mixture must be determined.

The product identifier of a research chemical or sample for analysis may be:

- the actual name of the chemical
- a recognised abbreviation or acronym
- a chemical formula, structure or reaction components.

When the identity of a research chemical or sample for analysis is not known this should be indicated clearly on the label. Labels for research chemicals or samples for analysis should include as much hazard information as possible, based on the identity and the known or suspected hazards.

Where labelling the actual laboratory container is impractical due to its size or the conditions under which it is used, other methods of providing the information can be used, for example a secure swing tag, a sign attached to supporting apparatus or labelling an outer container.

For example, for a rack of test tubes, rather than label each individual test tube containing the same hazardous chemical, you may attach a label to the rack using a swing tag.

3.3 Decanted or transferred hazardous chemicals

WHS Regulations Schedule 9

Classification, packaging and labelling requirements

If a hazardous chemical is decanted or transferred from the container in which it was packed and it will not be used immediately or it is supplied to someone else, the label must, at a minimum, be written in English and include the following:

- the product identifier, and
- a hazard pictogram or hazard statement consistent with the correct classification of the chemical.

Note: Chemicals regulated under more than one set of laws may have additional labelling requirements when decanted or transferred to another container. For example, agvet chemicals typically require a label under the *Agricultural and Veterinary Chemicals Code Act 1994* when transferred to another container for supply, and authorisation may be required for this activity. For more advice refer to the relevant regulatory authority.

For the purposes of this Code, *decant* means to transfer a hazardous chemical from a correctly labelled container to another container within a workplace. Such a container may range from a small flask in a research laboratory to a large vessel that is used to contain reaction components prior to use in a mixing or reaction process. *Decant* does not include rebottling or repacking a chemical for supply to another workplace.

Where the entire amount of a decanted hazardous chemical will be used immediately, labelling of its container is not required.

A decanted hazardous chemical can only be considered to be used immediately in situations where:

- it is not left unattended by the person who decanted it
- it is used only by a person present at the decanting process
- the container is subsequently rendered free from any hazardous chemical immediately after use, so the container is in the condition it would be in if it had never contained the chemical.

Examples

Example 1: the hazardous chemical is considered to be used immediately:

- A sample of hydrocarbon solvent is dispensed from a bulk container into a 15 L container by Worker A. All of the decanted hydrocarbon solvent in the 15 L container is then used immediately by Worker A in the same shift. No hydrocarbon solvent is left in the 15 L container (as though it had never contained the chemical). The container with the dispensed solvent is not left unattended by Worker A before it is used.

Example 2: the hazardous chemical is not considered to be used immediately:

- A sample of hydrocarbon solvent is dispensed from a bulk container into a 15 L container by Worker A. The solvent in the 15 L container is not completely used up by Worker A at the end of his/her work shift. Worker A has not left the container with the dispensed solvent unattended during the shift. The remainder of the solvent is left for Worker B.

Where a container is repeatedly used for decanting as part of normal work procedures or processes, a permanent label should be attached to the container. Permanently labelled containers must not be used to contain any other substances or mixtures than those specified on the label.

3.4 Chemicals with known hazards that are not supplied to another workplace

WHS Regulations Schedule 9

Classification, packaging and labelling requirements

If a hazardous chemical is not being supplied to another workplace and the hazards associated with the chemical are known to the workers involved in using, handling or storing the chemical, then the label must, at a minimum, be written in English and include the following:

- the product identifier, and
- a hazard pictogram or hazard statement that are consistent with the correct classification of the chemical.

Where a hazardous chemical will not be supplied to another workplace, and your workers involved in its handling have sufficient knowledge of the associated hazards, then you may omit some of the information normally required in a label. The label should communicate enough information on the hazards as necessary to ensure its safe use.

Examples of labelling chemicals that are not supplied to another workplace

Example 1:

- Hazardous Chemical A is manufactured at Site A. Batch samples of Hazardous Chemical A are routinely sent to a laboratory at the same manufacturing site for analysis. Samples of Hazardous Chemical A are handled on a regular basis at the on-site laboratory, and the hazards are well known by the workers. Reduced labelling is permitted for the batch samples.

Example 2:

- Active Constituent A is manufactured at Site A and then later formulated into an end-use product, Agricultural Chemical Product A. The end-use product is formulated at the same facility, Site A, where the active ingredient is manufactured, and the workers undertaking the formulation step are aware of the hazards. In this case, the reduced labelling is permitted for Active Constituent A. However, Agricultural Chemical Product A must be labelled with all requisite labelling information.

Example 3:

- If Active Constituent A from Example 2 is transported to a different facility, Site B, for formulation into the end-use product Agricultural Chemical Product A, even where both facilities are owned and operated by the same company, Active Constituent A must be labelled with all requisite labelling information.

3.5 Hazardous waste products

Hazardous waste products must be identified and correctly classified so far as is reasonably practicable. Where it is not reasonably practicable to classify waste material, the hazard classification should be estimated using a precautionary approach based on the known or likely constituents of the waste.

WHS Regulations Schedule 9

Classification, packaging and labelling requirements

If it is reasonably likely that a waste product is a hazardous chemical, then the label on the container of the hazardous waste must be written in English and at a minimum, include the following:

- the product identifier
- the name, Australian address and business telephone number of either the manufacturer or the importer, and
- a hazard pictogram and hazard statement that are consistent with the correct classification of the chemical.

The product identifier should reflect the nature of the waste as closely as possible and may depend on the extent of knowledge about the components of the waste. Examples of product identifiers may include:

- chlorinated solvent waste
- flammable waste
- chromium VI waste
- heavy metal waste.

Labels for hazardous wastes should include as much hazard information as reasonably practicable based on what is known about its identity and any suspected hazards. The label of any hazardous wastes should also include, where possible, the following information:

- the identity of any known or likely hazardous constituents or impurities and their proportions (for example ‘contains chromium VI, 5%’ or ‘may contain trace levels of organic peroxides’)
- relevant precautionary statements
- relevant first aid and safety directions
- any other information that may assist identification of the hazardous waste and its associated hazards.

If you have made every reasonable attempt to identify and classify the chemical waste and have been unsuccessful, you should clearly indicate this on the label.

3.6 Duplication of labelling elements

WHS Regulation 335

Labelling hazardous chemicals

A hazardous chemical is correctly labelled if:

- the selection and use of label elements is in accordance with the GHS and it complies with Part 3 of Schedule 9 of the WHS Regulations, or
- the label includes content that complies with another labelling requirement of the WHS Regulations or required by another law [of this State or] of the Commonwealth and the content is the same, or substantially the same, as the content that is required by Part 3 of Schedule 9.

If a hazardous chemical is correctly labelled in accordance with other laws that apply to the chemical, then GHS statements are not required providing the label already contains content that is the same, or substantially the same, as the content that is required by Part 3 of Schedule 9.

For example, if the label on a hazardous chemical that is correctly labelled in accordance with another Commonwealth law contains the hazard statement 'Repeated exposure may cause allergic disorders', the GHS statement 'May cause an allergic skin reaction' would not be required because the two statements are sufficiently similar.

Similarly, it is possible to have redundant GHS label elements where a hazardous chemical meets the criteria for more than two similar hazard classes in the GHS. Redundant information should not be included on a label. Rules of precedence of certain label elements, and general guidance that should be used to determine when elements may be omitted from a label, are provided in Appendix E.

3.7 Hazardous chemicals classified in the explosives hazard class

WHS Regulations Schedule 9

Classification, packaging and labelling requirements

If a hazardous chemical is classified in the explosives hazard class, it must be packed in a container that has a label in English that complies with the *Australian Code for the Transport of Explosives by Road and Rail* and includes the following:

- the proper shipping name and UN number of the chemical, and
- any hazard pictogram, any hazard statement and any precautionary statement consistent with the correct classification of the chemical in relation to health hazards.

The *Australian Code for the Transport of Explosives by Road and Rail* (Explosives Code) outlines requirements for labelling of explosives. This labelling regime is designed primarily for the communication of physical hazards of explosives during their transport.

3.8 Hazardous chemicals that are dangerous goods packaged for transport

Where a hazardous chemical has been packaged and labelled in accordance with dangerous goods transport requirements and is in transit, the hazardous chemical is not subject to workplace labelling requirements. Where workplace hazardous chemicals are not in transit, they must have all of the required labelling information.

Hazardous chemicals that are classified as dangerous goods and transported by road or rail must comply with the labelling or marking requirements that are specified in the *Australian Code for the Transport of Dangerous Goods by Road and Rail* (the ADG Code). Transport markings and class labels of the ADG Code are designed primarily to assist emergency services personnel in case of an accident or emergency.

Note: The ADG Code refers to dangerous goods pictograms as Class or Division labels. Other information required on a package or container is referred to as 'markings'. The size and colour of labels and markings required for transport are specified in the ADG Code.

The ADG Code recognises the GHS as an appropriate labelling system for inner packages of dangerous goods during transport. As this code describes GHS-compliant labelling, labels prepared in accordance with this code should meet the inner package labelling requirements prescribed in the ADG Code for dangerous goods during transport.

To meet both workplace and transport labelling requirements, additional health and safety information may be required on some transport containers. The additional information would generally relate to chronic health hazards, which are not regulated for transport purposes.

For outer packaging of transport containers used within the workplace, workplace labelling requirements may be met by attaching to the container a supplementary panel or label that includes the additional information. The additional information should be clearly distinguishable from the information required to meet transport laws.

Combined labelling with ADG Class labels

Pictograms from the GHS may be substituted with correct ADG Code class labels where both represent the same hazard. A label for a workplace hazardous chemical that is a dangerous good for transport may include a mixture of GHS pictograms and ADG class labels for separate hazards, but should not include a class label and pictogram for the same hazard. For example, an ADG Flammable Liquid Class label can replace a GHS Flame pictogram, but both the Flame pictogram and the flammable liquid class label should not be included on the same label for a workplace chemical.

Where a GHS pictogram appears on the same container as a transport label, the GHS pictogram should be used as part of a complete GHS label.

The ADG Code prescribes minimum sizes for ADG class labels. When preparing labels to meet both workplace and transport requirements the requirements of the ADG Code must be met.

Examples of combined ADG and GHS labels can be found in Appendix H.

Labelling of chemicals stored or transported in multiple layers of packaged

Chemicals may be stored, handled or transported in multiple layers of packaging. This most commonly occurs when chemicals are packaged for transport.

GHS labelling must be applied to the innermost layer of packaging to provide information to the user when the chemical is used. If GHS labelling is not applied to the innermost layer of packaging the chemical will be incorrectly labelled when removed from its intermediate or outer packaging.

The outer layer of packaging (often referred to as an overpack) can be labelled in accordance with the ADG Code for transport without GHS labelling being required. However, if the chemical is expected to be used, handled or stored in the outer or intermediate layers of packaging then GHS information should also be provided on those layers to ensure it is available for workers.

Examples of the arrangement of GHS labels for multiple layers of packaging can be found in Annex 7 of the GHS.

3.9 Consumer products

WHS Regulation 335

Labelling hazardous chemicals

A hazardous chemical does not need to meet the labelling requirements under the WHS Regulations if the chemical is a consumer product labelled in accordance with the Standard for the Uniform Scheduling of Medicines and Poisons November 2016 (the Poisons Standard) as in force or remade from time to time, with the original label on its container and if it is reasonably foreseeable that the hazardous chemical will be used in the workplace only:

- in a quantity that is consistent with consumer household use
- in a way that is consistent with consumer household use, and
- in a way that is incidental to the nature of the work carried out by a worker using the chemical.

The following example shows how to distinguish between a consumer product and a workplace hazardous chemical.

Toilet cleaner is sold in 750 ml bottles for domestic use and is sold in 20 L containers to commercial cleaning businesses. The 750 ml bottle is intended for domestic use and does not need to be labelled in accordance with the WHS Regulations.

However, it is reasonably foreseeable that, due to the package size of the 20 L product, it would be used in a workplace rather than in a domestic situation. Therefore, the 20 L product must be labelled according to workplace labelling requirements.

Dual use products

Some hazardous chemicals may be intended for supply to both the consumer household markets and workplaces in identical containers and packaging. These products are sometimes referred to as dual use products. A dual use product label may need to comply with the Poisons Standard labelling requirements, the workplace labelling requirements or both.

Workplace labelling requirements apply if the manufacturer or importer determines that the use, handling and storage of the product are predominantly related to a work activity.

Poisons Standard labelling requirements apply to all poisons unless they are packed and sold solely for industrial, manufacturing, laboratory or dispensary use.

Where a hazardous chemical is also a poison intended for predominantly but not solely workplace use, both labelling requirements apply.

Examples of combined WHS and Poisons Standard labelling can be found in Appendix H.

3.10 Agricultural or veterinary chemical products

WHS Regulations Schedule 9

Classification, packaging and labelling requirements

Agvet chemicals must have a label in English that complies with the requirements of the *Agricultural and Veterinary Chemicals Code Act 1994* and also includes the following:

- any hazard statement that is consistent with the correct classification of the chemical, and
- any precautionary statement that is consistent with the correct classification of the chemical.

'Agricultural or veterinary chemical' refers to any agricultural chemical product or veterinary chemical product as defined in the *Agricultural and Veterinary Chemicals Code Act 1994 (Cth).*

The Australian Pesticides and Veterinary Medicines Authority (APVMA) labelling codes for agricultural and veterinary chemical products are the *Agricultural Labelling Code* and the *Veterinary Labelling Code*, respectively. You may omit the hazard pictogram and signal word from the labels of these chemicals. However, the label must contain hazard statements and precautionary statements for all of the intrinsic hazards of the product.

GHS statements are not required where the agvet chemical label already contains content that is the same, or substantially the same, as the GHS statements.

The APVMA labelling codes require that GHS information be placed in a separate box on the label. For more information about labelling of agricultural or veterinary chemical products please refer to the labelling codes published by the APVMA.

3.11 Products containing nanomaterials

For engineered or manufactured nanomaterials or chemicals containing engineered or manufactured nanomaterials, it is recommended that labels be prepared in accordance with this Code unless there is evidence that the nanomaterials are not hazardous.

The following label statements are recommended for products containing nanomaterials when the hazards are not fully characterised:

- Contains engineered/manufactured nanomaterials. Caution: Hazards unknown.
- Contains engineered/manufactured nanomaterials. Caution: Hazards not fully characterised.

These phrases are for use on an interim basis, as the manufacturer/importer has an ongoing duty to correctly classify the chemical and include information on known hazards on the label in accordance with the WHS Regulations. They should review any new or significant information in relation to any hazardous chemicals they import or manufacture. A review of the literature and other relevant sources of information should be undertaken on a regular basis.

3.12 Labelling of products which pose a hazard but do not meet ‘hazardous chemical’ definition

Some products have hazards consistent with GHS hazard classes and categories, but do not meet the definition of a hazardous chemical because they are not substances, mixtures or articles. For example, products where the active ingredient is a live bacterium.

Other products, such as radioactive materials, may have hazards that are not classified under the GHS. These are not hazardous chemicals under the WHS Regulations (unless they have additional hazards classifiable under the GHS that cause them to meet the definition of a hazardous chemical).

The requirements for labelling hazardous chemicals do not apply to such products, however you must still identify, communicate and manage risks as far as reasonably practicable, in accordance with the WHS Act. GHS label elements should not be used if the product is not classifiable under the GHS.

4. Labelling design and layout

The label must be written in English.

The size of a label should be:

- large enough to contain all of the relevant hazard and other information in a size and style that is easily visible and legible in the workplace, and
- appropriate to the size of the container, with larger labels present on larger containers.

The information on a label may be presented using one or more panels, or sections, dependent on the size and shape of the container. The label should be firmly secured to the outside of the container and should be visible in the normal storage position. The label should be sufficiently durable so as to remain legible and firmly attached to the container for the foreseeable lifetime of the product under normal storage and handling conditions.

4.1 Grouping information

A label should group specific information together so that hazard or precautionary information can be easily located.

4.2 Orientation and size of label elements

The text, hazard pictograms and other information on a label should be of a size and style that is easily legible and is appropriate to the size of the label and container.

The following table is provided as a guide for the minimum dimensions for hazard pictograms and sizes of text on containers of various capacities. The dimensions are intended to be measured along the edges of the pictograms. They are suggested sizes only and are not mandatory.

Table 1 Recommended sizes for label elements

Container capacity	Minimum hazard pictogram dimensions	Minimum text size
≤ 500 mL	15 x 15 mm	2.5 mm
> 500 mL and ≤ 5 L	20 x 20 mm	3 mm
> 5 L and ≤ 25 L	50 x 50 mm	5 mm
≥ 25 L	100 x 100 mm	7 mm

Refer to the ADG Code for marking requirements for dangerous goods being transported.

4.3 Placement

The label should be placed on the body of the container and be clearly visible to the user. Unless it is unavoidable, labels should always be placed on the container, not the lid. This is to avoid confusion if lids are swapped or removed.

The information and hazard pictograms on any label should be printed in a colour or colours that provide a distinct contrast to the background colour.

5. Other labelling duties

WHS Regulation 342

Labelling hazardous chemicals—containers

- As a person conducting a business or undertaking (PCBU) who manufactures hazardous chemicals at the workplace or decants or transfers a hazardous chemical from its original container, you must ensure that the container is correctly labelled in accordance with WHS regulation 335.
- You must also ensure, so far as is reasonably practicable, that a container that stores a hazardous chemical is correctly labelled in accordance with WHS Regulation 335 while the container contains the hazardous chemical.
- The PCBU at the workplace must also ensure that a container labelled for a hazardous chemical is used only for the use, handling or storage of that hazardous chemical.

These requirements do not apply if the hazardous chemical is used immediately after it is put into the container and the container is thoroughly cleaned immediately after the hazardous chemical is used, handled or stored to the condition it would be in if it had never contained the hazardous chemical.

5.1 Containers found without correct labelling

If you find that a container of a hazardous chemical is not correctly labelled in accordance with the WHS Regulations, you should attach the product identifier to the container. You should not use a hazardous chemical that is not correctly labelled. Store it in isolation until it is appropriately labelled.

If the product identifier of an unlabelled chemical is not known, this should be clearly marked on the container, for example by attaching a label to the container with the statement:

Caution—Do Not Use—Unknown Substance.

You should take steps to identify and correctly label the unknown chemical substance. Where the chemical cannot be identified and labelled correctly, the contents should be disposed of in accordance with relevant environmental regulations and, where necessary, in consultation with the relevant waste management authority.

5.2 Reviewing and updating information on labels

From time to time, the hazard classification of a hazardous chemical may change, for example where new information becomes available. Where the hazard classification of a hazardous chemical changes, the label must be reviewed and, if necessary, revised to reflect any required changes.

Importers, manufacturers and suppliers should review any new or significant information in relation to any hazardous chemicals they import, manufacture or supply. A review of the literature and other relevant sources of information should be undertaken on a regular basis.

It is good practice to review the label information of a hazardous chemical at the same time as the safety data sheet (SDS) is updated. SDSs are updated:

- when any new information about the hazardous chemical is known or received to ensure the SDS contains correct, current information
- at least once every five years.

If you have a duty to label a workplace hazardous chemical, then you must ensure that the label contains correct information at the time it is affixed to the container of the hazardous chemical.

Appendix A—Glossary

Term	Description
ADG Code	The Australian Code for the Transport of Dangerous Goods by Road and Rail, as in force or remade from time to time, approved by the Transport and Infrastructure Council. The ADG Code is accessible at the National Transport Commission website (www.ntc.gov.au).
Article	A manufactured item, other than a fluid or particle, that is formed into a particular shape or design during manufacture and has hazard properties and a function that are wholly or partly dependent on the shape or design.
Chemical identity	A name, in accordance with the nomenclature systems of the International Union of Pure and Applied Chemistry or the Chemical Abstracts Service, or a technical name, that gives a chemical a unique identity.
Class (of dangerous goods)	The number assigned to the goods in the ADG Code indicating the hazard, or most predominant hazard, exhibited by the goods.
Class label	A pictogram described in the ADG Code for a class, or division of a class, of dangerous goods.
Consumer product	A thing that: • is packed or repacked primarily for use by a household consumer or for use in an office • if the thing is packed or repacked primarily for use by a household consumer—is packed in the way and quantity in which it is intended to be used by a household consumer • if the thing is packed or repacked primarily for use in an office—is packed in the way and quantity in which it is intended to be used for office work.
Decant	To transfer a chemical from a correctly labelled container to another container within a workplace. Decant does not include rebottling or repacking a chemical for supply to another workplace.
Division (of dangerous goods)	A number, in a class of dangerous goods, to which the dangerous goods are assigned in the ADG Code.
Duty holder	Any person who owes a work health and safety duty under the WHS Act including a person conducting a business or undertaking, a designer, manufacturer, importer, supplier, installer of products or plant used at work (upstream duty holder), officer or a worker.
Exposure limit	An exposure limit published by Safe Work Australia in the *Workplace exposure limits for airborne contaminants*
Generic name	A name applied to a group of chemicals having similar structures and properties.

Term	Description
Genuine research	Systematic investigative or experimental activities that are carried out for either acquiring new knowledge (whether or not the knowledge will have a specific practical application) or creating new or improved materials, products, devices, processes or services.
GHS	The *Globally Harmonized System of Classification and Labelling of Chemicals*, 7th revised edition, published by UNECE, as modified under Schedule 6 of the WHS Regulations.
Hazard	A situation or thing that has the potential to harm a person. Hazards at work may include: noisy machinery, a moving forklift, chemicals, electricity, working at heights, a repetitive job, bullying and violence at the workplace.
Hazard category	A division of criteria within a hazard class in the GHS.
Hazard class	The nature of a physical, health or environmental hazard under the GHS, including a class of dangerous goods.
Hazardous chemical	Any substance, mixture or article that satisfies the criteria for any one or more hazard classes in the GHS (including a classification referred to in Schedule 6 of the WHS Regulations), unless the only hazard class or classes for which the substance, mixture or article satisfies the criteria are any one or more of the following: • acute toxicity—oral—category 5 • acute toxicity—dermal—category 5 • acute toxicity—inhalation—category 5 • skin corrosion/irritation—category 3 • aspiration hazard—category 2 • flammable gases—category 2 • acute hazard to the aquatic environment—category 1, 2 or 3 • chronic hazard to the aquatic environment—category 1, 2, 3 or 4 • hazardous to the ozone layer. Note: The Schedule 6 tables replace some tables in the GHS.
Hazardous ingredient	An ingredient of a mixture which is, in its pure form, a hazardous chemical.
Hazard pictogram	A graphical composition, including a symbol plus other graphical elements, that is assigned in the GHS to a hazard class or hazard category.
Hazard statement	A statement assigned in the GHS to a hazard class or hazard category describing the nature of the hazards of a hazardous chemical including, if appropriate, the degree of hazard.
Health and safety committee	A consultative body established under the WHS Act. The committee's functions include facilitating cooperation between workers and the person conducting a business or undertaking to ensure workers' health and safety at work, and assisting to develop work health and safety standards, rules and procedures for the workplace.

Term	Description
Health and safety representative	A worker who has been elected by their work group under the WHS Act to represent them on health and safety matters.
Import	Bring into the jurisdiction from outside Australia.
Importer (of a hazardous chemical)	A person who conducts a business or undertaking that imports a substance that is a hazardous chemical that is to be used, or could reasonably be expected to be used, at a workplace.
Ingredient	Any component of a mixture.
In transit	A thing is ***in transit*** if the thing: • is supplied to, or stored at, a workplace in containers that are not opened at the workplace, and • is not used at the workplace, and • is kept at the workplace for not more than five consecutive days.
Label element	A type of information used on a label. For example: a pictogram, signal word, hazard statement.
Laboratory	A building or room equipped for analysis, genuine research or practical teaching, and which is not used for production purposes.
Manufacture (of a hazardous chemical)	The activities of packing, repacking, formulating, blending, mixing, making, remaking and synthesising of the chemical.
Manufacturer (of a hazardous chemical)	A person who conducts a business or undertaking that manufactures a substance that is a hazardous chemical that is to be used, or could reasonably be expected to be used, at a workplace.
May	'May' indicates an optional course of action.
Mixture	A combination of or a solution composed of two or more substances that do not react with each other.
Must	'Must' indicates a legal requirement exists that must be complied with.
Officer	An officer under the WHS Act includes: • an officer under section 9 of the *Corporations Act 2001* (Cth) • an officer of the Crown within the meaning of section 247 of the WHS Act, and • an officer of a public authority within the meaning of section 252 of the WHS Act. A partner in a partnership or an elected member of a local authority is not an officer while acting in that capacity**.**

Term	Description
Person conducting a business or undertaking (PCBU)	PCBU is an umbrella concept which intends to capture all types of working arrangements or relationships. A PCBU includes a: • company • unincorporated body or association, and • sole trader or self-employed person. Individuals who are in a partnership that is conducting a business will individually and collectively be a PCBU. A volunteer association (defined under the WHS Act, see below) or elected members of a local authority will not be a PCBU.
Poisons Standard	The Standard for the Uniform Scheduling of Medicines and Poisons November 2016 (SUSMP), published by the Commonwealth as in force or remade from time to time.
Precautionary statement	A phrase prescribed by the GHS that describes recommended measures to be taken to prevent or minimise the adverse effects of exposure to a hazardous chemical or the improper handling of a hazardous chemical.
Product Identifier	The name or number used to identify a product on a label and in an SDS.
Proper shipping name	A proper shipping name under the ADG Code.
Research chemical	A substance or mixture that is manufactured in a laboratory for genuine research and is not for use or supply for a purpose other than analysis or genuine research.
Risk	The possibility harm (death, injury or illness) might occur when exposed to a hazard.
Should	‘Should’ indicates a recommended course of action.
Safety Data Sheet (SDS)	A document that describes the identity, properties (chemical and physical properties and health hazard and environmental hazard information), uses, precautions for use, safe handling procedures and safe disposal procedures of a hazardous chemical.
Signal Word	The word **Danger** or **Warning** used on a label to indicate to a label reader the relative severity level of a hazard, and to alert the reader to a potential hazard, as classified under the GHS.
Substance	A chemical element or compound in its natural state or obtained or generated by a process: • including any additive necessary to preserve the stability of the element or compound and any impurities deriving from the process but • excluding any solvent that may be separated without affecting the stability of the element or compound, or changing its composition.

Term	Description
Supply	Selling or transferring ownership or responsibility (for a chemical).
Technical name	A name that is: • ordinarily used in commerce, regulations and codes to identify a substance or mixture, other than an International Union of Pure and Applied Chemistry or Chemical Abstracts Service name • recognised by the scientific community.
Transfer	The pumping, dispensing or decanting from one container into another or from one place to another.
UNECE	The United Nations Economic Commission for Europe.
United Nations (UN) Number	A number assigned to dangerous goods by the United Nations Subcommittee of Experts on the Transport of Dangerous Goods.[3]
Volunteer association	A group of volunteers working together for one or more community purposes where none of the volunteers, whether alone or jointly with any other volunteers, employs any person to carry out work for the volunteer association.
Work group	A group of workers established to facilitate the representation of workers by one or more health and safety representatives. A work group may be all workers at a workplace but it may also be appropriate to split a workplace into multiple work groups where workers share similar work conditions or are exposed to similar risks and hazards. For example all workers on night shift.
Worker	Any person who carries out work for a person conducting a business or undertaking, including work as an employee, contractor or subcontractor (or their employee), self-employed person, outworker, apprentice or trainee, work experience student, employee of a labour hire company placed with a 'host employer' or a volunteer.
Workplace	Any place where work is carried out for a business or undertaking and includes any place where a worker goes, or is likely to be, while at work. This may include offices, factories, shops, construction sites, vehicles, ships, aircraft or other mobile structures on land or water.

[3] *UN Numbers are published in the UN Recommendations on the Transport of Dangerous Goods—Model Regulation, and in the ADG Code.*

Appendix B—Checklist for preparing a label

The following table lists the steps that are recommended for the preparation of a label for a hazardous chemical. The information is intended for use as a quick reference guide. It may not apply to all situations. The relevant sections of this Code should be referred to for full details.

Much of the information required on the label of a hazardous chemical is also included in the chemical's safety data sheet (SDS). For example, the product identifier on the label must be consistent with the product identifier used in the SDS. If an SDS is available for the hazardous chemical it can be used as the basis for much of the label information.

Table 2 Labelling checklist

Step Number	Step	Comments
1	Select the suitable product identifier.	Refer to section 2.2 of this Code.
2	Determine which ingredients require disclosure.	Refer to section 2.3 of this Code for ingredient disclosure requirements.
3	Select the label elements which apply to the hazard categories, in accordance with correct hazard classification.	Label elements applicable to all hazard categories are tabulated in Appendix D.
4	Combine all applicable elements, and then determine which elements may be omitted from the label to avoid duplication or redundancy.	Refer to Appendix E for precedence rules and hierarchy of elements.
5	Determine which label elements may be omitted where a special labelling situation may apply.	Refer to Chapter 3.
6	Determine whether other relevant health and safety information may be required.	Particularly important for hazard endpoints not covered by the GHS but where there are health and safety concerns.
7	Select the appropriate supplier details to be included.	Other information, for example web address or emergency contact phone number, may be included.
8	Determine whether an expiry date is required.	Expiry date is required if degradation over time could change the hazard classification. For example, if a highly toxic impurity is formed.
9	Identify any other relevant information that may be required.	For example, reference to SDS or product use information.
10	Design the label layout and grouping of information.	Refer to Chapter 4.

Appendix C—Guide for selecting generic names

This appendix describes:

- a procedure for naming hazardous chemicals, and
- the division of substances into families.

Section 2.3 of this Code explains when generic names may be used.

The families of substances are defined in the following manner:

- inorganic or organic substances whose properties are identified by having a common chemical element as their chief characteristic. The family name is derived from the name of the chemical element. These families are identified in Table 6 below by the atomic number of the chemical element (Family No. 001 to 103)
- organic substances whose properties are identified by having a common functional group as their chief characteristic.
  - the family name is derived from the functional group name
  - these families are identified by the number convention found in Table 6 below (Family No. 601 to 650).

Sub-families bringing together substances with a common specific character have been added in certain cases.

5.3 Establishing the generic name

General principles

In selecting a generic name, the most specific generic name must be chosen. The following approach should be adopted:

- identify the functional groups and chemical elements present in the molecule
- determine the most important functional groups and chemical elements that contribute to its properties.

The identified functional groups and elements taken into account are the names of the families and sub-families set out in Table 6 below in the form of a (non-restrictive) list.

Practical application

After having conducted a search to see if the substance belongs to one or more families or sub-families on the list in Table 6 below, the generic name can be established in the following way:

- If the name of a family or sub-family is sufficient to characterise the chemical elements or important functional groups, this name will be chosen as the generic name. Table 3 shows some examples.

Table 3 Family or sub-family name sufficient to establish generic name

Name	Family • **Sub-family**	Generic name
1,4-dihydoxybenzene	604: Phenols and derivatives	Phenol derivative
Butanols	603: Alcohols and derivatives • Aliphatic alcohols	Aliphatic alcohol
2-isopropoxyethanol	603: Alcohols and derivatives Glycolethers	Glycolether
Methacrylate	607: Organic acids and derivatives • Methacrylate	Methacrylate

If the name of a family or sub-family is not sufficient to characterise the chemical elements of important functional groups, the generic name should be a combination of the corresponding different family or sub-family names. Table 4 shows some examples.

Table 4 Family and sub-family names combined to establish generic name

Name	Family • **sub-family**	Generic name
Lead hexafluorosilicate	009: Fluorine compounds • Inorganic fluorides 082: Lead compounds	Inorganic lead fluoride
Chlorobenzene	602: Halogenated hydrocarbons • Halogenated aromatic hydrocarbons 017: Chlorine compounds	Chlorinated aromatic hydrocarbon
2,3,6-Trichlorophenylacetic acid	607: Organic acids and derivatives • Halogenated aromatic acids 017: Chlorine compounds	Chlorinated aromatic acid
1-Chloro-1-nitropropane	610: Chloronitrated compounds 601: Hydrocarbons • Aliphatic hydrocarbons	Chloronitrated aliphatic hydrocarbon
Tetrapropyl dithiopyrophosphate	015: Phosphorus compounds • Phosphoric esters 016: Sulphur compounds	Thiophosphoric ester

Note: In the case of certain elements, notably metals, the name of the family or sub-family may be indicated by the words 'organic' or 'inorganic'. Table 5 shows some examples.

Table 5 Family or sub-family name indicated by ‘organic’ or ‘inorganic’ to establish generic name

Name	Family • sub-family	Generic name
Dimercury dichloride	080: Mercury compounds	Inorganic mercury compound
Barium acetate	056: Barium compounds	Organic barium compound
Ethyl nitrite	007: Nitrogen compounds • Nitrites	Organic nitrite
Sodium hydrosulphite	016: Sulphur compounds	Inorganic sulphur compound

Table 6 Division of substances into families and sub-families

Family no.	Families • Sub-Families
001	Hydrogen compounds • Hydrides
003	Lithium compounds
004	Beryllium compounds
005	Boron compounds • Boranes • Borates
006	Carbon compounds • Carbamates • Inorganic carbon compounds • Salts of hydrogen cyanide • Urea and derivatives
007	Nitrogen compounds • Quaternary ammonium compounds • Acid nitrogen compounds • Nitrates • Nitrites
008	Oxygen compounds
009	Fluorine compounds • Inorganic fluorides

Family no.	Families • Sub-Families
011	Sodium compounds
012	Magnesium compounds • Organometallic magnesium derivatives
013	Aluminium compounds • Organometallic aluminium derivatives
014	Silicon compounds • Silicones • Silicates
015	Phosphorus compounds • Acid phosphorus compounds • Phosphonium compounds • Phosphoric esters Phosphates • Phosphites Phosphoramides and derivatives
016	Sulphur compounds • Acid sulphur compounds Mercaptans • Sulphates • Sulphites
017	Chlorine compounds • Chlorates • Perchlorates
018	Argon compounds
019	Potassium compounds
020	Calcium compounds
021	Scandium compounds
022	Titanium compounds
023	Vanadium compounds
024	Chromium compounds • Chromium VI compounds
025	Manganese compounds

Family no.	Families • Sub-Families
026	Iron compounds
027	Cobalt compounds
028	Nickel compounds
029	Copper compounds
030	Zinc compounds • Organometallic zinc derivatives
031	Gallium compounds
032	Germanium compounds
033	Arsenic compounds
034	Selenium compounds
035	Bromine compounds
036	Krypton compounds
037	Rubidium compounds
038	Strontium compounds
039	Yttrium compounds
040	Zirconium compounds
041	Niobium compounds
042	Molybdenum compounds
043	Technetium compounds
044	Ruthenium compounds
045	Rhodium compounds
046	Palladium compounds
047	Silver compounds
048	Cadmium compounds
049	Indium compounds
050	Tin compounds • Organometallic tin derivatives
051	Antimony compounds

Family no.	Families • Sub-Families
052	Tellurium compounds
053	Iodine compounds
054	Xenon compounds
055	Caesium compounds
056	Barium compounds
057	Lanthanum
058	Cerium compounds
059	Praseodymium compounds
060	Neodymium compounds
061	Promethium compounds
062	Samarium compounds
063	Europium compounds
064	Gadolinium compounds
065	Terbium compounds
066	Dysprosium compounds
067	Holmium compounds
068	Erbium compounds
069	Thulium compounds
070	Ytterbium compounds
071	Lutetium compounds
072	Hafnium compounds
073	Tantalum compounds
074	Tungsten compounds
075	Rhenium compounds
076	Osmium compounds
077	Iridium compounds
078	Platinum compounds
079	Gold compounds

Family no.	Families • Sub-Families
080	Mercury compounds • Organometallic mercury derivatives
081	Thallium compounds
082	Lead compounds • Organometallic lead derivatives
083	Bismuth compounds
084	Polonium compounds
085	Astatine compounds
086	Radon compounds
087	Francium compounds
088	Radium compounds
089	Actinium compounds
090	Thorium compounds
091	Protactinium compounds
092	Uranium compounds
093	Neptunium compounds
094	Plutonium compounds
095	Americium compounds
096	Curium compounds
097	Berkelium compounds
098	Californium compounds
099	Einsteinium compounds
100	Fermium compounds
101	Mendelevium compounds
102	Nobelium compounds
103	Lawrencium compounds
601	Hydrocarbons • Aliphatic hydrocarbons • Aromatic hydrocarbons

Family no.	Families • **Sub-Families**
	• Alicyclic hydrocarbons • Polycyclic aromatic hydrocarbons (PAH)
602	Halogenated hydrocarbons* • Halogenated aliphatic hydrocarbons* • Halogenated aromatic hydrocarbons* • Halogenated alicyclic hydrocarbons* * Specify according to family corresponding to halogen.
603	Alcohols and derivatives • Aliphatic alcohols • Aromatic alcohols • Alicyclic alcohols • Alcanolamines • Epoxy derivatives • Ethers • Glycolethers • Glycols and polyols
604	Phenols and derivatives • Halogenated phenol derivatives* * Specify according to the family corresponding to halogen.
605	Aldehydes and derivatives • Aliphatic aldehydes • Aromatic aldehydes • Alicyclic aldehydes • Aliphatic acetals • Aromatic acetals • Alicyclic acetals
606	Ketones and derivatives • Aliphatic Ketones • Aromatic Ketones* • Alicyclic Ketones * Quinones included
607	Organic acids and derivatives • Aliphatic acids • Halogenated aliphatic acids* • Aromatic acids

Family no.	Families • Sub-Families
	Halogenated aromatic acids* • Alicyclic acids • Halogenated alicyclic acids* • Aliphatic acid anhydrides • Halogenated aliphatic acid anhydrides* • Aromatic acid anhydrides • Halogenated aromatic acid anhydrides* • Alicyclic acid anhydrides • Halogenated alicyclic acid anhydrides* • Salts of aliphatic acid • Salts of halogenated aliphatic acid* • Salts of aromatic acid • Salts of halogenated aromatic acid* • Salts of alicyclic acid • Salts of halogenated alicyclic acid* • Esters of aliphatic acid • Esters of halogenated alicyclic acid* • Esters of aromatic acid • Esters of halogenated aromatic acid* • Esters of alicyclic acid • Esters of halogenated alicyclic acid* • Esters of glycol ether • Acrylates • Methacrylates • Lactones • Acyl halides * Specify according to the family corresponding to halogen.
608	Nitriles and derivatives
609	Nitro compounds
610	Chloronitrated compounds
611	Azoxy and azo compounds
612	Amine compounds • Aliphatic amines and derivatives • Alicyclic amines and derivatives • Aromatic amines and derivatives • Aniline and derivatives

Family no.	Families • **Sub-Families**
	• Benzidine and derivatives
613	Heterocyclic bases and derivatives • Benzimidazole and derivatives • Imidazol and derivatives Pyrethrinoids • Quinoline and derivatives • Triazine and derivatives • Triazole and derivatives
614	Glycosides and alkaloids • Alkaloid and derivatives • Glycosides and derivatives
615	Cyanates and isocyanates • Cyanates • Isocyanates
616	Amides and derivatives • Acetamide and derivatives • Anilides
617	Organic Peroxides
650	Various substances Do not use this family. Instead, use the families or sub-families mentioned above.

Appendix D—Application of label elements

This appendix is intended to provide guidance for the application of the appropriate signal word, hazard pictograms, hazard statements and precautionary statements to a label. The tables (section D4) specify the signal word, hazard pictograms, hazard statements, precautionary statements that apply to each hazard class and category.

D1. Structure of hazard statement text

All of the hazard statement text that appears in bold in the tables (section D3) should appear on the label, except as otherwise specified.

Text in italics indicates additional information that should appear as part of the hazard statement, where applicable. The text in italics should not appear on the label.

The hazard statement codes shown in the tables are intended to be used for reference purposes only. They are not part of the hazard statement text and should not be used on a label.

D2. Structure of precautionary statement text

There are five types of precautionary statement: **general, prevention, response** (in case of accidental spillage or exposure, emergency response and first aid), **storage** and **disposal**.

All of the precautionary statement text that appears in bold in the tables (section D3) should appear on the label, except as otherwise specified.

To provide flexibility in the application of precautionary phrases, a combination of statements may be used to save label space and improve the readability of phrases. A combination of phrases can also be useful for different types of hazard where the precautionary behaviour is similar.

When a forward-slash or diagonal mark [/] appears in a precautionary statement text, it indicates that a choice has to be made between the phrases they separate

When an ellipsis (three full stops) [**…**] appears in a precautionary statement text, it indicates that all applicable conditions are not listed.

When text in the precautionary statement text appears in italics, this indicates that specific conditions apply to the use or allocation of the precautionary statement. This may relate to conditions attaching to either the general use of a precautionary statement or its use for a particular hazard class and/or hazard category. The text in italics is not intended to be present on a label.

The precautionary statements included in the following tables cover general emergency response and first-aid information. For some specific chemicals, supplementary first aid, treatment measures or specific antidotes or cleansing materials may be required. Poisons Centres and/or medical practitioners or specialist advice should be sought in such situations and this direction included on labels where appropriate.

The precautionary statement codes that are used in the tables are intended to be used for reference purposes only. They are not part of the precautionary statement text and should not be used on a label.

Examples of precautionary statements

Precautionary statement formed from a combination of phrases:

- P210 + P403 ‘Keep away from heat, hot surfaces, sparks, open flame and other ignition sources. Store in a well-ventilated place’.

Precautionary Statement that Contains a Forward-Slash [/]:

- P280 ‘Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/…’ should read: ‘Wear eye protection’ where the hazard classification does not warrant the additional personal protective equipment.

Precautionary Statement that Contains Three Full Stops […]:

- P241 ‘Use explosion-proof [electrical/ventilating/lighting/...] equipment’, the use of square brackets and ‘…’ ‘... allows for the specific equipment to be specified if necessary and appropriate. .

General precautionary statements

General precautionary statements are not aligned with any particular hazard category and, according to the GHS principles, these statements are required for consumer products only. Manufacturers of hazardous chemicals may choose to include these on workplace labels, particularly where it is foreseeable that the chemical may be used in a non-workplace situation. The general precautionary statements are:

- P101 If medical advice is needed, have product container or label at hand
- P102 Keep out of reach of children
- P103 Read carefully and follow all instructions.

D3. Tables of label elements from the GHS

The tables below provide the following information for each hazard class and hazard category of the GHS:

- hazard category
- the assigned signal word
- the assigned hazard statement and code
- the assigned GHS symbol
- the assigned precautionary statements, by precautionary statement type and code.

This table is adapted from GHS 7. Spelling has been changed to align with Australian spelling conventions where appropriate.

Explosives

Hazard category	Signal word	Hazard statement	Symbol
Unstable Explosive	Danger	H200 **Unstable Explosive**	 Exploding bomb

Precautionary statements

Prevention	Response	Storage	Disposal
P201 **Obtain special instructions before use.** P250 **Do not subject to grinding/shock/friction/…** … manufacturer/supplier or the competent authority to specify applicable rough handling. *— if the explosive is mechanically sensitive.* P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P370 + P372 + P380 + P373 **In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.**	P401 **Store in accordance with ...** …Manufacturer/supplier or the competent authority to specify local/regional/ national/international regulations as applicable.	P503 **Refer to manufacturer/supplier/… for information on disposal/recovery/recycling.** …Manufacturer/supplier or the competent authority to specify appropriate source of information in accordance with local/regional/ national/international regulations as applicable.

Explosives

Hazard category	Signal word	Hazard statement	Symbol
Division 1.1 Division 1.2 Division 1.3	Danger Danger Danger	H201 **Explosive; mass explosion hazard** H202 **Explosive; severe projection hazard** H203 **Explosive; fire, blast or projection hazard**	 Exploding bomb

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P230 **Keep wetted with...** …Manufacturer/supplier or the competent authority to specify appropriate material. *-for substances and mixtures which are wetted, diluted, dissolved or suspended with a phlegmatiser in order to reduce or suppress their explosive properties (desensitised explosives).* P234 **Keep only in original packaging.** P240 **Ground and bond container and receiving equipment.** *— if the explosive is electrostatically sensitive.* P250 **Do not subject to grinding/shock/friction/…** … manufacturer/supplier or the competent authority to specify applicable rough handling. *— if the explosive is mechanically sensitive.* P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/…** …Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P370 + P372 + P380 + P373 **In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.**	P401 **Store in accordance with ...** …Manufacturer/supplier or the competent authority to specify local/regional/ national/international regulations as applicable.	P503 **Refer to manufacturer/supplier/ … for information on disposal/recovery/recycling.** …Manufacturer/supplier or the competent authority to specify appropriate source of information in accordance with local/regional/ national/international regulations as applicable.

Explosives

Hazard category	Signal word	Hazard statement	Symbol
Division 1.4	Warning	H204 **Fire or projection hazard**	 Exploding bomb

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P234 **Keep only in original packaging.** P240 **Ground and bond container and receiving equipment.** *— if the explosive is electrostatically sensitive.* P250 **Do not subject to grinding/shock/friction/ …** … manufacturer/supplier or the competent authority to specify applicable rough handling. *— if the explosive is mechanically sensitive.* P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P370 + P372 + P380 + P373 **In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.** *— except for explosives of division 1.4 (compatibility group S) in transport packaging.* P370 + P380 + P375 **In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.** *— for explosives of division 1.4 (compatibility group S) in transport packaging.*	P401 **Store in accordance with…** …Manufacturer/supplier or the competent authority to specify local/regional/national/international regulations as applicable.	P503 **Refer to manufacturer/supplier/ … for information on disposal/recovery/recycling.** …Manufacturer/supplier or the competent authority to specify appropriate source of information in accordance with local/regional/national/international regulations as applicable.

Explosives

Hazard category	Signal word	Hazard statement	Symbol*
Division 1.5	Danger	H205 **May mass explode in fire**	

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P230 **Keep wetted with...** Manufacturer/supplier or the competent authority to specify appropriate material. ***—****for substances and mixtures which are wetted, diluted, dissolved or suspended with a phlegmatiser in order to reduce or suppress their explosive properties (desensitised explosives).* P234 **Keep only in original packaging.** P240 **Ground and bond container and receiving equipment.** *— if the explosive is electrostatically sensitive.* P250 **Do not subject to grinding/shock/friction/…** Manufacturer/supplier or the competent authority to specify applicable rough handling. *— if the explosive is mechanically sensitive.* P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/…** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P370 + P372 + P380 + P373 **In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.**	P401 **Store in accordance with ...** …Manufacturer/supplier or the competent authority to specify local/regional/ national/international regulations as applicable.	P503 **Refer to manufacturer/ supplier/…for information on disposal/recovery /recycling.** …Manufacturer/ supplier or the competent authority to specify appropriate source of information in accordance with local/regional/ national/international regulations as applicable.

*Note: The GHS does not have a pictogram for Explosive Division 1.5. The recommended symbol for Explosive Division 1.5 is the one used by the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code).

Explosives

Hazard category	Signal word	Hazard statement	Symbol*
Division 1.6	*No signal word*	*No hazard statement*	

Precautionary statements

Prevention	Response	Storage	Disposal
No precautionary statements	*No precautionary statements*	*No precautionary statements*	*No precautionary statements*

*Note: The GHS does not have a pictogram for Explosive Division 1.6. The recommended symbol for Explosive Division 1.6 is from the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code).

Flammable gases

Hazard category	Signal word	Hazard statement	Symbol
1A 1B	Danger Danger	H220 **Extremely flammable gas** H221 **Flammable gas**	 Flame

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.**	P377 **Leaking gas fire:** **Do not extinguish, unless leak can be stopped safely.** P381 **In case of leakage, eliminate all ignition sources.**	P403 **Store in a well-ventilated place.**	*No precautionary statements*

Flammable gases (pyrophoric gases)

Hazard category	Signal word	Hazard statement	Symbol
1A, Pyrophoric gas	Danger	H220 **Extremely flammable gas**; and H232 **May ignite spontaneously if exposed to air**	 Flame

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P222 **Do not allow contact with air.** *— if emphasis of the hazard statement is deemed necessary.* P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/…** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P377 **Leaking gas fire:** **Do not extinguish, unless leak can be stopped safely.** P381 **In case of leakage, eliminate all ignition sources.**	P403 **Store in a well-ventilated place.**	*No precautionary statements*

Note: This table lists only precautionary statements that are assigned due to the flammability and the pyrophoricity of the gas. For other precautionary statements that are assigned based on chemical instability see the respective table for chemically unstable gases A and B.

Flammable gases (chemically unstable gases)

Hazard category	Signal word	Hazard statement	Symbol
1A, chemically unstable gas A	Danger	H220 **Extremely flammable gas**; and H230 **May react explosively even in the absence of air**	 Flame
1A, chemically unstable gas B	Danger	H220 **Extremely flammable gas**; and H231 **May react explosively even in the absence of air at elevated pressure and/or temperature**	

Precautionary statements

Prevention	Response	Storage	Disposal
P202 **Do not handle until all safety precautions have been read and understood.** P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.**	P377 **Leaking gas fire:** **Do not extinguish, unless leak can be stopped safely.** P381 **In case of leakage, eliminate all ignition sources.**	P403 **Store in a well-ventilated place.**	*No precautionary statements*

Note: This table lists only precautionary statements that are assigned due to the flammability and the chemical instability of the gas. For other precautionary statements that are assigned based on the pyrophoricity see the respective table for pyrophoric gases.

Aerosols

Hazard category	Signal word	Hazard statement	Symbol
1	Danger	H222 **Extremely flammable aerosol**; and H229 **Pressurised container: may burst if heated**	 Flame
2	Warning	H223 **Flammable aerosol**; and H229 **Pressurised container: may burst if heated**	

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P211 **Do not spray on an open flame or other ignition source.** P251 **Do not pierce or burn, even after use.**	*No precautionary statements*	P410 + P412 **Protect from sunlight. Do not expose to temperatures exceeding 50ºC/122ºF.** Manufacturer/supplier or the competent authority to use applicable temperature scale.	*No precautionary statements*

Aerosols

Hazard category	Signal word	Hazard statement	Symbol
3	Warning	H229 **Pressurised container: may burst if heated**	*No symbol*

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P251 **Do not pierce or burn, even after use.**	*No precautionary statements*	P410 + P412 **Protect from sunlight. Do not expose to temperatures exceeding 50ºC/122ºF.** Manufacturer/supplier or the competent authority to use applicable temperature scale.	*No precautionary statements*

Oxidising gases

Hazard category	Signal word	Hazard statement	Symbol
1	Danger	H270 **May cause or intensify fire; oxidiser**	 Flame over circle

Precautionary statements

Prevention	Response	Storage	Disposal
P220 **Keep away from clothing and other combustible materials.** P244 **Keep valves and fittings free from oil and grease.**	P370 + P376 **In case of fire: Stop leak if safe to do so.**	P403 **Store in a well-ventilated place.**	*No precautionary statements*

Gases under pressure (compressed, liquefied and dissolved gases)

Hazard category	Signal word	Hazard statement	Symbol
Compressed gas	Warning	H280 **Contains gas under pressure; may explode if heated**	 Gas cylinder
Liquefied gas	Warning	H280 **Contains gas under pressure; may explode if heated**	
Dissolved gas	Warning	H280 **Contains gas under pressure; may explode if heated**	

Precautionary statements

Prevention	Response	Storage	Disposal
No precautionary statements	*No precautionary statements*	P410 + P403 **Protect from sunlight. Store in a well-ventilated place.** *— P410 may be omitted for gases filled in transportable gas cylinders in accordance with packing instruction P200 of the UN Recommendations on the Transport of Dangerous Goods, Model Regulations, unless those gases are subject to (slow) decomposition or polymerisation, or the competent authority provides otherwise.*	*No precautionary statements*

Gases under pressure (refrigerated liquefied gases)

Hazard category	Signal word	Hazard statement	Symbol
Refrigerated liquefied gas	Warning	H281 **Contains refrigerated gas; may cause cryogenic burns or injury**	 Gas cylinder

Precautionary statements

Prevention	Response	Storage	Disposal
P282 **Wear cold insulating gloves and either face shield or eye protection.**	P336 + P315 **Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice/attention.** Manufacturer/supplier or the competent authority to select medical advice or attention as appropriate.	P403 **Store in a well-ventilated place.**	*No precautionary statements*

Flammable liquids

Hazard category	Signal word	Hazard statement	Symbol
1 2 3	Danger Danger Warning	H224 **Extremely flammable liquid and vapour** H225 **Highly flammable liquid and vapour** H226 **Flammable liquid and vapour**	 Flame

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P233 **Keep container tightly closed.** ***—**if the liquid is volatile and may generate an explosive atmosphere.* P240 **Ground and bond container and receiving equipment.** ***—**if the liquids is volatile and may generate an explosive atmosphere.* P241 **Use explosion-proof [electrical/ventilating/lighting/...] equipment.** ***—**if the liquid is volatile and may generate an explosive atmosphere.* ***—**text in square brackets may be used to specify specific electrical, ventilating, lighting or other equipment if necessary and as appropriate.* ***—**precautionary statement may be omitted where local or national legislation introduces more specific provisions.* P242 **Use non-sparking tools.** *—if the liquid is volatile and may generate an explosive atmosphere and if the minimum ignition energy is very low. (This applies to substances and mixtures where the minimum ignition energy Is <0.1mJ, e.g. carbon disulphide.)* P243 **Take action to prevent static discharges.** ***—**if the liquid is volatile and may generate an explosive atmosphere.* ***—**may be omitted where local or national legislation introduces more specific provisions.* P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/…** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P303 + P361 + P353 **IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].** ***—**text in square brackets to be included where the manufacturer/supplier or the competent authority considers it appropriate for the specific chemical.* P370 + P378 **In case of fire: Use ... to extinguish.** ...Manufacturer/ supplier or the competent authority to specify appropriate media. *— if water increases risk.*	P403 + P235 **Store in a well-ventilated place. Keep cool.** ***—**for flammable liquids category 1 and other flammable liquids that are volatile and may generate an explosive atmosphere.*	P501 **Dispose of contents/container to...** … in accordance with local/regional/ national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Flammable liquids

Hazard category	Signal word	Hazard statement	Symbol
4	Warning	H227 **Combustible liquid**	*No symbol*

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P280 **Wear protective gloves/protective clothing/eye protection/ face protection/hearing protection/…** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P370 + P378 **In case of fire: Use ... to extinguish.** ... Manufacturer/supplier or the competent authority to specify appropriate media. **—***if water increases risk.*	P403 **Store in a well-ventilated place.** **—***for flammable liquids Category 1 and other flammable liquids that are volatile and may generate an explosive atmosphere.*	P501 **Dispose of contents/container to...** … in accordance with local/ regional/ national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Flammable solids

Hazard category	Signal word	Hazard statement	Symbol
1 2	Danger Warning	H228 **Flammable solid** H228 **Flammable solid**	 Flame

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P240 **Ground and bond container and receiving equipment.** *— if the solid is electrostatically sensitive.* P241 **Use explosion-proof [electrical/ventilating/lighting/...] equipment.** *— if dust clouds can occur.* ***—**text in square brackets may be used to specify specific electrical, ventilating, lighting or other equipment if necessary and as appropriate.* ***—**precautionary statement may be omitted where local or national legislation introduces more specific provisions* P280 **Wear protective gloves/protective clothing/eye protection/ face protection/hearing protection/…** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P370 + P378 **In case of fire: Use ... to extinguish.** ...Manufacturer/supplier or the competent authority to specify appropriate media. *— if water increases risk.*	*No precautionary statements*	*No precautionary statements*

Self-reactive substances and mixtures

Hazard category	Signal word	Hazard statement	Symbol
Type A	Danger	H240 **Heating may cause an explosion**	 Exploding bomb

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P234 **Keep only in original packaging.** P235 **Keep cool.** *— may be omitted if P411 is given on the label.* P240 **Ground and bond container and receiving equipment.** *— if electrostatically sensitive and able to generate an explosive atmosphere.* P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P370 + P372 + P380 + P373 **In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.**	P403 **Store in a well-ventilated place.** *— except for temperature controlled self-reactive substances and mixtures or organic peroxides because condensation and consequent freezing may take place.* P411 **Store at temperatures not exceeding …°C/…°F.** *— if temperature control is required (according to section 2.8.2.3 or 2.15.2.3 of the GHS) or if otherwise deemed necessary.* ... Manufacturer/supplier or the competent authority to specify temperature using applicable temperature scale. P420 **Store separately.**	P501 **Dispose of contents/ container to...** … in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Self-reactive substances and mixtures

Hazard category	Signal word	Hazard statement	Symbol
Type B	Danger	H241 **Heating may cause a fire or explosion**	 Exploding bomb and  Flame

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P234 **Keep only in original packaging.** P235 **Keep cool.** *— may be omitted if P411 is given on the label.* P240 **Ground and bond container and receiving equipment.** *— if electrostatically sensitive and able to generate an explosive atmosphere.* P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P370 + P380 + P375 [+ P378] **In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. [Use…to extinguish].** *— text in square brackets to be included if water increases risk.* ...Manufacturer/supplier or the competent authority to specify appropriate media.	P403 **Store in a well-ventilated place.** *— except for temperature controlled self-reactive substances and mixtures or organic peroxides because condensation and consequent freezing may take place.* P411 **Store at temperatures not exceeding …°C/…°F.** *— if temperature control is required (according to section 2.8.2.3 or 2.15.2.3 of the GHS) or if otherwise deemed necessary.* ...Manufacturer/supplier or the competent authority to specify temperature using applicable temperature scale. P420 **Store separately.**	P501 **Dispose of contents/container to...** …in accordance with local/ regional/ national/ international Regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Self-reactive substances and mixtures

Hazard category	Signal word	Hazard statement	Symbol
Type C Type D Type E Type F	Danger Danger Warning Warning	H242 **Heating may cause a fire** H242 **Heating may cause a fire** H242 **Heating may cause a fire** H242 **Heating may cause a fire**	 Flame

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P234 **Keep only in original packaging.** P235 **Keep cool.** *— may be omitted if P411 is given on the label.* P240 **Ground and bond container and receiving equipment.** *— if electrostatically sensitive and able to generate an explosive atmosphere.* P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P370 + P378 **In case of fire: Use ... to extinguish.** ... Manufacturer/supplier or the competent authority to specify appropriate media. *— if water increases risk.*	P403 **Store in a well-ventilated place.** *— except for temperature controlled self-reactive substances and mixtures or organic peroxides because condensation and consequent freezing may take place.* P411 **Store at temperatures not exceeding …°C/…°F.** *— if temperature control is required (according to section 2.8.2.3 or 2.15.2.3 of the GHS) or if otherwise deemed necessary.* ...Manufacturer/supplier or the competent authority to specify temperature using applicable temperature scale. P420 **Store separately.**	P501 **Dispose of contents/ container to...** …in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Note: Hazard category Type G: There are no label elements allocated to this hazard category, however it still meets the definition of a hazardous chemical and therefore a safety data sheet is required.

Pyrophoric liquids

Hazard category	Signal word	Hazard statement	Symbol
1	Danger	H250 **Catches fire spontaneously if exposed to air**	 Flame

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P222 **Do not allow contact with air.** *— if emphasis of the hazard statement is deemed necessary.* P233 **Keep container tightly closed.** P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P302 + P334 **IF ON SKIN: Immerse in cool water or wrap in wet bandages.** P370 + P378 **In case of fire: Use ... to extinguish.** ... Manufacturer/supplier or the competent authority to specify appropriate media. *— if water increases risk.*	*No precautionary statements*	*No precautionary statements*

Pyrophoric solids

Hazard category	Signal word	Hazard statement	Symbol
1	Danger	H250 **Catches fire spontaneously if exposed to air**	 Flame

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P222 **Do not allow contact with air.** *— if emphasis of the hazard statement is deemed necessary.* P233 **Keep container tightly closed.** P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P302 + P335 + P334 **IF ON SKIN: Brush off loose particles from skin. Immerse in cool water or wrap in wet bandages.** P370 + P378 **In case of fire: Use ... to extinguish.** ... Manufacturer/supplier or the competent authority to specify appropriate media. *— if water increases risk.*	*No precautionary statements*	*No precautionary statements*

Self-heating substances and mixtures

Hazard category	Signal word	Hazard statement	Symbol
1 2	Danger Warning	H251 **Self-heating; may catch fire** H252 **Self-heating in large quantities; may catch fire**	 Flame

Precautionary statements

Prevention	Response	Storage	Disposal
P235 **Keep cool.** *— may be omitted if P413 is given on the label.* P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	*No precautionary statements*	P407 **Maintain air gap between stacks or pallets.** P410 **Protect from sunlight.** P413 **Store bulk masses greater than … kg/…lbs at temperatures not exceeding …°C/…°F.** ...Manufacturer/supplier or the competent authority to specify mass and temperature using applicable scale. P420 **Store separately.**	*No precautionary statements*

Substances and mixtures which, in contact with water, emit flammable gases

Hazard category	Signal word	Hazard statement	Symbol
1	Danger	H260 **In contact with water releases flammable gases, which may ignite spontaneously**	 Flame
2	Danger	H261 **In contact with water releases flammable gases**	

Precautionary statements

Prevention	Response	Storage	Disposal
P223 **Do not allow contact with water.** *— if emphasis of the hazard statement is deemed necessary.* P231 + P232 **Handle and store contents under inert gas/... Protect from moisture.** *— if the substance or mixture reacts readily with moisture in air.* …Manufacturer/supplier or the competent authority to specify appropriate liquid or gas if “inert gas” is not appropriate. P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P302 + P335 + P334 **IF ON SKIN: Brush off loose particles from skin and immerse in cool water.** P370 + P378 **In case of fire: Use ... to extinguish.** ...Manufacturer/supplier or the competent authority to specify appropriate media. *— if water increases risk.*	P402 + P404 **Store in a dry place. Store in a closed container.**	P501 **Dispose of contents/ container to...** …in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Substances and mixtures which, in contact with water, emit flammable gases

Hazard category	Signal word	Hazard statement	Symbol
3	Warning	H261 **In contact with water releases flammable gases**	 Flame

Precautionary statements

Prevention	Response	Storage	Disposal
P231 + P232 **Handle and store contents under inert gas/... Protect from moisture.** *— if the substance or mixture reacts readily with moisture in air.* …Manufacturer/supplier or the competent authority to specify appropriate liquid or gas if "inert gas" is not appropriate. P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P370 + P378 **In case of fire: Use ... to extinguish.** ...Manufacturer/supplier or the competent authority to specify appropriate media. *— if water increases risk.*	P402 + P404 **Store in a dry place. Store in a closed container.**	P501 **Dispose of contents/ container to...** ... in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Oxidising liquids

Hazard category	Signal word	Hazard statement	Symbol
1	Danger	H271 **May cause fire or explosion; strong oxidiser**	 Flame over circle

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P220 **Keep away from clothing and other combustible materials.** P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment. P283 **Wear fire resistant or flame retardant clothing.**	P306 + P360 **IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.** P371 + P380 + P375 **In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.** P370 + P378 **In case of fire: Use ... to extinguish.** ... Manufacturer/supplier or the competent authority to specify appropriate media. *— if water increases risk.*	P420 **Store separately.**	P501 **Dispose of contents/ container to...** …in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Oxidising liquids

Hazard category	Signal word	Hazard statement	Symbol
2 3	Danger Warning	H272 **May intensify fire; oxidiser** H272 **May intensify fire; oxidiser**	 Flame over circle

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P220 **Keep away from clothing and other combustible materials.** P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P370 + P378 **In case of fire: Use ... to extinguish.** ... Manufacturer/supplier or the competent authority to specify appropriate media. — *if water increases risk.*	*No precautionary statements*	P501 **Dispose of contents/ container to...** …in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Oxidising solids

Hazard category	Signal word	Hazard statement	Symbol
1	Danger	H271 **May cause fire or explosion; strong oxidiser**	 Flame over circle

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P220 **Keep away from clothing and other combustible materials.** P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment. P283 **Wear fire resistant or flame retardant clothing.**	P306 + P360 **IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.** P371 + P380 + P375 **In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.** P370 + P378 **In case of fire: Use ... to extinguish.** ... Manufacturer/supplier or the competent authority to specify appropriate media. *— if water increases risk.*	P420 **Store separately.**	P501 **Dispose of contents/ container to...** …in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Oxidising solids

Hazard category	Signal word	Hazard statement	Symbol
2 3	Danger Warning	H272 **May intensify fire; oxidiser** H272 **May intensify fire; oxidiser**	 Flame over circle

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P220 **Keep away from clothing and other combustible materials.** P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P370 + P378 **In case of fire: Use ... to extinguish.** ...Manufacturer/supplier or the competent authority to specify appropriate media. — *if water increases risk.*	*No precautionary statements*	P501 **Dispose of contents/ container to...** …in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Organic peroxides

Hazard category	Signal word	Hazard statement	Symbol
Type A	Danger	H240 **Heating may cause an explosion**	 Exploding bomb

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P234 **Keep only in original packaging.** P235 **Keep cool.** *— may be omitted if P411 is given on the label.* P240 **Ground and bond container and receiving equipment.** *— if electrostatically sensitive and able to generate an explosive atmosphere.* P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P370 + P372 + P380 + P373 **In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.**	P403 **Store in a well-ventilated place.** *— except for temperature controlled self-reactive substances and mixtures or organic peroxides because condensation and consequent freezing may take place* P410 **Protect from sunlight.** P411 **Store at temperatures not exceeding …°C/…°F.** *— if temperature control is required (according to section 2.8.2.3 or 2.15.2.3 of the GHS) or if otherwise deemed necessary.* ... Manufacturer/supplier or the competent authority to specify temperature using applicable temperature scale. P420 **Store separately.**	P501 **Dispose of contents/ container to...** ... in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Organic peroxides

Hazard category	Signal word	Hazard statement	Symbol
Type B	Danger	H241 **Heating may cause a fire or explosion**	 Exploding bomb and  Flame

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P234 **Keep only in original packaging.** P235 **Keep cool.** *— may be omitted if P411 is given on the label.* P240 **Ground and bond container and receiving equipment.** *— if electrostatically sensitive and able to generate an explosive atmosphere.* P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P370 + P380 + P375 [+ P378] **In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. [Use…to extinguish].** *— text in square brackets to be used if water increases risk.* …Manufacturer/supplier or the competent authority to specify appropriate media.	P403 **Store in a well-ventilated place.** *— except for temperature controlled self-reactive substances and mixtures or organic peroxides because condensation and consequent freezing may take place.* P410 **Protect from sunlight.** P411 **Store at temperatures not exceeding …°C/…°F.** *— if temperature control is required (according to section 2.8.2.3 or 2.15.2.3 of the GHS) or if otherwise deemed necessary.* ... Manufacturer/supplier or the competent authority to specify temperature using applicable temperature scale. P420 **Store separately.**	P501 **Dispose of contents/ container to...** ... in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Organic peroxides

Hazard category	Signal word	Hazard statement	Symbol
Type C Type D Type E Type F	Danger Danger Warning Warning	H242 **Heating may cause a fire** H242 **Heating may cause a fire** H242 **Heating may cause a fire** H242 **Heating may cause a fire**	 Flame

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P234 **Keep only in original packaging.** P235 **Keep cool.** *— may be omitted if P411 is given on the label.* P240 **Ground and bond container and receiving equipment.** *— if electrostatically sensitive and able to generate an explosive atmosphere.* P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P370 + P378 **In case of fire: Use ... to extinguish.** *— if water increases risk.* ...Manufacturer/ supplier or the competent authority to specify appropriate media.	P403 **Store in a well-ventilated place.** *— except for temperature controlled self-reactive substances and mixtures or organic peroxides because condensation and consequent freezing may take place.* P410 **Protect from sunlight.** P411 **Store at temperatures not exceeding …°C/…°F.** *— if temperature control is required (according to section 2.8.2.3 or 2.15.2.3 of the GHS) or if otherwise deemed necessary.* ... Manufacturer/supplier or the competent authority to specify temperature using applicable temperature scale. P420 **Store separately.**	P501 **Dispose of contents/ container to...** ... in accordance with local/ regional/national/international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Note: Hazard category Type G: There are no label elements allocated to this hazard category, however it still meets the definition of a hazardous chemical and a safety data sheet is required.

Corrosive to metals

Hazard category	Signal word	Hazard statement	Symbol
1	Warning	H290 **May be corrosive to metals**	 Corrosion

Precautionary statements

Prevention	Response	Storage	Disposal
P234 **Keep only in original packaging.**	P390 **Absorb spillage to prevent material-damage.**	P406 **Store in corrosive resistant/ ... container with a resistant inner liner.** *— may be omitted if P234 is given on the label* ... Manufacturer/supplier or the competent authority to specify other compatible materials.	*No precautionary statements*

Desensitised Explosives

Hazard category	Signal word	Hazard statement	Symbol
1	Danger	H206 **Fire, blast or projection hazard; increased risk of explosion if desensitising agent is reduced**	 Flame
2	Danger	H207 **Fire or projection hazard; increased risk of explosion if desensitising agent is reduced**	
3	Warning	H207 **Fire or projection hazard; increased risk of explosion if desensitising agent is reduced**	

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P212 **Avoid heating under confinement or reduction of the desensitising agent.** P230 **Keep wetted with…** ...Manufacturer/supplier or the competent authority to specify appropriate material. P233 **Keep container tightly closed.** P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P370 + P380 + P375 **In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.**	P401 **Store in accordance with…** …Manufacturer/supplier or the competent authority to specify local/regional/ national/international regulations as applicable.	P501 **Dispose of contents/containers to…** …in accordance with local/regional/national /international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Desensitised Explosives

Hazard category	Signal word	Hazard statement	Symbol
4	Warning	H208 **Fire hazard; increased risk of explosion if desensitising agent is reduced**	 Flame

Precautionary statements

Prevention	Response	Storage	Disposal
P210 **Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** P212 **Avoid heating under confinement or reduction of the desensitising agent.** P230 **Keep wetted with…** ...Manufacturer/supplier or the competent authority to specify appropriate material. P233 **Keep container tightly closed.** P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P371 + P380 + P375 **In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.**	P401 **Store in accordance with…** …Manufacturer/supplier or the competent authority to specify local/regional/ national/international regulations as applicable.	P501 **Dispose of contents/containers to…** …in accordance with local/regional/national /international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Acute toxicity—oral

Hazard category	Signal word	Hazard statement	Symbol
1 2 3	Danger Danger Danger	H300 **Fatal if swallowed** H300 **Fatal if swallowed** H301 **Toxic if swallowed**	 Skull and crossbones

Precautionary statements

Prevention	Response	Storage	Disposal
P264 **Wash…thoroughly after handling.** …Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. P270 **Do not eat, drink or smoke when using this product.**	P301 + P310 **IF SWALLOWED: Immediately call a POISON CENTRE/doctor/...** …Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P321 **Specific treatment (see ... on this label).** *— if immediate administration of antidote is required.* ...Reference to supplemental first aid instruction. P330 **Rinse mouth.**	P405 **Store locked up.**	P501 **Dispose of contents/ container to...** ...in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Acute toxicity—oral

Hazard category	Signal word	Hazard statement	Symbol
4	Warning	H302 **Harmful if swallowed**	 Exclamation mark

Precautionary statements

Prevention	Response	Storage	Disposal
P264 **Wash…thoroughly after handling.** …Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. P270 **Do not eat, drink or smoke when using this product.**	P301 + P312 **IF SWALLOWED: Call a POISON CENTRE/doctor/…if you feel unwell.** …Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P330 **Rinse mouth.**	*No precautionary statements*	P501 **Dispose of contents/ container to...** ... in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Acute toxicity—dermal

Hazard category	Signal word	Hazard statement	Symbol
1 2	Danger Danger	H310 **Fatal in contact with skin** H310 **Fatal in contact with skin**	 Skull and crossbones

Precautionary statements

Prevention	Response	Storage	Disposal
P262 **Do not get in eyes, on skin, or on clothing.** P264 **Wash…thoroughly after handling.** …Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. P270 **Do not eat, drink or smoke when using this product.** P280 **Wear protective gloves/protective clothing.** Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate.	P302 + P352 **IF ON SKIN: Wash with plenty of water/...** …Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. P310 **Immediately call a POISON CENTRE/doctor/...** …Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P321 **Specific treatment (see ... on this label).** *— if immediate measures such as specific cleansing agent is advised.* ...Reference to supplemental first aid instruction. P361+ P364 **Take off immediately all contaminated clothing and wash it before reuse.**	P405 **Store locked up.**	P501 **Dispose of contents/ container to...** ... in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Acute toxicity—dermal

Hazard category	Signal word	Hazard statement	Symbol
3	Danger	H311 **Toxic in contact with skin**	 Skull and crossbones

Precautionary statements

Prevention	Response	Storage	Disposal
P280 **Wear protective gloves/ protective clothing.** Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate.	P302 + P352 **IF ON SKIN: Wash with plenty of water/...** …Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. P312 **Call a POISON CENTRE/doctor/…if you feel unwell.** …Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P321 **Specific treatment (see ... on this label).** *— if immediate measures such as specific cleansing agent is advised.* ... Reference to supplemental first aid instruction. P361 + P364 **Take off immediately all contaminated clothing and wash it before reuse.**	P405 **Store locked up.**	P501 **Dispose of contents/ container to...** ... in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Acute toxicity—dermal

Hazard category	Signal word	Hazard statement	Symbol
4	Warning	H312 **Harmful in contact with skin**	 Exclamation mark

Precautionary statements

Prevention	Response	Storage	Disposal
P280 **Wear protective gloves/ protective clothing.** Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate.	P302 + P352 **IF ON SKIN: Wash with plenty of water/...** …Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. P312 **Call a POISON CENTRE/doctor/…if you feel unwell.** …Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P321 **Specific treatment (see ... on this label).** *— if immediate measures such as specific cleansing agent is advised.* ...Reference to supplemental first aid instruction. P362 + P364 **Take off contaminated clothing and wash it before reuse.**	*No precautionary statements*	P501 **Dispose of contents/ container to...** ... in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Acute toxicity—inhalation

Hazard category	Signal word	Hazard statement	Symbol
1 2	Danger Danger	H330 **Fatal if inhaled** H330 **Fatal if inhaled**	 Skull and crossbones

Precautionary statements

Prevention	Response	Storage	Disposal
P260 **Do not breathe dust/ fume/gas/mist/vapours/spray.** Manufacturer/supplier or the competent authority to specify applicable conditions. P271 **Use only outdoors or in a well-ventilated area.** P284 **[In case of inadequate ventilation] wear respiratory protection.** *— text in square brackets may be used if additional information is provided with the chemical at the point of use that explains what type of ventilation would be adequate for safe use.* Manufacturer/supplier or the competent authority to specify equipment.	P304 + P340 **IF INHALED: Remove person to fresh air and keep comfortable for breathing.** P310 **Immediately call a POISON CENTRE/doctor/...** …Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P320 **Specific treatment is urgent (see ... on this label).** *— if immediate administration of antidote is required.* ...Reference to supplemental first aid instruction.	P403 + P233 **Store in a well-ventilated place. Keep container tightly closed.** *— if the chemical is volatile and may generate a hazardous atmosphere.* P405 **Store locked up.**	P501 **Dispose of contents/ container to...** ... in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Acute toxicity—inhalation

Hazard category	Signal word	Hazard statement	Symbol
3	Danger	H331 **Toxic if inhaled**	 Skull and crossbones

Precautionary statements

Prevention	Response	Storage	Disposal
P261 **Avoid breathing dust/ fume/gas/mist/vapours/spray.** *— may be omitted if P260 is given on the label* Manufacturer/supplier or the competent authority to specify applicable conditions. P271 **Use only outdoors or in a well-ventilated area.**	P304 + P340 **IF INHALED: Remove person to fresh air and keep comfortable for breathing.** P311 **Call a POISON CENTRE/doctor...** …Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P321 **Specific treatment (see ... on this label).** *— if immediate specific measures are required.* ...Reference to supplemental first aid instruction.	P403 + P233 **Store in a well-ventilated place. Keep container tightly closed.** *— if the chemical is volatile and may generate a hazardous atmosphere.* P405 **Store locked up.**	P501 **Dispose of content/ container to…** … in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Note: In 2019, the hazard statement code for this hazard category was corrected in GHS 7 from H311 to H331. For details see https://unece.org/DAM/trans/danger/publi/ghs/ghs_rev07/English/ST-SG-AC10-30-Rev7-Corr1e.pdf.

Acute toxicity—inhalation

Hazard category	Signal word	Hazard statement	Symbol
4	Warning	H332 **Harmful if inhaled**	 Exclamation mark

Precautionary statements

Prevention	Response	Storage	Disposal
P261 **Avoid breathing dust/ fume/gas/mist/vapours/spray.** *— may be omitted if P260 is given on the label* Manufacturer/supplier or the competent authority to specify applicable conditions. P271 **Use only outdoors or in a well-ventilated area.**	P304 + P340 **IF INHALED: Remove person to fresh air and keep comfortable for breathing.** P312 **Call a POISON CENTRE/doctor/…if you feel unwell.** …Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice.	*No precautionary statements*	*No precautionary statements*

Skin corrosion/irritation

Hazard category	Signal word	Hazard statement	Symbol
1A to 1C	Danger	H314 **Causes severe skin burns and eye damage**	 Corrosion

Precautionary statements

Prevention	Response	Storage	Disposal
P260 **Do not breathe dusts or mists.** *— if inhalable particles of dusts or mists may occur during use.* P264 **Wash …thoroughly after handling.** …Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. P280 **Wear protective gloves/ protective clothing/ eye protection/ face protection.** Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate.	P301 + P330 + P331 **IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.** P303 + P361 + P353 **IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].** *— text in square brackets to be included where the manufacturer/supplier or the competent authority considers it appropriate for the specific chemical.* P363 **Wash contaminated clothing before reuse.** P304 + P340 **IF INHALED: Remove person to fresh air and keep comfortable for breathing.** P310 **Immediately call a POISON CENTRE/doctor/...** …Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P321 **Specific treatment (see ... on this label).** ...Reference to supplemental first aid instruction. Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate. P305 + P351 + P338 **IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**	P405 **Store locked up.**	P501 **Dispose of contents/ container to...** ... in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Skin corrosion/irritation

Hazard category	Signal word	Hazard statement	Symbol
2	Warning	H315 **Causes skin irritation**	 Exclamation mark

Precautionary statements

Prevention	Response	Storage	Disposal
P264 **Wash…thoroughly after handling.** … Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. P280 **Wear protective gloves.** Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate.	P302 + P352 **IF ON SKIN: Wash with plenty water/…** …Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. P321 **Specific treatment (see ... on this label).** ...Reference to supplemental first aid instruction. Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate. P332 + P313 **If skin irritation occurs: Get medical advice/attention.** *— may be omitted when P333 + P313 appears on the label* Manufacturer/supplier or the competent authority to select medical advice or attention as appropriate. P362 + P364 **Take off contaminated clothing and wash it before reuse.**	*No precautionary statements*	*No precautionary statements*

Eye damage/irritation

Hazard category	Signal word	Hazard statement	Symbol
1	Danger	H318 **Causes serious eye damage**	 Corrosion

Precautionary statements

Prevention	Response	Storage	Disposal
P280 **Wear eye protection/face protection.** Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate.	P305 + P351 + P338 **IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.** P310 **Immediately call a POISON CENTRE/doctor/...** …Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice.	*No precautionary statements*	*No precautionary statements*

Eye damage/irritation

Hazard category	Signal word	Hazard statement	Symbol
2A	Warning	H319 **Causes serious eye irritation**	 Exclamation mark

Precautionary statements

Prevention	Response	Storage	Disposal
P264 **Wash…thoroughly after handling.** …Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. P280 **Wear eye protection/face protection.** Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate.	P305 + P351 + P338 **IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.** P337 + P313 **If eye irritation persists: Get medical advice/attention.** Manufacturer/supplier or the competent authority to select medical advice or attention as appropriate.	*No precautionary statements*	*No precautionary statements*

Eye damage/irritation

Hazard category	Signal word	Hazard statement	Symbol
2B	Warning	H320 **Causes eye irritation**	No symbol

Precautionary statements

Prevention	Response	Storage	Disposal
P264 **Wash … thoroughly after handling.** …Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling.	P305 + P351 + P338 **IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.** P337 + P313 **If eye irritation persists: Get medical advice/attention.** Manufacturer/supplier or the competent authority to select medical advice or attention as appropriate.	*No precautionary statements*	*No precautionary statements*

Respiratory sensitisation

Hazard category	Signal word	Hazard statement	Symbol
1, 1A, 1B	Danger	H334 **May cause allergy or asthma symptoms or breathing difficulties if inhaled**	 Health hazard

Precautionary statements

Prevention	Response	Storage	Disposal
P261 **Avoid breathing dust/ fume/gas/mist/vapours/ spray.** *- may be omitted if P260 is given on the label* Manufacturer/supplier or the competent authority to specify applicable conditions. P284 **[In case of inadequate ventilation] wear respiratory protection.** *- text in square brackets may be used if additional information is provided with the chemical at the point of use that explains what type of ventilation would be adequate for safe use.* Manufacturer/supplier or the competent authority to specify equipment.	P304 + P340 **IF INHALED: remove person to fresh air and keep comfortable for breathing.** P342 + P311 **If experiencing respiratory symptoms: Call a POISON CENTRE/doctor/...** …Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice.	*No precautionary statements*	P501 **Dispose of contents/ container to...** ...in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Skin sensitisation

Hazard category	Signal word	Hazard statement	Symbol
1, 1A, 1B	Warning	H317 **May cause an allergic skin reaction**	 Exclamation mark

Precautionary statements

Prevention	Response	Storage	Disposal
P261 **Avoid breathing dust/ fume/gas/mist/vapours/ spray.** *— may be omitted if P260 is given on the label* Manufacturer/supplier or the competent authority to specify applicable conditions. P272 **Contaminated work clothing should not be allowed out of the workplace.** P280 **Wear protective gloves.** Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate.	P302 + P352 **IF ON SKIN: Wash with plenty of water/…** …Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. P333 + P313 **If skin irritation or rash occurs: Get medical advice/attention.** Manufacturer/supplier or the competent authority to select medical advice or attention as appropriate. P321 **Specific treatment (see ... on this label).** ...Reference to supplemental first aid instruction. Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate. P362 + P364 **Take off contaminated clothing and wash it before reuse.**	*No precautionary statements*	P501 **Dispose of contents/ container to...** ...in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Germ cell mutagenicity

Hazard category	Signal word	Hazard statement	Symbol
1A, 1B 2	Danger Warning	H340 **May cause genetic defects** <...> H341 **Suspected of causing genetic defects** <...> <...> (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	 Health hazard

Precautionary statements

Prevention	Response	Storage	Disposal
P201 **Obtain special instructions before use.** *— omit for consumer products where P202 is used* P202 **Do not handle until all safety precautions have been read and understood.** P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/…** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P308 + P313 **IF exposed or concerned: Get medical advice/attention.** Manufacturer/supplier or the competent authority to select medical advice or attention as appropriate.	P405 **Store locked up.**	P501 **Dispose of contents/ container to...** ...in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Carcinogenicity

Hazard category	Signal word	Hazard statement	Symbol
1A, 1B 2	Danger Warning	H350 **May cause cancer** <...> H351 **Suspected of causing cancer** <...> <...> (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).	 Health hazard

Precautionary statements

Prevention	Response	Storage	Disposal
P201 **Obtain special instructions before use.** *— omit for consumer products where P202 is used* P202 **Do not handle until all safety precautions have been read and understood.** P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/…** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P308 + P313 **IF exposed or concerned: Get medical advice/attention.** Manufacturer/supplier or the competent authority to select medical advice or attention as appropriate.	P405 **Store locked up.**	P501 **Dispose of contents/ container to...** ... in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Reproductive Toxicity

Hazard category	Signal word	Hazard statement	Symbol
1A, 1B 2	Danger Warning	H360 **May damage fertility or the unborn child** <...> <<...>> H361 **Suspected of damaging fertility or the unborn child** <...> <<...>> <…> (state specific effect if known) <<...>> (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	 Health hazard

Precautionary statements

Prevention	Response	Storage	Disposal
P201 **Obtain special instructions before use.** *— omit for consumer products where P202 is used* P202 **Do not handle until all safety precautions have been read and understood.** P280 **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/…** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment.	P308 + P313 **IF exposed or concerned: Get medical advice/attention.** Manufacturer/supplier or the competent authority to select medical advice or attention as appropriate.	P405 **Store locked up.**	P501 **Dispose of contents/ container to...** ...in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Reproductive Toxicity (effects on or via lactation)

Hazard category	Signal word	Hazard statement	Symbol
(additional)	No signal word	H362 **May cause harm to breast-fed children**	No symbol

Precautionary statements

Prevention	Response	Storage	Disposal
P201 **Obtain special instructions before use.** *— omit for consumer products where P202 is used* P202 **Do not handle until all safety precautions have been read and understood.** P260 **Do not breathe dusts or mists.** *— if inhalable particles of dusts or mists may occur during use.* P263 **Avoid contact during pregnancy and while nursing.** P264 **Wash … thoroughly after handling.** …Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. P270 **Do not eat, drink or smoke when using this product.**	P308 + P313 **IF exposed or concerned: Get medical advice/attention.** Manufacturer/supplier or the competent authority to select medical advice or attention as appropriate.	*No precautionary statements*	*No precautionary statements*

Specific target organ toxicity (single exposure)

Hazard category	Signal word	Hazard statement	Symbol
1	Danger	H370 **Causes damage to organs** <...> <<...>> <...> (or state all organs affected if known) <<...>> (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	 Health hazard

Precautionary statements

Prevention	Response	Storage	Disposal
P260 **Do not breathe dust/ fume/gas/mist/vapours/ spray.** Manufacturer/supplier or the competent authority to specify applicable conditions. P264 **Wash …thoroughly after handling.** …Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. P270 **Do not eat, drink or smoke when using this product.**	P308 + P311 **IF exposed or concerned: Call a POISON CENTRE/doctor/...** …Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P321 **Specific treatment (see ... on this label).** *— if immediate measures are required.* ...Reference to supplemental first aid instruction.	P405 **Store locked up.**	P501 **Dispose of contents/ container to...** ... in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Specific target organ toxicity (single exposure)

Hazard category	Signal word	Hazard statement	Symbol
2	Warning	H371 **May cause damage to organs** <...> <<...>> <...> (or state all organs affected, if known) <<...>> (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	 Health hazard

Precautionary statements

Prevention	Response	Storage	Disposal
P260 **Do not breathe dust/ fume/gas/mist/vapours/ spray.** Manufacturer/supplier or the competent authority to specify applicable conditions. P264 **Wash…thoroughly after handling.** … Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. P270 **Do not eat, drink or smoke when using this product.**	P308 + P311 **IF exposed or concerned: Call a POISON CENTRE/doctor/...** …Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice.	P405 **Store locked up.**	P501 **Dispose of contents/ container to...** ... in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Specific target organ toxicity (single exposure)

Hazard category	Signal word	Hazard statement	Symbol
3	Warning	H335 **May cause respiratory irritation;** or H336 **May cause drowsiness or dizziness**	 Exclamation mark

Precautionary statements

Prevention	Response	Storage	Disposal
P261 **Avoid breathing dust/ fume/gas/mist/vapours/ spray.** *— may be omitted if P260 is given on the label* Manufacturer/supplier or the competent authority to specify applicable conditions. P271 **Use only outdoors or in a well-ventilated area.**	P304 + P340 **IF INHALED: Remove person to fresh air and keep comfortable for breathing.** P312 **Call a POISON CENTRE/doctor/…if you feel unwell.** …Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice.	P403 + P233 **Store in a well-ventilated place. Keep container tightly closed.** *— if the chemical is volatile and may generate a hazardous atmosphere.* P405 **Store locked up.**	P501 **Dispose of contents/ container to...** ... in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Specific target organ toxicity (repeated exposure)

Hazard category	Signal word	Hazard statement	Symbol
1	Danger	H372 **Causes damage to organs** <...> **through prolonged or repeated exposure** <<...>> <...> (state all organs affected, if known) <<...>> (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	 Health hazard

Precautionary statements

Prevention	Response	Storage	Disposal
P260 **Do not breathe dust/ fume/gas/mist/vapours/ spray.** Manufacturer/supplier or the competent authority to specify applicable conditions. P264 **Wash … thoroughly after handling.** …Manufacturer/supplier or the competent authority to specify parts of the body to be washed after handling. P270 **Do not eat, drink or smoke when using this product.**	P314 **Get medical advice/attention if you feel unwell.** Manufacturer/supplier or the competent authority to select medical advice or attention as appropriate.	*No precautionary statements*	P501 **Dispose of contents/ container to...** ... in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Specific target organ toxicity (repeated exposure)

Hazard category	Signal word	Hazard statement	Symbol
2	Warning	H373 **May cause damage to organs** <...> **through prolonged or repeated exposure** <<...>> <...> (state all organs affected, if known) <<...>> (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	 Health hazard

Precautionary statements

Prevention	Response	Storage	Disposal
P260 **Do not breathe dust/ fume/gas/mist/vapours/ spray.** Manufacturer/supplier or the competent authority to specify applicable conditions.	P314 **Get medical advice/attention if you feel unwell.** Manufacturer/supplier or the competent authority to select medical advice or attention as appropriate.	*No precautionary statements*	P501 **Dispose of contents/ container to...** ...in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

Aspiration hazard

Hazard category	Signal word	Hazard statement	Symbol
1	Danger	H304 **May be fatal if swallowed and enters airways**	 Health hazard

Precautionary statements

Prevention	Response	Storage	Disposal
No precautionary statements	P301 + P310 **IF SWALLOWED: Immediately call a POISON CENTRE/ doctor/...** …Manufacturer/supplier or the competent authority to specify the appropriate source of emergency medical advice. P331 **Do NOT induce vomiting.**	P405 **Store locked up.**	P501 **Dispose of contents/ container to...** ...in accordance with local/regional/national/ international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

D4. Additional non-GHS hazard statements

There are 12 non-GHS hazard statements recognised in Australia. These statements are not mandatory, and do not result in a chemical being considered a hazardous chemical under the WHS Regulations.

However, it is recommended that manufacturers and importers of hazardous chemicals include them on labels and in SDS where applicable to ensure that complete hazard information is provided to chemical users.

On their own these statements do not result in pictograms or signal words appearing on the label.

Physical hazard statements

AUH001: Explosive when dry

For explosive substances and mixtures placed on the market wetted with water or alcohols or diluted with other chemicals to suppress their explosive properties.

AUH006: Explosive with or without contact with air

For substances and mixtures which are unstable at ambient temperatures, such as acetylene.

AUH014: Reacts violently with water

For substances and mixtures which react violently with water, such as acetyl chloride, alkali metals and titanium tetrachloride.

AUH018: In use, may form flammable/explosive vapour-air mixture

For substances and mixtures not classified as flammable themselves, but which may form flammable/explosive vapour-air mixtures. For substances this might be the case for halogenated hydrocarbons; and for mixtures this might be the case due to a volatile flammable component or due to the loss of a volatile non-flammable component.

AUH019: May form explosive peroxides

For substances and mixtures which may form explosive peroxides during storage, such as diethyl ether, 1,4-dioxan.

AUH044: Risk of explosion if heated under confinement

For substances and mixtures not classified as explosive but which may nevertheless display explosive properties in practice if heated under sufficient confinement, in particular substances and mixtures that decompose explosively if heated in a steel drum do not show this effect if heated in less-strong containers.

Human health hazard statements

AUH029: Contact with water liberates toxic gas

For substances and mixtures which in contact with water or damp air, evolve gases classified for acute toxicity in category 1, 2 or 3 in potentially dangerous amounts, such as aluminium phosphide and phosphorus pentasulphide.

AUH031: Contact with acids liberates toxic gas

For substances and mixtures which react with acids to evolve gases classified for acute toxicity in category 3 in dangerous amounts, such as sodium hypochlorite, barium polysulphide.

AUH032: Contact with acids liberates very toxic gas

For substances and mixtures which react with acids to evolve gases classified for acute toxicity in category 1 or 2 in dangerous amounts; such as salts of hydrogen cyanide and sodium azide.

AUH066: Repeated exposure may cause skin dryness or cracking

For substances and mixtures which may cause concern as a result of skin dryness, flaking or cracking but which do not meet the criteria for skin irritancy, based on either practical observations or relevant evidence concerning their predicted effects on the skin.

AUH070: Toxic by eye contact

For substances or mixtures where an eye irritation test has resulted in overt signs of systemic toxicity or mortality among the animals tested, which is likely to be attributed to absorption of the substance or mixture through the mucous membranes of the eye. The statement should also be applied if there is evidence in humans for systemic toxicity after eye contact. The statement should also be applied where a substance or a mixture contains another substance labelled for this effect, if the concentration of this substance is equal to, or greater than 0.1%.

AUH071: Corrosive to the respiratory tract

For substances and mixtures in addition to classification for inhalation toxicity, if data is available that indicate the mechanism of toxicity was corrosivity.

In addition to an appropriate acute toxicity symbol, a ‘corrosion’ symbol (similar to the ‘corrosion’ symbol used for skin and eye corrosivity) should be added along with the hazard statement ‘Corrosive to the respiratory tract’.

For substances and mixtures in addition to classification for skin corrosivity, if no acute inhalation test data is available and which may be inhaled.

Appendix E—Precedence rules for label elements

This appendix provides information on the rules of precedence of certain label elements, and general guidance for when redundant elements may be omitted from a label.

Duplication or redundancy of label elements may occur where a hazardous chemical meets the criteria for more than one hazard class or category. Duplication of an element may occur where:

- a specific precautionary statement applies to several hazard categories into which a particular chemical is classified
- an element may become redundant because a more stringent control applies to another hazard category (for example, the type of PPE required).

Duplicate or redundant information should not be included on a label.

5.4 Multiple hazards and precedence of hazard information

Hazard pictograms

The following rules apply for the use of hazard pictograms on a label:

- where a transport of dangerous goods class label (pictogram) is required on the container to meet transport regulations, the equivalent hazard pictogram, as specified in the GHS, should not appear
- if the skull and crossbones hazard pictogram applies, the exclamation mark hazard pictogram should not appear
- if the corrosive hazard pictogram applies, the exclamation mark hazard pictogram should not appear if it is used to communicate skin or eye irritation
- if the health hazard pictogram appears for respiratory sensitisation, the exclamation mark hazard pictogram should not appear if it is used to communicate skin sensitisation, or for skin or eye irritation.

Hazard statements

Where hazard statements are required to be present on a label, then all of the assigned hazard statements must appear on the label except where:

- the statement duplicates or conflicts with another statement or other hazard information that is required on the label
- omission of the statement would not decrease the level of protection or information in relation to the hazards.

Signal words

Where the signal word ‘Danger’ applies, the signal word ‘Warning’ should not appear concomitantly.

Precautionary statements

Where precautionary statements are required to be present on a label, then normally not more than six to ten precautionary statements are required, unless necessary to reflect the nature and the severity of the hazards. For example, precautionary statements can be omitted if:

- the statement duplicates or conflicts with another statement or other hazard information that is required on the label, and
- omission of the statement would not decrease the level of protection or information in relation to the hazards.

Any conflict that arises between precautionary statements that are present on labels may be resolved by modifying the statements. However, the new statement(s) must give equivalent levels of information or protection.

It is not mandatory to include information relating to environmental hazard categories on the label of a workplace hazardous chemical. However, this information should be included if a fully GHS-compliant label is desired.

Example of where the omission of a precautionary statement is acceptable

An example where the omission of a precautionary statement on the label may be acceptable (and recommended) is where the use of personal protective equipment applies to different hazard categories for the same hazardous chemical.

For example, where the precautionary statements ‘Wear face protection’ and ‘Wear gloves and face protection’ are specified, then only the latter statement should appear on the label as it relates to the more stringent protective measures.

Example: applying precedence rules

In the following example, the chemical meets the criteria for both Flammable liquids (Category 2) and Skin Sensitisation (Category 1) as specified in the GHS. Table 7 shows all of the elements required for a label to meet the criteria for a substance or mixture that is classified as a flammable liquid (Category 2) and skin sensitiser (Category 1). No precedence rules are applied.

Table 7 Example of hazard communication elements without precedence rules

	Flammable liquids (Category 2)	Skin Sensitisation (Category 1)
Signal word	Danger	Warning
Hazard statement	Highly flammable liquid and vapour	May cause an allergic skin reaction
Hazard Pictogram		

	Flammable liquids (Category 2)	Skin Sensitisation (Category 1)
Precautionary Statements	**Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** **Keep container tightly closed.** *—if the liquid is volatile and may generate an explosive atmosphere.* **Ground and bond container and receiving equipment** *—if the liquid is volatile and may generate an explosive atmosphere.* **Use explosion-proof [electrical/ventilating/lighting/...] equipment.** *—if the liquid is volatile and may generate an explosive atmosphere.* *—text in square brackets may be used to specify specific electrical, ventilating, lighting or other equipment if necessary and as appropriate.* *—precautionary statement may be omitted where local or national legislation introduces more specific provisions* **Use non-sparking tools.** **Take action to prevent static discharges.** *—if the liquid is volatile and may generate an explosive atmosphere* *—may be omitted where local or national legislation introduces more specific provisions.* **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/…** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment. **IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].** *—text in square brackets to be included where the manufacturer /supplier or the*	**Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.** *— may be omitted if P260 is given on the label* Manufacturer/supplier or the competent authority to specify applicable conditions. **Contaminated work clothing should not be allowed out of the workplace.** **Wear protective gloves**. Manufacturer/supplier or the competent authority may further specify type of equipment where appropriate **IF ON SKIN: Wash with plenty of water/…** …Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate, or may recommend an alternative agent in exceptional cases if water is clearly inappropriate. **If skin irritation or rash occurs: Get medical advice/ attention.** Manufacturer/supplier or the competent authority to select medical advice or attention as appropriate. **Specific treatment (see ... on this label).** ... Reference to supplemental first aid instruction. Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate. **Take off contaminated clothing and wash it before reuse.** **Dispose of contents/ container to...** ... in accordance with local/ regional/ national/ international Regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

	Flammable liquids (Category 2)	Skin Sensitisation (Category 1)
	competent authority considers it appropriate for the specific chemical. **In case of fire: Use ... to extinguish.** ... Manufacturer/supplier or the competent authority to specify appropriate media. *— if water increases risk.* **Store in a well-ventilated place. Keep cool.** *—for flammable liquids category 1 and other flammable liquids that are volatile and may generate an explosive atmosphere.* **Dispose of contents/container to...** … in accordance with local/ regional/ national/ international Regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.	

According to the precedence rules described above, the following elements should be omitted from the label:

- The signal word ‘Warning’ because ‘Danger’ applies.
- The precautionary statement ‘Wear protective gloves…’ because the statement ‘Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/…’ also applies and provides for all relevant PPE including gloves.
- The statement ‘Dispose of contents/container to…’ as this is duplicated and should only appear on the label once.

The following precautionary statements refer to similar controls and may be combined to aid comprehensibility and to save label space:

- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
- IF ON SKIN: Wash with plenty of water/…

These statements could be combined to read:

- IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash skin (or hair) with plenty of water.

Table 8 shows the label elements that apply to a substance or mixture classified for (Flammable liquids (Category 2) and Skin sensitisation (Category 1) with the precedence rules applied.

Table 8 Example of combined hazard communication elements with precedence rules.

	Combined hazard communication
Signal word	Danger
Hazard statement	Highly flammable liquid and vapour May cause an allergic skin reaction
Hazard pictogram	
Precautionary statements	**Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.** **Keep container tightly closed.** *—if the liquid is volatile and may generate an explosive atmosphere.* **Ground and bond container and receiving equipment** *—if the liquids is volatile and may generate an explosive atmosphere.* **Use explosion-proof [electrical/ventilating/lighting/...] equipment.** *—if the liquid is volatile and may generate an explosive atmosphere.* *—text in square brackets may be used to specify specific electrical, ventilating, lighting or other equipment if necessary and as appropriate.* *—precautionary statement may be omitted where local or national legislation introduces more specific provisions* **Use non-sparking tools.** **Take action to prevent static discharges.** *—if the liquid is volatile and may generate an explosive atmosphere* *—may be omitted where local or national legislation introduces more specific provisions.* **Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/…** Manufacturer/supplier or the competent authority to specify the appropriate personal protective equipment. **Avoid breathing dust/fume/gas/mist/vapours/spray.** *— may be omitted if P260 is given on the label* Manufacturer/supplier or the competent authority to specify applicable conditions.

	Combined hazard communication
	Contaminated work clothing should not be allowed out of the workplace. **IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash skin (or hair) with plenty of water.** **In case of fire: Use ... to extinguish.** ... Manufacturer/supplier or the competent authority to specify appropriate media. *— if water increases risk.* **If skin irritation or rash occurs: Get medical advice/ attention.** Manufacturer/supplier or the competent authority to select medical advice or attention as appropriate. **Specific treatment (see ... on this label).** ... Reference to supplemental first aid instruction. Manufacturer/supplier or the competent authority may specify a cleansing agent if appropriate. **Take off contaminated clothing and wash it before reuse.** **Store in a well-ventilated place. Keep cool.** *—for flammable liquids category 1 and other flammable liquids that are volatile and may generate an explosive atmosphere.* **Dispose of contents/ container to...** ... in accordance with local/ regional/ national/ international Regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

6. Appendix F—Hazard pictograms

The nine hazard pictograms that are representative of the physical, health and/or environmental hazards are shown below.

Table 9 GHS Hazard pictograms

Pictogram	Description
	Exploding bomb
	Gas cylinder
	Flame
	Corrosion
	Flame over circle
	Skull and crossbones
	Health hazard
	Exclamation mark

	Environment

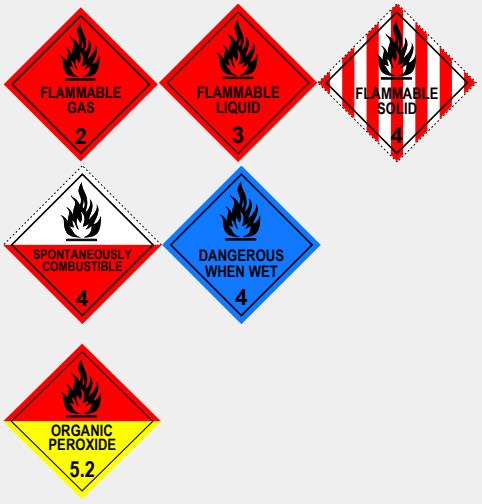
Chronic health hazards, denoted by the health hazard pictogram, include carcinogens, reproductive toxins, mutagens, specific target organ toxicants, and aspiration toxicants.

Other health hazards, denoted by the exclamation mark pictogram, include skin, eye and respiratory irritation, allergic skin reactions, drowsiness and dizziness.

Appendix G—Comparison of hazard pictograms with ADG class labels

The following table maps GHS 7 hazard classes and categories to the equivalent dangerous goods classes in the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code). The ADG Code can be downloaded from the National Transport Commission website.

Table 10 Comparison of GHS hazard pictograms with their corresponding ADG class labels

Hazard pictogram	GHS Hazard classes/categories	Dangerous Goods class label (pictogram)	Dangerous Goods classes
	Unstable explosives Self-reactive substances and mixtures Type A Organic peroxides Type A	No corresponding class label	Goods too dangerous to be transported
	Explosives Divisions 1.1 to 1.6 (see Note 1) Self-reactive substances and mixtures Type B (see Note 2) Organic peroxides Type B (see Note 2)		Explosives
	Flammable gases, liquids and solids Aerosols categories 1 and 2 Self-reactive substances and mixtures Types B – F (see Notes 2 and 3) Pyrophoric liquids and solids Self-heating substances and mixtures Substances and mixtures which, in contact with water, emit flammable gases		Flammable gases, liquids, solids Substances liable to spontaneous combustion Substances which, in contact with water, emit flammable gases Organic peroxides

	Organic peroxides Types B - F (see Notes 2 and 3) Desensitised explosives		
	Oxidising gases Oxidising liquids Oxidising solids		Oxidising substances
	Aerosols category 3 (see Note 4) Gases under pressure		Non-toxic non-flammable gases
	Acute toxicity – categories 1, 2 and 3		Toxic gases Toxic substances
	Acute toxicity - category 4 Skin irritation – category 2 Eye irritation - category 2 and 2A Skin sensitisation Hazardous to the ozone layer	No equivalent class label	No equivalent dangerous goods classes
	Carcinogenicity Respiratory sensitisation Reproductive toxicity – category 1 and 2 Specific target organ toxicity (single and repeated exposure) Germ cell mutagenicity Aspiration hazard	No equivalent class label	No equivalent dangerous goods classes

	Eye damage - category 1 Skin corrosion – category 1A to 1C Corrosive to metal		Corrosive substances
	Hazardous to the aquatic environment (acute and chronic) (see Note 5)		Environmentally hazardous substances marking
No equivalent hazard pictogram	No equivalent hazard (see Note 5)		Miscellaneous dangerous substances and articles
No equivalent hazard pictogram	No equivalent hazard (see Note 5)		Infectious substances
No equivalent hazard pictogram	No equivalent hazard (see Note 5)		Radioactive material

Note 1: The GHS does not specify a pictogram for Explosives Division 1.5 and 1.6. The recommended symbol for Explosive Divisions 1.5 and 1.6 is from the ADG Code.

Note 2: Both an explosion and a flame GHS pictogram are prescribed for Self-reactive substances and mixtures Type B and Organic Peroxides Type B.

Note 3: Both Self-reactive substances and mixtures Type G and Organic Peroxides Type G are specified as hazard classes in the GHS. Despite not having any GHS pictograms, they remain within the scope of the workplace hazardous chemicals requirements. However, they may be considered outside the scope of the ADG Code.

Note 4: Aerosols category 3 does not have a GHS pictogram, but has been added to the table to associate the GHS hazard category with its corresponding ADG class/class label.

Note 5: Substances captured under the ADG classes for miscellaneous dangerous substances and articles, infectious substances and radioactive materials, as well as substances under the GHS environmental hazards (Hazardous to the aquatic environment, Hazardous to the ozone layer), are not considered hazardous chemicals unless they also have other hazards that cause them to meet the definition of a hazardous chemical. See section 3.12 above.

Note 6: Eye irritation category 2B and Reproductive toxicity – effect on or via lactation categories do not have a GHS pictogram or an equivalent dangerous goods class label.

Appendix H—Example labels

This appendix contains example labels that have been produced in accordance with the labelling system described in this Code (in some cases they have been reduced in size for the purpose of presentation in this document.

Examples 1–4 are prepared for a hypothetical hazardous mixture, *Flammosol*. *Flammosol* contains 95% aliphatic hydrocarbons and 5% toxicole and is classified as Flammable liquids (Category 2), acute toxicity—oral (Category 3) and skin corrosion/irritation (Category 2).

Note: it is assumed that ‘toxicole’ is an acceptable technical name.

Additional examples are available in annex 7 to the GHS, which can be accessed from the UNECE website.

Example 1: Flammosol label containing the full set of workplace labelling information

The general precautionary statements ‘Read label before use’ and ‘Keep out of reach of children’ have been included. Inclusion of these statements is not mandatory. In accordance with precedence rules described in Appendix E, the exclamation mark hazard pictogram and ‘Warning’ signal word have been omitted and duplicate precautionary statements have not been included.

Read label before use. Keep out of reach of children

Flammosol

FLAMMABLE LIQUID, TOXIC N.O.S.

(aliphatic hydrocarbons, toxicole)

UN 1992

Contains:

Aliphatic hydrocarbons 95%

Toxicole 5%

4 L



DANGER

Highly flammable liquid and vapour

Toxic if swallowed

Causes skin irritation

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Wash skin (or hair) with plenty of water.

Take of contaminated clothing and wash it before reuse.

If skin irritation occurs: Get medical advice/attention.

IF SWALLOWED: Immediately call a POISON CENTRE or doctor.

Rinse mouth.

Wash hands thoroughly after handling.

Do not eat, drink or smoke when using this product.

Store in a well-ventilated place. Keep cool.

Dispose of contents/container in accordance with jurisdictional regulations.

In case of fire: Use powder to extinguish.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep container tightly closed.

Ground and bond container and receiving equipment.

Use explosion-proof electrical equipment.

Use only non-sparking tools.

Take action to prevent static discharge.

Wear protective gloves and eye and face protection.

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Example 2: Flammosol label containing the full set of workplace labelling information using 2 separate panels

Front Panel

Read label before use. Keep out of reach of children

Flammosol

FLAMMABLE LIQUID, TOXIC N.O.S.

(aliphatic hydrocarbons, toxicole)

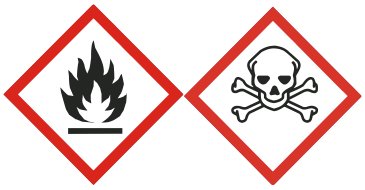
UN 1992

Contains:

Aliphatic hydrocarbons 95%

Toxicole 5%

4 L



DANGER

Highly flammable liquid and vapour

Toxic if swallowed

Causes skin irritation

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Back Panel

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Ground and bond container and receiving equipment.

Use explosion-proof electrical equipment.

Use only non-sparking tools.

Take action to prevent static discharge.

Wear protective gloves and eye and face protection.

Do not eat, drink or smoke when using this product.

In case of fire: Use powder to extinguish.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Wash skin (or hair) with plenty of water.

Take of contaminated clothing and wash it before reuse.

If skin irritation occurs: Get medical advice/attention.

IF SWALLOWED: Immediately call a POISON CENTRE or doctor.

Rinse mouth.

Wash hands thoroughly after handling.

Store in a well-ventilated place. Keep cool.

Keep container tightly closed.

Dispose of contents/container in accordance with jurisdictional regulations.

Example 3: Flammosol label that meets both transport and workplace labelling requirements (single container)

The equivalent dangerous goods (transport) classification for *Flammosol* is a class 3 (flammable liquid, packing group II) and a class 6.1 (oral toxicity, packing group III). The transport markings should be in the most prominent position on the container and should be clearly distinguishable from the workplace labelling. Hazard pictograms are not included on the workplace label panel as the equivalent class labels appear on the transport panel.

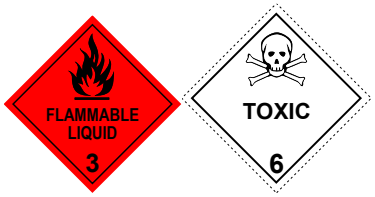
Transport markings label portion (to comply with transport Regulations)

Flammosol

FLAMMABLE LIQUID, TOXIC N.O.S.

(aliphatic hydrocarbons, toxicole)

UN 1992



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Workplace information label panel

Flammosol

Contains:
Aliphatic hydrocarbon 95%
Toxicole 5%

DANGER

4 L

Highly flammable liquid and vapour
Toxic if swallowed
Causes skin irritation

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Ground and bond container and receiving equipment.
Use explosion-proof electrical equipment.
Use only non-sparking tools.
Take action to prevent static discharge.
Wear protective gloves and eye and face protection.
Do not eat, drink or smoke when using this product.

In case of fire: Use powder to extinguish.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Wash skin (or hair) with plenty of water.
Take of contaminated clothing and wash it before reuse.
If skin irritation occurs: Get medical advice/attention.
IF SWALLOWED: Immediately call a POISON CENTRE or doctor.
Rinse mouth.
Wash hands thoroughly after handling.

Store in a well-ventilated place. Keep cool.
Keep container tightly closed.

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Example 4: Flammosol labels appropriate for small containers

The amount of information included on the label of a small container will vary. It will be dependent on the size and shape of the container and the number of label elements to be included, particularly where the hazardous chemical meets the criteria for multiple hazard classes. As a mandatory minimum, small containers must be labelled with the product identifier, manufacturer or importer information and hazard pictograms or hazard statements. Labels for small containers or packages must include as much labelling information as reasonably practicable

This example contains the minimum labelling information permitted and a reference to the safety data sheet.

Flammosol



Refer to the Safety Data Sheet before use.

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This label has sufficient room to include additional labelling information. Following the guidance provided in Appendix E, hazard statements, the identity and proportions of the hazardous ingredients, critical first aid instructions and reference to the safety data sheet have been included.

Flammosol



Contains:	**Highly flammable liquid and vapour**
Hydrocarbon solvent 95%	**Toxic if swallowed**
Toxicole 5%	**Causes skin irritation**

IF SWALLOWED: Immediately call a POISON CENTRE or doctor.

Rinse mouth.

Additional information is listed in the Safety Data Sheet

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Example 5: Examples of labels for hazardous waste

- Hazardous Waste label that meets both transport and workplace labelling requirements (single container)

Selected precautionary statements relating to first aid instructions, accident prevention and personal protective equipment and disposal advice have been included. Hazard pictograms have not been included as the corresponding transport class labels already appear. The generic type of waste solvent is expected to be known e.g. alcohols, esters, ketones, aliphatic hydrocarbons, aromatic hydrocarbons or chlorinated hydrocarbons.

Flammable Toxic Waste—Batch 1

FLAMMABLE LIQUID, TOXIC N.O.S.

(hydrocarbons, organotin compound)

UN 1992





Contains:

Mixed aromatic and aliphatic hydrocarbons (90%)

Alkyl tin (5%)

Flammable liquid and vapour

Toxic if swallowed

IF SWALLOWED: Immediately call a POISON CENTRE or doctor.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

In case of fire: Use powder to extinguish.

Wear protective gloves, eye and face protection.

Dispose of contents in accordance with jurisdictional regulations

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- Hazardous Waste label that meets workplace labelling requirements and transport inner packaging requirements

The main differences between this and the previous example are that hazard pictograms are used and the proper shipping name and UN number are not included.

Flammable Toxic Waste—Batch 1



Contains:

Mixed aromatic and aliphatic hydrocarbons (90%)

Alkyl tin (5%)

Flammable liquid and vapour

Toxic if swallowed

IF SWALLOWED: Immediately call a POISON CENTRE or doctor.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

In case of fire: Use powder to extinguish.

Wear protective gloves, eye and face protection.

Dispose of contents in accordance with jurisdictional regulations

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- Labelling of hydrochloric acid waste that meets workplace labelling requirements and transport inner packaging requirements

Hydrochloric acid waste



May be corrosive to metals

Causes serious eye damage

Wear eye or face protection.

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do so. Continue rinsing.

Immediately call a POISON CENTRE or doctor.

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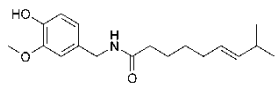
http://www.madeup-chemical-company.com.au/

Example 6: Example labels for research chemicals or samples for analysis

- In this example, the chemical identity and some of the hazardous properties are known, and are therefore included on the label.

A.B. Researcher

Aromatic amide



WARNING

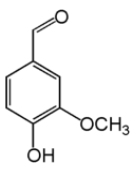
Causes serious eye irritation

Causes skin irritation

- In this example, the identity of the chemical is known. However, the hazardous properties have not been determined.

A.B. Researcher

Phenolic aldehyde



CAUTION

Unknown properties

Note: For the two examples above, a generic name in accordance with Appendix C should be used, as chemical structures are difficult to communicate in the event of an incident.

- In the following example, neither the identity nor the hazardous properties of the substance are known.

ABR14b (Uncharacterised substance)	**CAUTION** Unknown properties

Example 7: Example labels for a substance not otherwise classifiable under the GHS

The following two example labels are for carbon dioxide (dry ice). Dry ice does not meet any of the hazard categories of the GHS, and therefore cannot be assigned any label elements. However, there are health and safety issues associated with the handling, use and storage of dry ice and information on these hazards should be included on labels.

- The following label meets road transport labelling requirements. It also meets workplace labelling requirements as it includes other health and safety information applicable to its workplace storage, handling and use.

CARBON DIOXIDE, SOLID (dry ice)

UN 1845

2.5 kg net



Asphyxiation hazard:

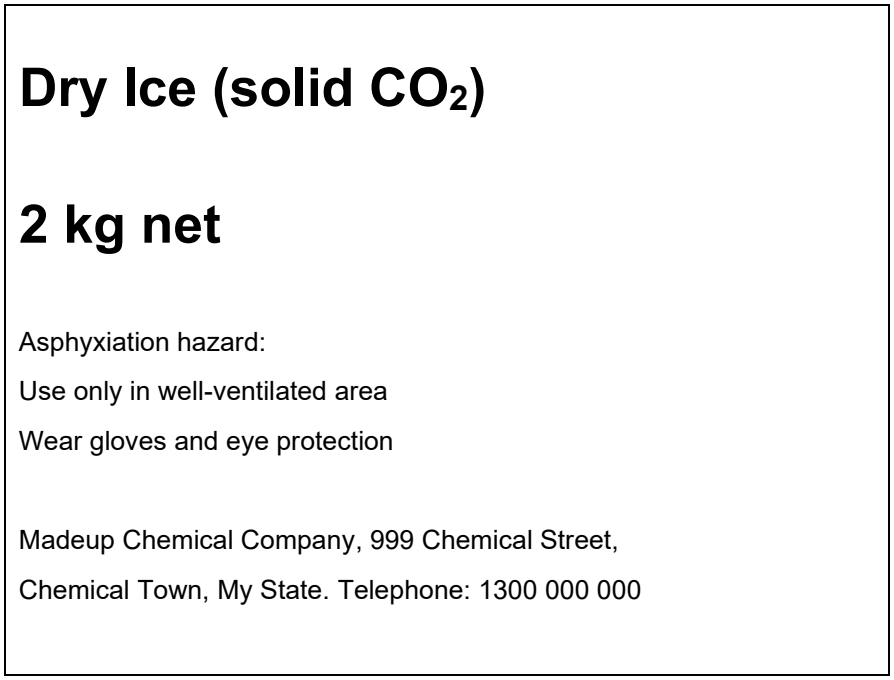
Use only in well-ventilated area

Wear gloves and eye protection

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- The following label meets workplace labelling requirements and road transport inner packaging requirements. No hazard pictograms or class labels are present. However, health and safety information relating to storage, handling and use in the workplace is included.



Example 8: Example label for Poisons Standard, WHS and transport labelling

Note: Poisons Standard and transport marking may need to meet minimum size requirements to comply with their respective requirements.

POISON

KEEP OUT OF REACH OF CHILDREN

READ SAFETY DIRECTIONS

Flammosol

FLAMMABLE LIQUID, TOXIC N.O.S.

(aliphatic hydrocarbons, toxicole)

UN 1992

Contains:

Aliphatic hydrocarbons 95%

Toxicole 5%





1 L

DANGER

Highly flammable liquid and vapour

Toxic if swallowed

Causes skin irritation

FIRST AID

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Wash skin (or hair) with plenty of water.

Take of contaminated clothing and wash it before reuse.

If skin irritation occurs: Get medical advice/attention.

IF SWALLOWED: Immediately call a POISON CENTRE or doctor.

Rinse mouth.

Wash hands thoroughly after handling.

Dispose of contents/container in accordance with Jurisdictional regulations.

SAFETY DIRECTIONS

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

In case of fire: Use powder to extinguish.

Ground and bond container and receiving equipment.

Use explosion-proof electrical equipment.

Use only non-sparking tools.

Take action to prevent static discharge.

Wear protective gloves and eye and face protection.

Do not eat, drink or smoke when using this product.

Store in a well-ventilated place. Keep cool. Keep container tightly closed.

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Appendix I—Other relevant information

Classifying hazardous chemicals – National guide
https://www.safeworkaustralia.gov.au/doc/classifying-hazardous-chemicals-national-guide

ADG Code (7th Edition) for download
http://www.ntc.gov.au/heavy-vehicles/safety/australian-dangerous-goods-code/

Code of Practice: Preparation of Safety Data Sheets for hazardous chemicals
https://www.safeworkaustralia.gov.au/doc/model-code-practice-preparation-safety-data-sheets-hazardous-chemicals

GHS hazard pictograms for download
www.unece.org/trans/danger/publi/ghs/pictograms.html

GHS revision 7—Official text and corrigenda:
http://www.unece.org/trans/danger/publi/ghs/ghs_rev07/07files_e.html

Labelling of Agricultural and Veterinary chemicals
https://apvma.gov.au/registrations-and-permits/labelling-codes

The Poisons Standard (the SUSMP)
http://www.tga.gov.au/industry/scheduling-poisons-standard.htm

UN Model Regulations for the Transport of Dangerous Goods
https://unece.org/transport/dangerous-goods/un-model-regulations-rev-22
(Note that an updated revision of these regulations is due to be published in 2023.)

Amendments

The model Code of Practice: *Labelling of workplace hazardous chemicals* has been amended since its publication in September 2015, including a number of amendments agreed to in 2018 as part of a technical and usability review of the model Code. The current version, dated October 2018, incorporates all of those amendments.

Additional amendments were made to this model Code of Practice in July 2020 and June 2023 to reflect the adoption of the 7th revised edition of the GHS.

Subsequent amendments were made to this model Code of Practice in November 2026 to reflect the transition from Workplace exposure standards for airborne contaminants to Workplace exposure limits for airborne contaminants.

The current version, dated November 2026, incorporates all of those amendments.