

Manifest requirements for hazardous chemicals

under the *Work Health and Safety Act 2011*



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1. Introduction

The *Work Health and Safety Act 2011* (WHS Act) regulates the storage and handling and use of hazardous chemicals. Under the WHS Act, a person conducting a business or undertaking (PCBU) which uses, handles, stores or generates hazardous chemicals must comply with specific sections in chapter 3 and chapter 7.1 of the *Work Health and Safety Regulation 2011* (WHS Regulation).

When a PCBU has hazardous chemicals that exceed the manifest quantity in Column 5 of Schedule 11, a manifest must be provided under section 347 of the WHS Regulation. Under section 348, the PCBU must also notify Workplace Health and Safety Queensland (WHSQ) of their workplace details and supply a copy of the manifest with the notification. The information required in a manifest is prescribed in Schedule 12 of the WHS Regulation. Such workplaces are referred to as manifest quantity workplaces (MQW). These requirements also apply to major hazard facilities.

This guide can be used to assist a PCBU meet their duty to provide a manifest for hazardous chemicals under the WHS Regulation. This guide outlines the information to be included, provides an example manifest, and a checklist to help ensure the required information is included.

2. Role of manifests

When emergency services respond to fires, toxic gas releases and chemical spills at workplaces storing, handling and using hazardous chemicals, the responders need to know the potential hazards. For effective and efficient emergency action, responders need information about the type, quantity and locations of the hazardous chemicals at the workplace.

The role of the manifest is primarily to inform emergency personnel of the types, quantities, and locations of hazardous chemicals at the workplace. The site plan, which is part of the manifest, plays an important role in providing this information. The manifest is an important information source available to emergency services to respond to and manage a hazardous chemicals incident.

Manifest versus registers

Manifests should not be confused with the hazardous chemical register (required under section 346 of the WHS Regulation). A register is a list of the hazardous chemicals used, handled or stored at the workplace including the safety data sheet (SDS) for each. The register must be made readily accessible to workers or others in a work area who may be affected by the hazardous chemicals at the workplace. The purpose of the register is to provide workers and others access to information about a hazardous chemical used in a work activity including hazards, first aid actions, storage conditions and appropriate personal protective equipment for the safe management of the product.

3. Information to be included in the manifest

Manifests should reflect current information and be prepared from up-to-date maximum quantities likely to be held. The manifest must contain information in accordance with Schedule 12 of the WHS Regulation as summarised below. A sample manifest is provided in Appendix 1. A checklist for the manifest content is provided in Appendix 2.

3.1 General information

The manifest must state:

- name of the PCBU (Trading Name is also recommended)
- address of the workplace
- date when the manifest was first prepared or last amended
- business hours and after hours contact telephone numbers for at least two people who may be contacted.

Additionally, it must give the following information about the hazardous chemicals stored at the workplace.

3.2 Hazardous chemicals stored in bulk (e.g. stockpiles)

The manifest must include:

- identification number/code of the location where the bulk material is stored
- proper shipping name of the hazardous chemical
- maximum quantity likely to be stored in the storage area.

3.3 Hazardous chemicals stored in tanks other than in intermediate bulk containers (IBCs)

For each hazardous chemical stored in tanks (other than in IBCs), the manifest must include the following information:

- identification number or code for each tank
- maximum storage capacity for each tank
- type (underground or above ground) tank
- the diameter of the tank (for fixed vertical tanks used to store fire risk hazardous chemicals).

For all hazardous chemicals, as stated in Table 3.2.3 in the ADG Code¹, include:

- proper shipping name
- UN number
- dangerous goods class, division and packing group.

For Flammable Liquid Category 4, also known as Combustible liquid C1 - flashpoint 61-93°C (e.g. diesel)

- product name
- the words 'Combustible Liquid'.

3.4 Hazardous chemical storage areas for packages or IBCs

For hazardous chemicals stored in packages and IBC's that are required to have information placards (i.e. exceeds the prescribed placard quantity), the manifest must include the storage area identification number or code.

For Flammable Liquid Category 4, also known as combustible liquid C1 - flashpoint 61 to 93°C (e.g. diesel)

- the words 'Combustible Liquid'
- the largest quantity likely to be stored in the storage area.

For hazardous chemicals that are specified hazardous chemicals² (generally equivalent to Class 2 Division 2.3 toxic gas or packing group I classifications under the ADG Code), include:

- proper shipping name as stated in Table 3.2.3 of the ADG Code
- dangerous goods class and division
- largest quantity of the materials likely to be stored in the storage area.

For hazardous chemicals that are classified as Unstable Explosives, Organic Peroxides Type A or Self Reactive Substances Type A, include:

- name of the hazardous chemical as listed in Appendix A of the ADG Code
- largest quantity of the materials likely to be stored in the storage area
- the words 'Goods too dangerous to be transported'.

For all other hazardous chemicals, include:

- dangerous goods class of the materials
- largest quantity of each class of hazardous chemical likely to be stored in the storage area.

¹ The Australian Dangerous Goods Code (ADG Code) is available at www.ntc.gov.au. The ADG Code or product safety data sheet will provide the product's dangerous goods classification details including the class, division and packing group and identification details including the proper shipping name and UN number.

² Specified hazardous chemicals are defined in Schedule 12 of the WHS Regulation to include the following GHS categories: flammable liquid category 1; self-reactive substances type B; substances which in contact with water emit flammable gas category 1; pyrophoric liquids category 1; pyrophoric solids category 1; organic peroxides type B; acute toxicity category 1; oxidising solids category 1; oxidising liquids category 1; skin corrosion category 1A; gases under pressure with acute toxicity categories 1, 2 or 3 or skin corrosion categories 1A, 1B or 1C.

3.5 Hazardous chemicals being manufactured

For each area that hazardous chemicals are manufactured, include:

- the manufacturing area identification number or code
- a description of the hazardous chemicals being manufactured in the area
- the average and the largest quantity of each class of hazardous chemical likely to be manufactured.

3.6 Hazardous chemicals in transit³

For each area that hazardous chemicals are stored in transit, include:

- transit area identification number or code
- dangerous goods class of the hazardous chemicals that are stored
- quantity of each dangerous goods class of hazardous chemical stored or likely to be stored.

Transport documents that comply with the ADG Code requirements for the goods in transit may be attached to the manifest to comply with the requirements for identification of hazardous chemicals.

3.7 Site plans

The purpose of the plan of the workplace is to identify the places, buildings and structures on the premises where hazardous chemicals are used, stored and handled. The plan should also include details of all significant facility and surrounding area features. It should be easy for emergency services personnel to read. The plan of the premises should be on a scale that adequately illustrates the details required by the WHS Regulation.

The following information is required on a plan of the workplace:

- locations and identification number or code of all bulk storages
- locations and identification number or code of all tanks
- locations where hazardous chemicals in packages or IBC's are stored
- areas where hazardous chemicals are manufactured
- areas where dangerous goods in transit may be located.

Provide a legend for the identification numbers and codes for the above areas and indicate true north.

The scaled site plan must also include the location of:

- the main entrance and other entry and exit points to the workplace
- essential site services including fire services (e.g. hydrant and booster pump locations)
- isolation points for fuel and power
- all drains on the site (a detailed drainage plan will assist QFES isolate and manage an incident)
- the manifest (e.g. manifest box)
- adjoining occupancies and land use (e.g. residential/commercial, vacant land).

In addition, the following information may be relevant inclusions:

- the location of all buildings, amenities, structures and internal roadways on the premises and their uses including environmentally sensitive areas and watercourses
- areas of public access adjacent to the site and parking (if any)
- public street names adjacent to the premises and evacuation routes
- nature of fences (if any), distance scale, site topography
- the location of emergency resources and equipment.

Tip

A practical way to show the location attributes, neighbouring facilities and surrounding area is to include a satellite image and annotate as required, in addition to the detailed site plan. This can be particularly helpful for remote locations, rural areas, or sites with many buildings when located within an industrial park or complex. Such images can be obtained via mapping software such as Google Maps, Google Earth, Queensland Globe and Near Maps.

³ In transit, means hazardous chemicals supplied to or stored at a workplace in containers that are not opened and not used at the workplace and kept at the workplace for not more than 5 consecutive days. Refer to Schedule 15 definition.

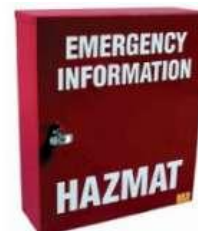
4. Location of manifest

The manifest must be kept in a place that is in agreement with the Queensland Fire and Emergency Service (QFES). QFES recommend that the manifest be kept in a red waterproof container kept as close as possible to the main entrance.

4.1 HAZMAT box

It is recommended that the manifest be kept in a red weatherproof container, commonly known as a 'Hazmat box'. An example of a Hazmat box is shown on the right. Alternative designs such as tubular versions with caps for weather proofing are also acceptable.

Under section 347 (3) of the WHS Regulation, the manifest is required to be kept in a place determined in agreement with QFES, available for inspection, and readily accessible to the QFES.



QFES recommend that the box should be located:

- inside the boundary near the outer warning placard and as close as practicable to the main entry to the workplace
- on the left hand side as you enter the workplace so a fire officer can safely and readily access the manifest.

If you wish to vary the location, consult with the local QFES fire station (the responders) about the best position for its location (e.g. gatehouse). If more than one entry point is used regularly (e.g. two-street access) it may be necessary to have a Hazmat box at each entry.

A suitable sized Hazmat box is 400 mm x 300 mm x 90 mm deep. The box should be signal red in colour preferably with 100 mm white letters stating 'HAZMAT'. It should be mounted securely, for example, on a steel post and concreted in position. For security, a 003 series lock should be installed on the box to enable the emergency services to open the lock as desired. While it is not mandatory to include the word HAZMAT, it is recommended as a useful label.

Tip

Making a manifest readily accessible means that it must be available 24 hours a day 7 days a week. A manifest must not be isolated or remote from the workplace such as at a centre management office for a multi-tenanted site or in secure site office which may be closed after hours. The manifest location must also be marked on the site plan.

Further information is available from the [QFES](#) .

4.2 Manifest box contents

The contents of the manifest box should be limited to the manifest document. The site information and site contacts should be listed first, followed by location and quantity information of the hazardous chemicals stored. The site plan/s must clearly identify the hazardous chemical storage areas and other relevant information (preferably printed in A3 format).

Tip

Laminated versions are useful to protect against moisture during storage and wet conditions when required during an incident. Larger formats like A3 should use gridlines and grid references for large more complex facilities for readily pin-pointing areas of interest. A separate map to display a drainage plan may be useful.

In an emergency situation, first responders need clear, concise information in a manifest to inform their emergency response. Providing non-essential information or details may appear helpful but can create confusion and delay. The manifest box information should enable the emergency services to quickly locate hazardous chemical storage areas and make contact with a site representative knowledgeable about the site.

Safety data sheets (SDS)

Many manifest quantity workplaces store and handle a wide variety of hazardous chemicals. Trying to accommodate all SDS in a manifest box will quickly overload it. Generally, documents such as SDS, environment management plans or emergency plans should be avoided in the manifest box. These sorts of documents may be useful to the emergency services, but should be kept elsewhere at a location known to the sites emergency contact personnel. Only if there are a few (e.g. 1-5) hazardous chemicals stored and handled at the workplace, it may be appropriate to include the SDS in the manifest box but it is not required by the Regulation.

5. Notification

All workplaces that exceed the manifest quantity listed in column 5 of Schedule 11 of the WHS Regulation are required to notify WHSQ of their existence under section 348. Notification requirements for hazardous chemicals including relevant forms are available at www.worksafe.qld.gov.au .

The manifest and site plan that complies with Schedule 12 is required to be submitted with the notification for a MQW (Refer to Form 73- Notification of a manifest quantity workplace). This guide will assist the PCBU to ensure the manifest is compliant with Schedule 12.

Significant change triggers re-notification

Re-notification is required if a significant change in the risk of using, handling or storing Schedule 11 hazardous chemicals occurs. A significant change is likely to influence the details on the manifest and the way emergency services respond to an incident. A significant change could include:

- Introducing or removing a storage area that exceeds a placard quantity.
- A substantial permanent change (e.g. ± 20 per cent) in the quantity of a placarded storage area, based on the largest quantity likely to be kept.
- Introducing new types of hazard classes and/or categories.
- Installing a new storage and handling system. For example, a bulk fuel tank, or a modified freight container for storing flammable liquids, or expanding the capacity of an existing ammonia based refrigeration system.
- Removing a storage and handling system. For example, decommissioning an underground fuel tank, or removing a chlorine-gas dosing system or LPG tank.
- No longer using, handling or storing hazardous chemicals.

6. Emergency plans

All workplaces that exceed the manifest quantity listed in column 5 of Schedule 11 of the WHS Regulation (i.e. all MQWs) are required to submit a copy of their emergency plan to QFES for review under section 361. Any recommendations about the content or effectiveness of the emergency plan will need to be incorporated into a revised plan. Further information on emergency planning is available from [WHSQ](#) and [QFES](#).

QFES requires emergency plans for manifest quantity workplaces to be emailed to a central contact at QFES.EMPlanning@qfes.qld.gov.au rather than lodging it at the local fire station.

7. Further information and assistance

Consultants and industry associations

To assist industry, WHSQ provides a contact list of consultants specialising in hazardous chemical safety management that PCBUs may wish to consider if they need external assistance. Refer to 'industry consultants for hazardous chemicals' at www.worksafe.qld.gov.au.

The Australasian Institute of Dangerous Goods Consultants also provides a contact list at www.aidgc.org.au.

Manufacturers, suppliers and local distributors of hazardous chemicals may be able to provide technical assistance in regards to their products, including the provision of safety data sheets for product hazard classification and identification information for manifests.

Workplace Health and Safety Queensland

For further information on the *Work Health and Safety Act 2011* and Work Health and Safety Regulation 2011, visit www.worksafe.qld.gov.au or call 1300 362 128.

Any enquiries relating to this guide may be directed to the Hazardous Chemicals Team at hazchem@oir.qld.gov.au.

Appendix 1 — Example manifest for hazardous chemicals

This example is provided to assist a PCBU to develop a manifest that meets the requirements of Schedule 12 of the Work Health and Safety Regulation 2011. The format/layout used here is not mandatory but shows the information to be included. The amount of information will depend on the size and complexity of the workplace. The manifest is to be a readily available document presenting the up-to-date hazardous chemical information clearly and accurately to emergency services for use in an emergency situation.

Person conducting the business or undertaking (PCBU)	<i>XYZ CHEMICALS PTY LTD</i>
Trading name:	<i>XYZ CHEMICALS</i>
Address of premises:	<i>123 Cambridge Street, Eagle Farm, QLD 4009.</i>
Date of preparation:	<i>21 April 2018</i>

Emergency contacts

Name	Position	Telephone
<i>B Wright</i>	<i>Production supervisor</i>	<i>B/H : 0453 345 378 A/H : 07 3425 6345</i>
<i>A Citizen</i>	<i>Safety manager</i>	<i>B/H : 0452 454 733 A/H : 07 3029 4563</i>

Hazardous chemicals stored in bulk (e.g. stockpiles)

Storage area	Dangerous goods			Largest quantity
	Class	Sub risk/s	PG	
<i>n/a</i>				<i>Nil</i>

Hazardous chemicals stored in tanks (other than IBC's)

Tank id No.	Dangerous goods					Tank		
	Name	UN no.	Class/Type	Sub risk	PG	Type	Capacity	Diameter
<i>DG T1</i>	<i>Methanol</i>	<i>1230</i>	<i>3</i>	<i>6.1</i>	<i>II</i>	<i>u/g</i>	<i>30 000 L</i>	<i>n/a</i>
<i>DG T2</i>	<i>Abandoned tank</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>u/g</i>	<i>30 000 L</i>	<i>n/a</i>
<i>DG T3</i>	<i>LP Gas</i>	<i>1075</i>	<i>2.1</i>	<i>n/a</i>	<i>n/a</i>	<i>a/g</i>	<i>5 000 L</i>	<i>n/a</i>
<i>DG T4</i>	<i>Diesel</i>	<i>n/a</i>	<i>Combustible liquid</i>	<i>n/a</i>	<i>n/a</i>	<i>a/g</i>	<i>10 000 L</i>	<i>See note</i>

u/g — underground a/g — aboveground n/a — not applicable

Note: tank diameter required for vertical aboveground tanks storing fire risk hazardous chemical (does not apply to combustible liquids).

Package storage areas

The following types of hazardous chemicals must be identified individually:

1. Class 2.3 - toxic gas
2. Packing group I chemicals of any dangerous goods class
3. Chemicals that are classified as goods too dangerous to be transported

Package store 1

Area	Hazardous chemicals				Largest quantity
	Name	Class	Sub risk/s	PG	
PS1	Chlorine	2.3	5.1 and 8	n/a	70 L

Package store 2

Area	Hazardous chemicals			Largest quantity
	Class	Sub risk/s	PG	
PS2	6.1	n/a	II	2 500 L
PS2	6.1	n/a	III	12 000 L

Package store 3

Area	Hazardous chemicals				Largest quantity
	Name	Class	Sub risk/s	PG	
PS3	Carbon disulphide	3	6.1	I	200 L

Area	Hazardous chemicals			Largest quantity
	Class	Sub risk/s	PG	
PS3	3	n/a	II	4 000 L
PS3	3	n/a	III	8 000 L
PS3	Combustible Liquid	n/a	n/a	2 000 L

Package store 4

Area	Hazardous chemicals			Largest quantity
	Class	Sub risk/s	PG	
PS4	8	n/a	II	4 000 L
PS4	8	n/a	III	8 000 L

Manufacturing areas

Area	Hazardous chemicals			Average quantity	Largest quantity
	Class	PG	Sub risk/s		
MA1	3	II	6.1	2 500 L	4,000 L
MA2	8	II	n/a	1 400 L	2 800 L
	6.1	III	n/a	600 L	1 200 L

Transit area

Area	Class	PG	Sub risk/s	Largest quantity
n/a				Nil

A person conducting a business or undertaking to add in document control and authority information (e.g. signed off by an officer).

Approved by: Position:

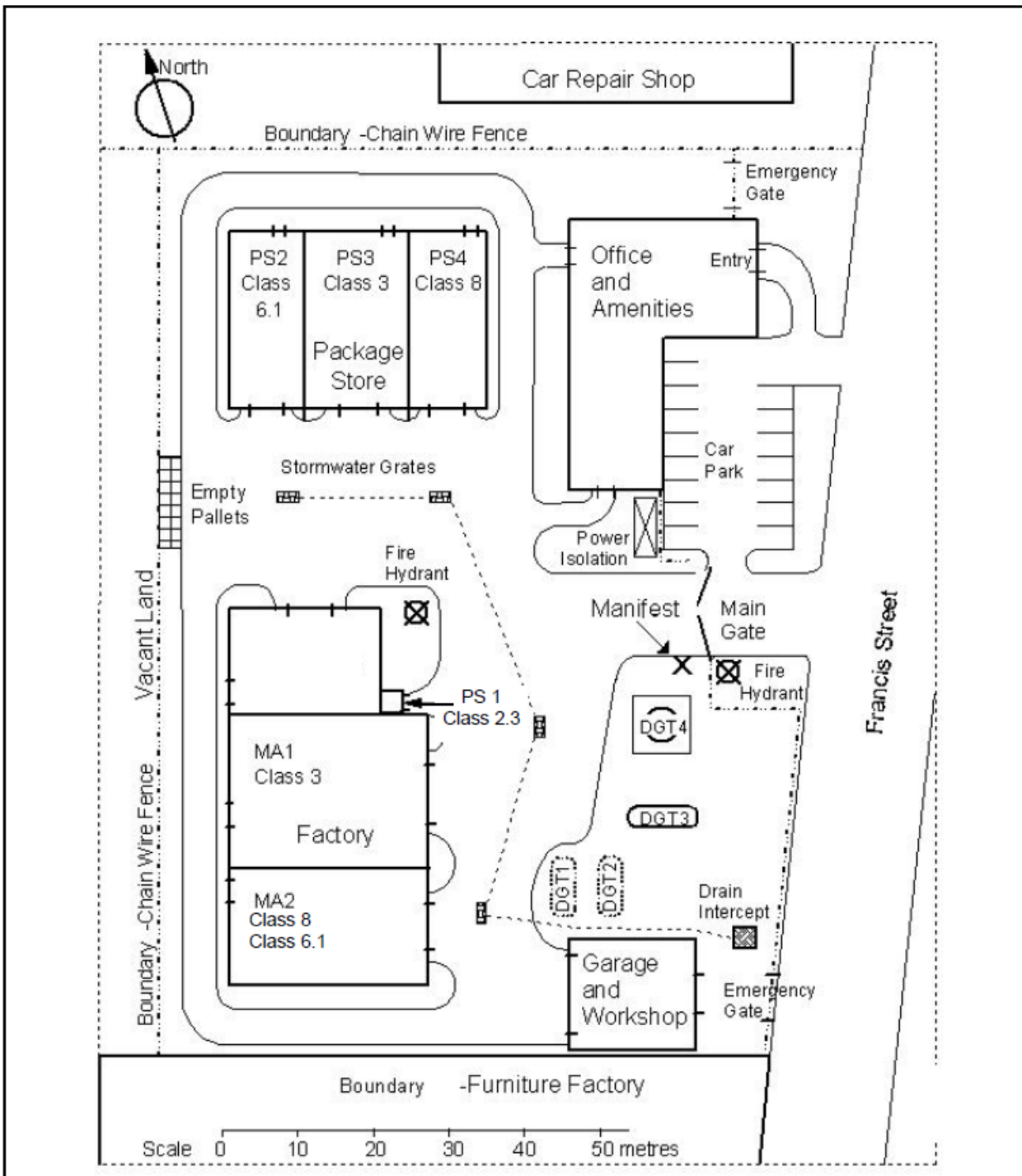
Date:

Example Manifest Site Plan

XYZ CHEMICALS PTY LTD SITE PLAN

NAME OF PREMISES: XYZ Chemicals Pty Ltd
 ADDRESS: 123 Cambridge Street, Eagle Farm.
 DATE OF THIS PLAN DRAWING: 2nd February 2012.
 DATE OF LAST REVISION: 21st April 2012.

Legend
 Insert descriptions for the various codes, symbols used in plan for clarity



Appendix 2 — Manifest checklist

- This is a self-assessment checklist designed to help ensure that the manifest required under section 347 of the Work Health and Safety Regulation 2011 (WHS Regulation) complies with the requirements of Schedule 12, WHS Regulation.
- Where applicable to the workplace, the following information must be clearly shown in the manifest.
- Tank and storage area identification numbers or codes recorded in the manifest must be clearly identifiable in site plan.

Information to be included in the manifest

General information

- Name of the person conducting a business or undertaking (PCBU)
- Address of the workplace
- Date when the manifest prepared / amended
- Business and after hours contact telephone numbers for at least two people specific to the workplace

Hazardous chemicals stored in bulk storage (not in containers e.g. stockpiles)

- Storage area identification number or code
- Name of chemical stored in a bulk storage area (e.g. ADG Code description)
- Quantity of chemical stored in a bulk storage area

Hazardous chemicals stored in bulk containers (e.g. tanks other than in IBCs)

For each bulk container, include:

- Identification number or code
- Container type (u/g or underground, a/g or aboveground, vertical or horizontal)
- Container capacity in litres
- For vertical tanks storing fire risk hazardous chemicals, include the tank diameter

For identification of the hazardous chemical contents of each, include:

- Proper shipping name, UN number, class, division (packing group (PG) also recommended)
- For combustible liquids having a flash point $\leq 93^{\circ}\text{C}$ (e.g. diesel)
- the product name and words 'Combustible Liquid'
- For goods too dangerous to be transported
- the name as appears in Appendix A of the ADG Code and words 'Goods too dangerous to be transported'

Storage areas for hazardous chemicals in packages or IBCs

Applies when the storage area is required to have a placard

For each placarded storage area

- Identification number or code
- Largest quantity of each class likely to be stored in the storage area

For identification of the hazardous chemicals

- Dangerous goods class, division (packing group also recommended)
- For combustible liquids (flash point $\leq 93^{\circ}\text{C}$)
- the words 'Combustible Liquid' and largest quantity
- For class 2.3, packing group I of any class
- Proper shipping name, class/division and largest quantity

For goods too dangerous to be transported
- the name as appears in Appendix A of the ADG Code and words 'Goods too dangerous to be transported', and largest quantity

For each area in which hazardous chemicals are manufactured

Identification number or code
Average and the largest quantity in manufacture
Description of hazardous chemicals being manufactured (e.g. the chemical name, other recognised descriptor such as dangerous class, division and packing group, or combustible liquid or GTDTBT/Appendix A name).

Hazardous chemicals in transit

Identification number or code
The requirements for hazardous chemicals in packages or IBCs described above apply. However, it is acceptable if the dangerous goods transport documents are provided in the manifest box at the workplace for dangerous goods under the ADG Code that are in transit.

Site plans

A scale plan of the workplace must show -

Location and ID No./code/description of bulk storage areas not in containers (e.g. stockpiles)
Location and ID No./code/description of bulk containers (e.g. tanks and vessels)
Location and ID No./code/description of package and IBC storage areas
Location and ID No./code/description of manufacturing areas
Location and ID No./code/description of in transit areas
Legend for identification numbers or codes used in the plan
The main entrance and other entry and exit points to the workplace
Essential site services including fire services (e.g. hydrants, booster pumps) or gas supply
Location of isolation points for fuel and power
Location of all drains
Location of the manifest
Description of the nature of the occupancy of adjoining sites or premises
Identification of true north

For some workplaces, additional information may assist emergency services such as:

- location of buildings, amenities, structures and internal roadways for large sites
- surrounding or adjacent environmentally sensitive areas and watercourses
- areas of public access adjacent to the site and parking
- public street names adjacent to the premises and evacuation routes
- nature of fences and restrictions to site accessibility (if any)
- site topography
- location of emergency resources and equipment
- inclusion of a satellite image showing the workplace and surrounding areas

Note: ADG Code information is available from the products safety data sheet (SDS) under Section 14-Transport Information. The ADG Code is available at www.ntc.gov.au .