

DGSM Information Paper No. 3



Minor Storage of Stated Dangerous Goods and Combustible Liquids

Under the
Dangerous Goods Safety Management Act 2001

May 2003

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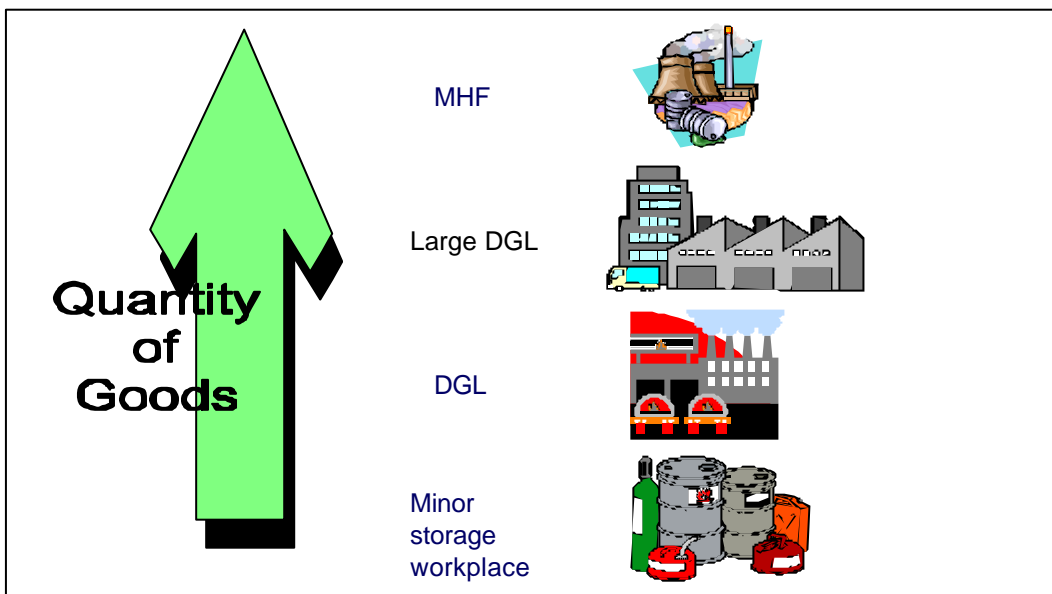
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1. Introduction

The objective of the *Dangerous Goods Safety Management Act 2001* (DGSM Act) is to protect the safety of people, and prevent damage to property and the environment, from hazardous materials.

The requirements of the DGSM legislation increase as the quantity of dangerous goods and combustible liquids stored and handled increases. Premises are classified into one of four categories based on the quantity of dangerous goods and combustible liquids present at a site:

- small quantities = Minor storage workplaces
- medium quantities = Dangerous goods locations (DGLs)
- large quantities = Large dangerous goods locations (Large DGLs)
- very large quantities = Major hazard facilities (MHFs)



You need to determine which of these types your premises is classified as. To do this, you need to determine the quantities of all stated dangerous goods and combustible liquids at the premises by class, type and packing group. Compare the actual quantities stored and handled at your site with the prescribed quantities in Appendix 1 (see DGSM Information Paper No. 5 if you would like more information on this subject).

This will determine which of the DGSM obligations you need to comply with. This document is designed to help occupiers of facilities or locations which store and handle smaller quantities of dangerous goods and combustible liquids and hence would not be classified as a dangerous goods location (DGL), Large DGL or major hazard facility under the DGSM Act. In this document, such a premises is referred to as a “minor storage” workplace.

Rural places are exempted from the classification as DGLs or Large DGLs and hence are required to follow the same provisions as those stipulated for minor storage workplaces under the DGSM Act. It is recommended that occupiers of rural places also consider the ‘Code of Practice for the Storage and Use of Chemicals at Rural Workplaces’, published by the Division of Workplace Health and Safety (DWHS).

NOTE: A ‘rural place’ means a place:

- (a) that has an area of 5 ha or more; and
- (b) used by its occupier for agricultural, horticultural, floricultural, aquacultural or pastoral purposes; and
- (c) at which there are no stated dangerous goods or combustible liquids being stored for resale.

2. What is 'Minor Storage'?

'Minor storage' denotes the storage of stated dangerous goods and combustible liquids in quantities **less than** the "Quantity for dangerous goods location" specified in Column 3 of the Table in Schedule 1 of the DGSM Regulation (see **Appendix 1**). The obligations applying to minor storage workplaces are included in **Appendix 2**. Information provided in this document aims to provide guidance for the safe storage and handling of minor quantities of stated dangerous goods and combustible liquids.

Examples of minor storage quantities under the DGSM Act 2001

Material	Dangerous goods class	Quantity held at premises	Prescribed quantity from Regulation
Unleaded Petrol	Class 3 PG II	120 L	250 L
Liquid pool chlorine	Class 8 PG III	800 L	1000 L
LPG cylinder (45kg)	Class 2.1	Approx 125 L	500 L
Diesel fuel	C1 combustible liquid	7000 L	10 000 L
Paints and lacquers	Class 3 PG II	200 L	250 L

NOTE:

- If a premises holds more than one of the above materials, a mixed class threshold may be exceeded (see Appendix 1); and
- The prescribed quantities address situations involving single classes and packing groups, single classes and mixed packing groups, and mixed classes. The quantities used in the calculation include dangerous goods and combustible liquids held across the facility or location regardless of the number of storage areas.

A discussion of the safety obligations of occupiers for storage and handling activities is given in the next section and is intended as a guide. The text is taken from Chapters 3, 4 and 5 of the CHEM Services's document titled "Safe Storage and Handling of Dangerous Goods: Guidelines for Industry" which is available from the CHEM Services website at www.emergency.qld.gov.au/chem under "Publications" or for purchase from the CHEM Services.

This information paper also includes a summary of what information is available from the CHEM Services (**Appendix 3**), as well as phone numbers of useful contacts for dangerous goods related issues (**Appendix 4**).

If you are involved in the manufacture, importation or supply of stated dangerous goods and combustible liquids, you will have additional obligations described in Part 2 of the DGSM Regulation.

If you have any questions regarding the information contained here, call the Dangerous Goods Safety Service at the CHEM Services on **3247 8444**.

3. Risk management for 'minor storages'

3.1 Hazard identification

You should prepare a list of all the dangerous goods in each minor storage that includes:

- the name of each of the dangerous goods;
- the Class, Subsidiary Risk and Packing Group of each of the dangerous goods, and
- a summary of the hazards identified in the MSDS for each of the dangerous goods

The MSDS must be obtained from the supplier for each of the dangerous goods at the premises. The MSDS provides the hazard information on the dangerous goods.



3.2 Risk assessment

In relation to each minor storage, you should:

- review the MSDS for each of the dangerous goods kept in each; and
- document the following broad types of risk associated with the dangerous goods in the minor storage:
 - fire and explosion risks associated with the storage and handling of flammable gases (Class 2.1 or Subsidiary Risk 2.1), flammable liquids (Class 3 or Subsidiary Risk 3), dangerous goods of Class 4.1, 4.2 and 4.3 or Subsidiary Risk 4.1, 4.2 and 4.3, and combustible liquids;
 - fire risks that may result from the storage and handling of oxidising agents of Class 5.1 or Subsidiary Risk 5.1 or organic peroxides of Class 5.2;
 - the toxic risks associated with dangerous goods of Class 6.1 or Subsidiary Risk 6.1; and
 - the corrosive risks associated with dangerous goods of Class 8 or Subsidiary Risk 8.

3.3 Risk control

To control risk associated with minor storage of dangerous goods, implement the measures outlined below.

3.3.1 Minimise quantities kept

Consider substituting the dangerous goods with other goods that have a lower risk associated with their storage and handling. Examples of substitution are the use of:

- degreasing with a detergent instead of a chlorinated or volatile solvent;
- a combustible liquid such as diesel instead of petrol and kerosene which are Class 3 flammable liquids; and
- a dangerous good with a higher Packing Group number. An example is substituting xylene (PGIII) for toluene (PGII).

Ensure the quantity of dangerous goods kept at any one time is kept to a minimum consistent with the operation of the premises.

3.3.2 Follow MSDS instructions

Where the label or MSDS for a dangerous goods specifies measures and/or equipment to be used for the storage and handling of the dangerous goods then you should adopt those measures or use that equipment.

3.3.3 Storage and handling of packages

Keep packages securely closed when not in use. They should be stored on surfaces that are resistant to attack by their contents if spilt, and will not react dangerously with spilt dangerous goods.

Stow packages in a way that minimises the risk of them falling or being dislodged.

3.3.4 Transfer of dangerous goods

Store packages so that leakage cannot adversely affect other dangerous goods in the storage area. Liquid dangerous goods in packages should not be stored above solid dangerous goods in paper or absorbent packaging. Glass containers of liquids should be stored at lower levels.

Similar steps should be taken to avoid contamination by dangerous goods of foodstuffs or personal care items.

Where dangerous goods require special storage conditions to ensure their stability (i.e. to eliminate the risk of hazardous reaction), make regular checks to ensure that these special conditions are maintained. Examples of special storage conditions are the need for stabilisers or refrigeration.

Where aerosols are stored together in outer packaging, enclose the storage area in a strong mesh enclosure to reduce the risk from projectiles in the event of a fire involving the aerosols.

Where dangerous goods need to be transferred (by pumping, decanting, dispensing and filling) into or from a container or moved from place to place in a minor storage area, ensure that:

- spill containment is provided that can hold at least the quantity of the largest container;
- the container being filled, including any transfer equipment, is earthed, if there is a likelihood of static electricity being generated and risk from ignition of flammable vapours during the transfer;
- the transfer is done in a manner reduces the generation of any vapours and avoids splashing or spillage of the dangerous goods;
- the place where the transfer is carried out is:
 - set aside for that purpose;
 - not within the storage area but adjacent to it;
 - free of ignition sources;
 - free of obstructions with sufficient room to enable the transfer to be carried out and to hold containers and associated equipment;
- any decontamination materials or clean-up equipment is kept close by;
- where dangerous goods are to be transferred into containers at the premises, the container is suitable and can't be damaged by the dangerous goods. For example, don't use a plastic container that could be softened or made brittle by the dangerous goods; and
- the container receiving the transferred dangerous goods as part of a work process does not require marking.

3.3.5 Segregation

Segregate any dangerous goods that are incompatible to prevent them mixing. This may be achieved by the use of an impervious barrier or by a separation distance sufficient to prevent contamination.

Examples of dangerous goods which are incompatible and which should be segregated are:

- Class 5.1 oxidising agents from Class 2.1 flammable gases, Class 3 flammable liquids (fire and explosion hazard) and combustible liquids;
- combustible liquids from Class 4.1 flammable solids (fire and explosion hazard);
- concentrated acids from alkalis (reaction hazard);
- cyanides from acids (generation of toxic gas hazard); and
- calcium hypochlorite from isocyanurate pool chlorine products (reaction and fire hazard).

Section 9.1.3 of the ADG Code provides guidance on the compatibility of dangerous goods.

ADG Code refers to the Australian Dangerous Goods Code comprising the Australian Code for the Transport of Dangerous Goods by Road and Rail, sixth edition available from Australian Government bookshop on (07) 3229 6822.

3.3.6 Separation

You must provide separation of the dangerous goods from people or property at or beyond the boundaries of the premises. Isolation is the separation of hazardous materials from people and other property, including other hazardous materials. Physical separation is the principal method by which such risks are controlled. Separation fulfils a dual purpose: protecting the other occupancies from the hazardous materials; and protecting the hazardous materials from the other occupancies.

The use of distance, effective barriers (such as fire rated walls or vapour barriers) or a combination of both may achieve separation. The types of barriers used will depend on the nature of the risks to be isolated.

Examples of isolation include:

- distancing the stated dangerous goods and combustible liquids from people and other property;
- enclosing a hazardous activity, such as decanting in a fume cupboard where emissions can be controlled by the use of scrubbers; and
- installing a vapour barrier with an appropriate fire resistance level (FRL)¹ to provide additional isolation.

¹ Fire resistance level (FRL) gives a measure of the protection offered by a wall or structure when exposed to fire, in terms of structural adequacy, integrity and insulation. The FRL rating system is defined in AS 1530.4. Further information about screen walls and vapour barriers may be found in AS 1940 and the Building Code of Australia.

Determining separation distances

Factors to consider include:

- the types of hazards exhibited by the dangerous goods and the risks they pose to the other occupancy;
- the quantity of dangerous goods stored and handled in the work area;
- the type of installation and processes applied to the dangerous goods in the work area and their associated hazards and risks;
- all other activities in the work area, which may increase the risk; and
- any control measures in place that will reduce the risk.

To determine if barriers – used in lieu of, or in conjunction with distances to achieve separation – are effective with the particular dangerous goods, consider:

- the types of hazards exhibited by the dangerous goods and the risks they pose to the barrier;
- the extent of vapour barrier required and its effectiveness in varied climatic conditions;
- appropriate levels of fire resistance (FRL) to be provided, depending on the potential heat load from internal or external incidents; and
- structural strength necessary to withstand weather and any overpressure resulting from internal or external incidents.

For most classes of dangerous goods, the class specific Australian Standards provide information on minimum separation distances which may be useful to consider.

In most cases, these separation distances may be measured around suitable barriers (referred to as vapour barriers, screen walls and fire walls²).

3.3.7 Segregation of dangerous goods within a storage area

When held in the same storage area, dangerous goods should be segregated from other dangerous goods or substances with which they are not compatible.

Storage of incompatible dangerous goods – for example, Class 5.1 oxidising agents and flammable materials – in well-separated buildings reduces the possibility that an incident involving one will affect the other.

Useful guidelines for segregation of incompatible dangerous goods are provided in Australian/New Zealand Standard AS/NZS 3833 *The storage and handling of mixed classes of dangerous goods in packages and intermediate bulk containers*.

Systems and procedures should be developed and enforced to ensure the segregation is maintained at all times. Marking out those parts of the storage area where particular types of dangerous goods are to be kept is one way of supporting those systems and procedures.

3.3.8 Avoid sources of heat and ignition

Keep ignition sources away from flammable or combustible dangerous goods (dangerous goods class or subsidiary risk of 2.1, 3, 4.1, 4.2, 4.3 or combustible



² Further advice on the use of screen walls can be found in Australian/New Zealand Standard AS/NZS 3833 *The Storage and Handling of Mixed Classes of Dangerous Goods in Packages and Intermediate Bulk Containers*. Australian Standard AS 1940 *The Storage and Handling of Flammable and Combustible Liquids* uses the term fire wall for this purpose.

liquids). Naked flames from direct fired heaters and any flames associated with maintenance work should be kept at least 5 metres from the goods.

Store dangerous goods away from sources of heat (for example, heating appliances).

Where dangerous goods being stored or handled can generate flammable or explosive atmospheres, use electrical equipment that is intrinsically safe or flameproof.

3.3.9 Spill control and clean-up

Prevent any potential flow of dangerous goods to other parts of the premises that could create a risk or reach any watercourse or the property boundary. Possible means are bunding, provision of channels and utilising the slope of the land. Where spill containment is required, it should have a sufficient capacity to contain the dangerous goods spillage.

Keep equipment and materials for clean-up at the premises to cope with spills from the largest packages kept at the premises. Immediately clean up any spills and leaks. Contaminated, spilt or leaked goods should not be returned to their original packaging except for the purposes of disposal or where it is known that this will not increase the risk.

Safely dispose of waste generated after the clean up of a spill or leak.



3.3.10 Decommissioning

Ensure that any container or piece of equipment that has been used to store or handle dangerous goods, and which is no longer required for that purpose, is cleaned free of dangerous goods, rendered unusable or otherwise made safe.

3.3.11 Ventilation

Provide the areas in which dangerous goods are stored and handled with adequate natural or mechanical ventilation sufficient to prevent the generation of a flammable or harmful atmosphere. The level and type of ventilation will depend on the nature of the goods and whether they are being stored or used. Ventilation is not required where the documented assessment of the risks indicates that the likelihood of the release of flammable or harmful dangerous goods into the atmosphere in the storage area is negligible.

If you intend to rely on natural ventilation and need to install vents to achieve the necessary airflow to maintain a safe atmosphere in the room being ventilated you should consider the following:

- The need to provide vents at floor level and near the ceiling. Most dangerous goods gases and vapours are heavier than air and will vent through the floor level vents. The high level vents allowing fresh air to circulate into the room.
- The need to ventilate directly to the outside and not into another room.
- The need to provide a minimum amount of vent area and the spacing of vents to ensure effective airflow. A useful guide is to allow at least 1 square meter of vent area for each 50 square meters of floor area. The actual amount of vent area and the number of vents that should be provided will be dependent on the size of the room to be vented and whether there are restrictions to the free circulation of the air within the room.

3.3.12 Lighting

Provide sufficient lighting of areas where dangerous goods are stored and handled to allow normal work to be undertaken safely.

3.3.13 Security

Secure storage areas for dangerous goods against unauthorised entry.



3.3.14 Personal Protective Equipment (PPE)

Ensure PPE, appropriate to the goods being handled, is worn when people are handling dangerous goods.

Periodically check and maintain any PPE provided. PPE includes full-length overalls, aprons, abrasion or chemical-resistant gloves, dust masks, respirators or breathing apparatus, safety footwear or chemical-resistant boots, goggles or face shields, hard hats, hearing protection and fully encapsulated suits.

The use of PPE in conjunction with other control measures may provide additional risk control. However, PPE relies heavily on users following instructions and procedures correctly. As a result, you may need to provide a greater level of supervision than is required for other risk controls.

PPE may be necessary in the following circumstances:

- where it is not practicable to achieve adequate control and an acceptable level of risk by other means;
- to safeguard safety and health until such time as adequate control is achieved by other means, for example, where urgent action is required because of plant failure;
- during some infrequent maintenance operations where the short duration may make other control measures impracticable;
- in an otherwise safe working environment, where protection may be required from acute hazards in the event of sudden plant failure or other unexpected incident.

Selecting and maintaining PPE

MSDS will normally contain recommendations on the selection and use of personal protective equipment for the particular dangerous goods. This advice should be followed unless the risk assessment process determines that other PPE would be more appropriate.

When choosing the most appropriate PPE, ensure that:

- it provides the required level of protection from the risks associated with the particular task;
- it is suitable for the individual's size and build; and
- you consider the wearer's need for mobility, dexterity, clear vision and communication.

You should ensure that people wearing PPE have been trained to fit and use it properly. Make sure that the equipment is cleaned and maintained by appropriately trained staff in accordance with relevant technical standards.

3.3.15 Access and egress

Don't store dangerous goods where they could hinder escape from the building or area in the event of a fire, spill or leak.

3.3.16 Fire prevention

Keep areas in which dangerous goods are stored or handled clear of combustible matter and refuse. In the case of storage or work outdoors, the surrounding area should be cleared of combustible vegetation for a distance of at least 3 metres.

3.3.17 Ventilation, lighting, access and egress, safety signs

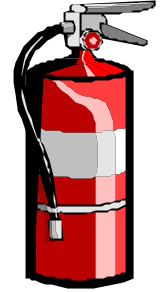
In areas where dangerous goods are stored and handled, you should provide sufficient ventilation, lighting, access and egress, and safety signs to allow normal work to be undertaken safely, in compliance with good workplace health and safety practice.

3.4 Fire protection

A supply of water should be available at a nearby location for emergency use.

In addition to building fire protection, provide portable fire extinguishers appropriate to the type and quantity of dangerous goods being stored and handled at or near to the place where the dangerous goods are stored or handled.

Maintain all fire protection equipment in an operable condition.



3.5 Emergency procedures

Establish procedures for responding to all emergencies, taking account of:

- the nature and quantity of dangerous goods;
- the types and likelihood of emergencies;
- the fire protection and other emergency equipment provided;
- the physical features of the site;
- access to the premises; and
- the number of people on the premises and adjoining premises.

Ensure that all relevant emergency contact telephone numbers are displayed in a prominent location at the premises.

3.6 Consultation, induction, information, supervision, education and training

You have obligations regarding consultation, induction, information, supervision, education and training. You must provide appropriate induction, information, training and supervision to all people involved with the storage and handling of dangerous goods.

Induction, information and training provide employees with the skills and knowledge they need to perform their jobs safely. It should help them to understand:

- the hazards and risks associated with the storage and handling of dangerous goods;
- how to follow health and safety procedures;
- the reasons risk controls have been set in place and how to use them; and
- emergency plans.

3.6.1 Training

Who should be trained?

You must provide induction, information and training to any person on the premises who is likely to be affected by the dangerous goods. This includes:

- your employees and their workplace health and safety representatives, if any; and
- any contractors you have engaged to work on the premises.

Employees supervising other employees who use dangerous goods should also receive training.

When developing and providing training programs, you should consider any special needs the employees being trained may have, such as specific skills, work experience, physical or intellectual disability, first language, literacy and age.

Consider using oral or visual training methods, or conducting training where appropriate in languages other than English.

Outcomes of training

The required outcomes of training for employees and other personnel on the premises include the ability to demonstrate an understanding of:

- safe work practices relating to the storage and handling of dangerous goods that are being used in the workplace;
- how to locate an MSDS, and use the information;
- the nature of the hazards and risks associated with the duties being performed;
- measures used to control risk;
- proper use of PPE;
- emergency procedures; and
- first aid and incident reporting procedures to be followed in case of injury or illness.

Review of training

To ensure that training remains effective, you should regularly review the training provided to identify the need for further training. Further training should be provided when:

- new dangerous goods are introduced to the premises;
- there are changes to the layout of the workplace, work practices or control measures for the dangerous goods; and
- new information on the hazards of the dangerous goods is made available (for example, a revised MSDS).

You should evaluate information, instruction and training to ensure that the content is clearly understood by employees. Evaluation could take the form of on-the-job observation. Refresher training should be provided as required and induction training for all new employees (and other people engaged to carry out work at the premises) should take place.

Limitations of training

Although training plays an important part in ensuring effective risk control, it is not a risk control measure in itself. People who are likely to be affected by the dangerous goods at the premises should be aware of the nature of the risk and the role that specific control measures play in risk prevention. However, you should not rely on safe worker behaviour alone. High levels of training and instruction cannot substitute for effective and proper measures to control the risk.

3.6.2 Provision of information

Who should receive information?

You must provide appropriate information to all people who may be involved with or affected by the storage and handling of dangerous goods, including:

- supervisors and employees;
- visitors;
- contractors, including transport drivers; and
- personnel of the emergency services authority.

Appropriate information would include MSDS, labels, safety signs and emergency procedure guides.

4. Licensing of flammable and combustible liquids storage

Flammable and combustible liquids (FCLs) constitute by far the largest group of hazardous materials commonly used in Queensland. Because of their potential to cause or exacerbate a fire they are considered to present such a large risk that special provisions for their storage and handling are needed. Common FCLs include petrol, kerosene and diesel fuel.

Under the DGSM Act, authority is devolved to Local Governments to license premises where FCLs are stored and to set and enforce licence conditions.

Premises needing to be licensed may also be a minor storage workplace under the DGSM Act.

A licence holder must meet the conditions of the licence as well as relevant requirements of the DGSM Act and Regulation.

Conditions of an FCL licence will be enforced by authorised officers from the Local Government that issued the licence.

Who needs a Licence?

In addition to obligations described in the DGSM Act and Regulation, an occupier of a site must hold a licence to store flammable and combustible liquids (FCLs) if the quantity stored exceeds specified quantities. The licence is to be issued by the Local Government (local council) for the area where the storage is intended.

A licence is required if the quantity of FCLs exceeds the minor storage exemption limits stated in Table 2.1 of Australian Standard AS1940 'Storage and Handling of Flammable and Combustible Liquids'. This quantity can be in underground tanks, aboveground tanks, packaged goods stores or a combination of these.

Because the AS 1940 minor storage exemption limits are different from the quantity thresholds for DGLs, it is possible that premises may be regarded as a minor storage workplace for the purposes of Part 3 of the DGSM Regulation but still require an FCL licence.

An example would be a warehouse which stores 8,000 litres of C1 combustible liquids in packages inside the building. Under Table 2.1 of AS 1940, this quantity exceeds the minor storage exemption limit of 2,000 litres; the premises would require an FCL licence. However, the quantity does not exceed the relevant DGL threshold (50,000 litres - Item 7 of the Table in Schedule 1 of the DGSM Regulation), and so is a minor storage workplace.

As the licensable quantities of FCLs varies for different types of premises, as shown in Table 2.1 of AS 1940, **any person who is proposing to store FCLs is advised to contact their Local Government to determine if they require a licence.**

Appendix 1: Schedule 1 of the DGSM Regulation

Minor storage quantities are quantities less than those stated here

	Column 1	Column 2	Column 3	Column 4
Item	Stated dangerous goods or combustible liquids	Packing group	Quantity for dangerous goods location	Quantity for a large dangerous goods location
1.	Class 2 . Class 2.1 . Class 2.2 - Subsidiary Risk 5.1 . Class 2.2 - Other . Class 2.3 Aerosols Cryogenic Fluids	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable	500 L 2 000 L 5 000 L 50 L 5 000 L 1 000 L	5 000 L 10 000 L 10 000 L 500 L 10 000 L 10 000 L
2.	Any one of class 3, 4.1, 4.2, 4.3, 5.1, 5.2, 6.1 or 8	I II III Mixed packing groups in a single class with the quantity of each packing group below the quantity specified for the packing group.	50 kg or L 250 kg or L 1 000 kg or L 1 000 kg or L	500 kg or L 2 500 kg or L 10 000 kg or L 10 000 kg or L
3.	Class 9	II III Mixed packing groups in class 9 with the quantity of each packing group below the quantity specified for the packing group	1 000 kg or L 5 000 kg or L 5 000 kg or L	10 000 kg or L 10 000 kg or L 10 000 kg or L
4(a).	Mixed classes of stated dangerous goods where none of the classes, types or packing groups (if any) present exceeds the quantities specified in items 1, 2 and 3 of this table.	Not applicable	2 000 kg or L Where the quantity specified in this schedule for each of the classes is 2 000 kg or L or less.	10 000 kg or L
4(b).	Mixed classes of stated dangerous goods where none of the classes, types or packing groups (if any) present exceeds the quantities specified in items 1, 2 and 3 of this table.	Not applicable	5 000 kg or L Where the quantity specified in this schedule for one or more of the classes is 5 000 kg or L and placarding is not required for Items 1, 2, 3 and 4(a).	10 000 kg or L
5.	Goods too dangerous to be transported	Not applicable	5 kg or L	50 kg or L
6.	Combustible liquids with fire risk dangerous goods	Not applicable	1 000 kg or L Includes both C1 and C2	10 000 kg or L Includes both C1 and C2
7.	C1 combustible liquids	Not applicable	10 000 L in a tank 50 000 L in packages 50 000 L in tanks and packages combined provided the quantity of C1s in tanks does not exceed 10 000 L	100 000 L in tanks or packages

Appendix 2: Excerpts from DGSM Legislation

Text taken from the *Dangerous Goods Safety Management Act 2001* - Part 2 Division 1 Section 16 (1).

16 Obligations for safety

(1) Everyone involved with the storage or handling of hazardous materials or with storage or handling systems at any place who may affect the safety of persons or may harm property at any place or the environment has the following obligations (“safety obligations”) -

- (a) to comply with this Act;
- (b) to take all reasonable precautions and care to achieve an acceptable level of risk.

Text taken from the *Dangerous Goods Safety Management Regulation 2001* - Part 3 Division 4 Sections 63- 77.

Shown below are the DGSM requirements for facilities or locations storing or handling minor quantities of stated dangerous goods and combustible liquids. These facilities or locations are not classified as major hazard facilities or dangerous goods locations. These requirements also apply to places such as farms which meet the definition of a “rural place”.

Division 4—Obligations applying to occupiers of workplaces that are not major hazard facilities or dangerous goods locations

63 Definition for div 4

In this division—

“**occupier**” means the occupier of a workplace, that is not a major hazard facility or dangerous goods location, where stated dangerous goods or combustible liquids are stored or handled.

64 Identification of hazards

The occupier must review the following to ensure that hazards associated with the storage or handling of stated dangerous goods or combustible liquids at the occupier’s workplace are identified—

- (a) the MSDS for the goods;
- (b) the hazardous properties of the liquids.

Maximum penalty—20 penalty units.

65 Assessment and minimisation of risk

If a hazard is identified under section 64, the occupier must—

- (a) review the way stated dangerous goods or combustible liquids are stored or handled at the occupier’s workplace; and
- (b) take the action necessary to eliminate unsafe practices and achieve an acceptable level of risk.

Maximum penalty—20 penalty units.

66 Clearing of decommissioned storage or handling systems

(1) This section applies if a storage or handling system at the occupier's workplace is to be disposed of or no longer used for the storage or handling or stated dangerous goods or combustible liquids.

- (2) The occupier must ensure that the storage or handling system is—
- (a) thoroughly cleaned so that the system is, as far as practicable, free from stated dangerous goods or combustible liquids; or
 - (b) otherwise made safe.

Maximum penalty—20 penalty units.

67 Induction, information, education, training and supervision

(1) The occupier must ensure that a person involved with the storage or handling of stated dangerous goods or combustible liquids at the occupier's workplace is provided with induction, information, education, training and supervision that is—

- (a) in a language or manner appropriate to the person; and
- (b) relevant to the roles and duties undertaken by the person and the risks associated with the roles and duties.

Maximum penalty—20 penalty units.

(2) The occupier must ensure that the induction, information, education and training provided to the person includes instruction in—

- (a) the nature of the hazards and properties of the stated dangerous goods or combustible liquids; and
- (b) the use and maintenance of the processes for the control of the risks associated with the person's roles and duties; and
- (c) the appropriate use and fitting of personal protective equipment.

Maximum penalty—20 penalty units.

68 Personal protective or safety equipment for workers

(1) This section applies if the occupier requires an employee or other person exposed to stated dangerous goods or combustible liquids to use personal protective equipment or safety equipment to achieve an acceptable level of risk.

(2) The occupier must provide and maintain personal protective equipment or safety equipment that is suitable for use with the goods or liquids.

Maximum penalty—20 penalty units.

(3) A person must not wilfully damage or make ineffective personal protective equipment or safety equipment.

Maximum penalty—20 penalty units.

69 Security at workplace

The occupier must, as far as practicable, prevent access by unauthorized persons to stated dangerous goods or combustible liquids stored at the occupier's workplace.

Maximum penalty—20 penalty units.

70 Preventing interaction with other goods

The occupier must ensure stated dangerous goods or combustible liquids that are not compatible with other goods or liquids (including other stated dangerous goods or combustible liquids) are stored separately from the other goods or liquids so that a loss of containment can not cause a dangerous situation.

Maximum penalty—20 penalty units.

71 Preventing contamination of food or personal products

The occupier must ensure that stated dangerous goods or combustible liquids stored or handled at the occupier's workplace can not contaminate food, food packaging or personal use products.

Maximum penalty—20 penalty units.

72 Elimination of ignition sources

(1) The occupier must ensure ignition sources in a hazardous area at the occupier's workplace—

(a) are eliminated; or

(b) if it is not reasonably practicable to eliminate the sources—are controlled so that risk is at an acceptable level.

Maximum penalty—20 penalty units.

(2) In this section—

“**hazardous area**” has the meaning given by AS 2430—‘Classification of Hazardous Areas’.

73 Spill containment

(1) The occupier must ensure that procedures are in place and equipment is available to contain and clean up a spill or leak of stated dangerous goods or combustible liquids stored or handled at the occupier's workplace.

Maximum penalty—20 penalty units.

(2) If a spill or leak of stated dangerous goods or combustible liquids happens, the occupier must ensure that immediate action is taken to clean up and dispose of the goods or liquids.

Maximum penalty—20 penalty units.

74 Material safety data sheets

(1) The occupier must, for stated dangerous goods stored or handled, or proposed to be stored or handled, at the occupier's workplace—

(a) obtain a current MSDS on or before the first occasion the goods are supplied to the workplace; and

(b) ensure that a current MSDS is readily accessible to persons at the workplace and to emergency services.

Maximum penalty—20 penalty units.

(2) Subsection (1) does not apply in relation to stated dangerous goods that are—

(a) in transit; or

(b) stored or handled at a retail outlet in consumer packages that are sold unopened.

(3) If, because of subsection (2), an occupier is not required to have, and does not have, a MSDS for stated dangerous goods, the occupier must ensure that alternative information for the safe storage and handling of the goods is readily accessible to persons at the occupier's workplace.

Maximum penalty—20 penalty units.

(4) If an occupier who provides a MSDS for stated dangerous goods also provides other information about the safe storage and handling of the goods, the occupier must ensure that the other information is—

(a) consistent with the information contained in the MSDS; and

(b) clearly identified as information provided by the occupier.

Maximum penalty—20 penalty units.

75 Register of stated dangerous goods or combustible liquids

(1) The occupier must ensure that—

- (a) a register is kept and maintained for stated dangerous goods or combustible liquids stored or handled at the occupier's workplace; and
- (b) the register contains a list of all stated dangerous goods or combustible liquids stored or handled at the workplace and, if required, a MSDS for each of the stated dangerous goods; and
- (c) the register is readily accessible to persons at the workplace.

Maximum penalty—20 penalty units.

(2) Subsection (1) does not apply to stated dangerous goods or combustible liquids—

- (a) received in packages not large enough to require marking under the ADG Code; or
- (b) in transit.

76 Marking of packages

(1) If the occupier receives a package of stated dangerous goods or combustible liquids at the occupier's workplace and the occupier knows, or ought reasonably to know, the package is not marked under section 9 ^s so that it complies with the ADG Code, the occupier must either—

- (a) not accept the goods; or
- (b) accept the goods and mark the package under the ADG Code.

Maximum penalty—20 penalty units.

(2) The occupier must ensure that, while stated dangerous goods or combustible liquids are at the occupier's workplace, the marking of the package complies with the ADG Code.

Maximum penalty—20 penalty units.

(3) The occupier must ensure that, once stated dangerous goods or combustible liquids at the occupier's workplace are removed from the package and the package is free of the goods or liquids, the marking on the package is removed or otherwise made illegible.

Maximum penalty—20 penalty units.

77 Information placards for stated dangerous goods or combustible liquids in tanks

(1) This section applies to stated dangerous goods or combustible liquids stored in tanks at the occupier's workplace, other than goods or liquids contained in a tank intended for transport and placarded under the ADG Code.

(2) The occupier of a workplace must display an information placard for the goods or liquids that—

- (a) complies with schedule 3; and
- (b) is clearly visible from normal approaches to the tank.

Maximum penalty—20 penalty units.

Appendix 3: Information available from the CHEM Services

Considerable information is available from the CHEM Services. The easiest way for many people to find the information they need is by visiting the CHEM Services web pages at:

www.emergency.qld.gov.au/chem. The information of relevance to dangerous goods storage and handling is summarised under the following headings (which are also menu items on the CHEM Services Web page). Note that the web site is regularly updated, so the information listed below is subject to change.

It should also be noted that any of the information available on the web pages can also be obtained by phoning the CHEM Services on **3247 8444**.

➤ About Us

- Staff contact numbers.

➤ Courses and Consultants

- Information on consultants working in the field of dangerous goods in Queensland.
- Also lists courses covering dangerous goods storage and handling issues.

➤ Dangerous Goods

- Background information on CHEM Units Dangerous Goods Safety Service.
- List of useful links to other web sites relating to dangerous goods. *In particular, a link to the Australian Liquefied Petroleum Gas Association (ALPGA) web site is provided to obtain the brochure on minor storage of LPG titled: "A Guide for the Storage and Handling of LP Gas in Minor Storage Quantities".*
- Identifies dangerous goods classes and pictures of the class diamonds and information on the HAZCHEM code.
- Summary of legislative responsibilities identifying which classes are regulated by which agencies.

➤ FAQ's

- A list of Frequently Asked Questions on dangerous goods storage and handling issues. For example:
 - What are dangerous goods?
 - What are fire-risk dangerous goods?
 - Do I need a licence to store dangerous goods?
 - When is placarding required?
 - What obligations are there for farmers?
 - How can I determine if different dangerous goods stored together are compatible?

➤ Legislation

- View and print the *Dangerous Goods Safety Management Act 2001* and the *Dangerous Goods Safety Management Regulation 2001*.
- Information provided on the administrative arrangements between agencies to regulate storage and handling of dangerous goods and combustible liquids in Queensland.

Publications

- This section allows you to download CHEM Services publications for free. They include:
 - Safe Storage and Handling of Dangerous Goods: Guidelines for Industry
 - A Guide to the *Dangerous Goods Safety Management Act 2001*
 - The Safe Use of Chemicals in the Home Brochure
 - DGSM Information paper #1: Placarding for Dangerous Goods Storage
 - DGSM Information paper #2: Manifests for Dangerous Goods Storage
 - DGSM Information paper #3: Minor Storage of Stated Dangerous Goods and Combustible Liquids
 - DGSM Information paper #4: Choosing a Consultant for the Storage and Handling of Dangerous Goods
 - DGSM Information paper #5: Site Classification for the Storage and Handling of Dangerous Goods
 - DGSM Information paper #6: Carrying out a Risk Assessment
 - Safe storage of unwanted farm chemicals
 - Dangerous Goods Information at Road Transport Incidents
 - Dangerous Goods Information at Rail Transport Incidents
 - Vehicle Fires and Fluoroelastomer (Viton)
 - Hazardous Industry Planning for Safety

Note that the following publication is only available in hardcopy (a fee applies) from the CHEM Services (phone 3247 8444):

- Emergency Planning: Guidelines for Hazardous Industry

Appendix 4 Useful contacts for Dangerous Goods



Organisation	Phone Number
CHEM Services (Chemical Hazards and Emergency Management Unit)	3247 8444
Division of Workplace Health and Safety – ask to speak to an Authorised Officer under the DGSM Act	1300 369 915
Brisbane City Council for Flammable and Combustible Liquids licensing enquiries in Brisbane area	3403 8888
For enquiries on Flammable and Combustible Liquids licensing in other Local Government areas, contact your local council office	-
DNRM- Petroleum and Gas Operations Branch (Gas Inspectorate) for LPG installation related issues	3237 1626
DNRM- Explosives Inspectorate	3224 7512
EPA (Environmental Protection Agency) Central Office	3227 7111
EPA Environmental Operations	1800 501 087
EPA Pollution and nuisance issues (24hr Pollution Hotline)	1300 130 372
EPA Licensing	3224 5641
EPA Waste Management	3225 1827
EPA Advisory Service	1800 501 087
Qld Department of Transport – ask for Dangerous Goods Section	132 380
Standards Australia for purchase of Australian Standards	1300 654 646
Your relevant industry association may also have information available to meet your needs regarding the safe storage and handling of dangerous goods.	-