

Dangerous Goods Guidelines

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Forms:

[Dangerous Goods / Hazardous Substances Register](#)
[Dangerous Goods Risk Assessment](#)
[Hazardous Substances and Dangerous Goods Training Record](#)

1. Recommended Compliance Procedure

The following provides a step by step guide to complying with the Dangerous Goods (Storage & Handling) Regulations.

Methodology	Resources / Tools
Step 1 – Obtain a copy of the Regulations and the Code of Practice (CoP) for the Storage and Handling of Dangerous Goods.	Download a copy of the Regulations and the Code of Practice from WorkSafe
Step 2 – Nominate a Chemical Safety Officer to co-ordinate the compliance program.	Management to establish a consultative process for the hazard identification, risk assessment and control process involving HSR and staff storing or handling the chemicals.
Step 3 – Conduct a survey of all chemicals. Record maximum container quantities of each Class/Division and Packing Group of the Dangerous Goods in each location	See Dangerous Goods (and Hazardous Substances) Register .
Step 4 – Create a Register of Hazardous Substances and Dangerous Goods	See Dangerous Goods (and Hazardous Substances) Register .
Step 5 – Obtain Material Safety Data Sheets (MSDS) for all Dangerous Goods	Obtain from supplier or use ChemWatch . The MSDS must be less than 5 years old
Step 6 - Determine need for HAZCHEM placarding and signage	Check Statutory Quantities to see if placarding of premises and building is necessary
Step 7 - Determine which storages are minor (less than the Placarding Quantity) and quantities that can be stored in laboratories	Check Statutory Quantities Check Laboratory Quantities
Step 8 - Create a Dangerous Goods Manifest for each building and any storage area within the building	An electronic copy of the Manifest is to be provided to the OHS Group in Human Resources Services half yearly
Step 9 – Label all containers of Dangerous Goods	Ensure appropriate labels (correct diamond/s for Class/Division and any Subsidiary Risk), together with the product or chemical name are on all Dangerous Goods containers, including all decanted products.

Methodology	Resources / Tools
Step 10 – Assess and document the risk arising from each identified class and type of dangerous goods. Work through control measures using the Hierarchy of Control to identify and prioritise control measures	See Dangerous Goods Risk Assessment form. Risk assessments must be reviewed when new materials are used, changes occur in the MSDS or at least every five years As part of the risk assessment ensure appropriate storage and segregation occurs for both minor storage and normal storage . The hazard identification, risk assessment and control process should be undertaken in consultation with users of the chemicals and the relevant Health and Safety Representative (HSR)
Step 11 - Ensure that staff, supervisors, students, contractors have received sufficient information, instruction and training to handle these substances. Ensure that they have an appreciation of the hazards involved and why the controls are necessary. Evaluate competency of staff. Ensure refresher and induction training is also provided.	See Hazardous Substances and Dangerous Goods Training Record Form Records must be kept five years
Step 12 - Ensure staff, supervisors, students, contractors can demonstrate competencies with regard to safe work practices	Provide appropriate levels of supervision especially with new workers
Step 13 – Carry out regular reviews of risk control measures	<ul style="list-style-type: none"> • to monitor implementation • to ensure their effectiveness, • when there are changes to products or procedures, • at least every 5 years.

2. Types of Dangerous Goods

Dangerous Goods are classified according to the following scheme:

Class	Class Description	Packing Group	Legislation
Class 2	Gases		DGA
2.1	Flammable gases	N/A	DGA
2.2	Non-flammable, non-toxic gases	N/A	DGA
2.3	Toxic gases	N/A	DGA
Cryogenic 2.1	Flammable	N/A	DGA
Cryogenic 2.2	Non-flammable, non-toxic	N/A	DGA
Cryogenic 2.3	Toxic	N/A	DGA
Aerosol 2.1	Flammable	N/A	DGA
Aerosol 2.2	Non-flammable, non-toxic	N/A	DGA
Aerosol 2.3	Toxic	N/A	DGA
Class 3	Flammable liquid	I, II, III	DGA
Class 4	Flammable solids etc.		DGA
4.1	Flammable solids; self-reactive and related substances; and desensitised explosives	I, II, III	DGA
4.2	Substances liable to spontaneous combustion	I, II, III	DGA
4.3	Substances that in contact with water emit flammable gases	I, II, III	DGA
Class 5	Oxidising substances, organic peroxides		DGA
5.1	Oxidising substances	I, II, III	DGA
5.2	Organic peroxides	II	DGA
Class 6.1	Toxic substances	I, II, III	DGA
Class 6.2	Infectious substances	N/A	HA
Class 7	Radioactive substances	N/A	RA
Class 8	Corrosive substances: acids, alkalis and acid oxidisers	I, II, III	DGA

Class	Class Description	Packing Group	Legislation
Class 9	Miscellaneous dangerous goods and articles	II, III	DGA
Class C1	Combustible liquid with a flash point greater than 60.5 degrees C and equal to or less than 150 degrees Celsius	N/A	DGA
Class C2	Combustible liquid with a flash point exceeding 150 degrees Celsius	N/A	NR
Legislation: DGA = Dangerous Goods Act HA = Health Act RA = Radiation Act NR = Not Regulated			
Packing Group - I = Great Danger II = Medium Danger III = Minor Danger			

3. ChemWatch

The University has a licence for ChemWatch which is a web-based chemical management system. Access is through the link: <http://max.chemwatch.net/integ/>

4. Labelling

Containers of dangerous goods must be labelled with the manufacturer's or importer's label. These labels must remain legible and must not be removed, defaced or altered. If dangerous goods are piped then piping must also be labelled.

Where dangerous goods are decanted into container that will be kept for longer than the process it is being used in, it must be labelled. The unlabelled container must not be left unattended. All containers of dangerous goods must be labeled with:

- Product name
- Class label
- Subsidiary Risk label

If the container is too small for all elements to be included, then the minimum required on the label is the Class label. Where such labelling is impossible due to container size, the container must be marked in such a way as to direct users unambiguously to the source of all of the risk and safety information that must be readily available.

5. Statutory Quantities

Quantities stored in the one location under the Placarding Quantity are regarded as minor storage.

Description of Dangerous Goods	Packing Group	Placarding Quantity	Manifest Quantity	Fire Protection Quantity
Class 2.1	N/A	500 L	5000 L	5,000 L
Class 2.2 Subsidiary Risk 5.1	N/A	2,000 L	10,000 L	20,000 L
Other Class 2.2	N/A	5,000 L	10,000 L	20,000 L
Class 2.3	N/A	50 L	500 L	2,000 L
Aerosols 2.1	N/A	5,000 L	10,000 L	20,000 L
Aerosols 2.2	N/A	5,000 L	10,000 L	20,000 L
Aerosols 2.3	N/A	5,000 L	10,000 L	20,000 L
Cryogenic Fluids 2.1	N/A	1,000 L	10,000 L	20,000 L
Cryogenic Fluids 2.2	N/A	1,000 L	10,000 L	20,000 L
Cryogenic Fluids 2.3	N/A	1,000 L	10,000 L	20,000 L
Class 3, 4.1, 4.2, 4.3, 5.1, 5.2, 6.1 or 8	I	50 kg or L	500 kg or L	2000 kg or L
	II	250 kg or L	2500 kg or L	10,000 kg or L
	III	1000 kg or L	10,000 kg or L	20,000 kg or L
	I+II+III	1000 kg or L	10,000 kg or L	20,000 kg or L
I+II+III = Mixed Packing Groups in a single Class with the quantity of each Packing Group below the specified quantity for the Packing Group.				
Class 9	II	1000 kg or L	10,000 kg or L	20,000 kg or L
	III	5000 kg or L	10,000 kg or L	20,000 kg or L
	II + III	5000 kg or L	10,000 kg or L	20,000 kg or L

Description of Dangerous Goods	Packing Group	Placarding Quantity	Manifest Quantity	Fire Protection Quantity
II + III = Mixed Packing Groups in Class 9 with the quantity of each Packing Group below the specified quantity for the Packing Group.				
Mixed Classes of dangerous goods where none of the Classes, types or Packing Groups (if any) present exceeds the quantities specified for the relevant quantity above.	Aerosols, Class 2.2 (with no subsidiary risk class), Class 9 Packing Group III		10 000 kg or L	20 000 kg or L
	N/A	5000 kg or L		
	All other Classes			
	N/A	2000 kg or L		

Description of Dangerous Goods	Packing Group	Placarding Quantity	Manifest Quantity	Fire Protection Quantity
C1 combustible liquids in bulk stored and handled in isolation from other dangerous goods.	N/A	10 000 L	100 000 L	100 000 L
C1 combustible liquids stored and handled in packages in isolation from other dangerous goods.	N/A	50 000 L	100 000 L	100 000 L
C1 combustible liquids in bulk and in packages stored and handled in isolation from other dangerous goods provided the quantity in bulk is 10 000 L or less.	N/A	50 000 L	100 000 L	100 000 L

6. Laboratory Quantities (AS 2243.10)

The following are the quantities able to be stored in laboratories inside, outside and within a 10 metre radius of storage cabinets:

Description of Dangerous Goods	Packing Group	Outside Storage Cabinets		In Storage Cabinets	Maximum quantity in 10 m radius for Packing Group		
		Maximum quantity per 50 square metres	Maximum pack size in L or Kg		Maximum quantity	I	II / III
Aerosols		50 L		5	250 L	10 L/kg	250 L/kg
Class 3 (primary or subsidiary risk)	N/A	10 L		5	250 L	10 L/kg	250 L/kg
Class 4	N/A	10 L/Kg	No more than 20 L/kg in total	10	50 L /Kg	10 L/kg	250 L/kg
Class 5	N/A	10 L/Kg		10	50 L/Kg	10 L/kg	250 L/kg
Class 6.1	I	10 L /Kg		10	250 L	10 L/kg	250 L/kg
	II + III	50 L /Kg		20	250 L	10 L/kg	250 L/kg
Class 8	Liquids	N/A		20	250 L	10 L/kg	250 L/kg
	Solids	N/A			250 L		
Class 9	Liquids	N/A		5	250 L	10 L/kg	250 L/kg
	Solids	N/A		20	250 L	10 L/kg	250 L/kg
Combustibles	N/A	50 L		20	250 L		
Maximum Aggregate		200 L/Kg					
Hazardous Substances	Liquids			5			
	Solids			10			

7. Hierarchy of Controls

In assessing control measures with dangerous goods, managers are required to apply the hierarchy of controls in order of preference.

Elimination	eg: the substance is too dangerous to store or use, or suitable methods to control staff exposure are not practicable.	
Substitution	eg: a less dangerous chemical can be used to give the same result	
Isolation	eg: the separation of the Dangerous Goods from persons, property or other goods by distance or a physical barrier	
Engineering Controls	eg: the work will be carried out in a bunded area	
Administrative Controls Supervision	eg: storage and handling procedures are used	
Personal Protective Equipment	eg: the use of safety glasses, masks, respirators, gloves, lab coats etc to minimise the exposure of the operator.	

Risk Controls

Safety Measure (in order of hierarchy)	Explanation and Examples
Elimination	Eliminate the use of the dangerous good. Example: <ul style="list-style-type: none"> • using a physical process instead of a chemical process eg.using ultrasound to clean equipment instead of a process involving flammable chemicals
Substitution	Use a safer substance or a safer form of the substance. Examples: <ul style="list-style-type: none"> • <i>safer substance</i> • Using detergent instead of chlorinated solvent for cleaning • Using water-based chemicals instead of solvent-based chemicals where compatible • <i>safer form or process</i> • Purchasing a substance in a safer form (e.g. using pellets instead of powder which reduces dust. Using liquids in ready to use form instead of concentrates which require decanting or mixing)
Isolation	Separate people or property from the substance by distance or barriers. Examples: <ul style="list-style-type: none"> • Using isolated storage areas • Using storage cabinets • Segregation of storage areas • Distancing property, non compatible chemicals and ignition sources from goods
Engineering	Physical controls (such as plant/equipment) that eliminate or reduce substances being produced, stop or contain substances, or limit the area of contamination in the event of spills and leaks. Examples: <ul style="list-style-type: none"> • Designing buildings that are: compatible with the intended goods; made of non-combustible construction as far as practicable; and designed to reduce contamination • Using bunding to reduce spillage • Installing drains, tanks or sumps to cope with spilled material • Installing automatic fire protection and chemical suppression systems
Administrative	Using safe work practices including good housekeeping. Examples: <ul style="list-style-type: none"> • Reducing the amount of property or the number of employees exposed • Reducing the duration and/or frequency of exposure • For dangerous goods reducing the amount of goods stored and used • Ensuring safe interim storage of wastes • Covering containers and making sure lids are attached • Providing suitable washing facilities • Providing first aid facilities • Instructing staff how to use substances/equipment safely
Supervision	<ul style="list-style-type: none"> • Set the level of supervision in light of the risk and the skills of the persons carrying out the work

Safety Measure (in order of hierarchy)	Explanation and Examples
Personal protective equipment (PPE)	Protective clothing and equipment for employees, supervisors and visitors. Examples: <ul style="list-style-type: none"> • Overalls • Aprons/gowns • Footwear • Gloves • Chemical resistant glasses (safety glasses) • Face shields • Respirators • head protection

8. Manifests

To meet the requirements of the regulations covering packaged dangerous goods, the manifest has two parts. The first part covers dangerous goods of class 2.3 (toxic gases) or Packing Group 1. These must be individually identified and listed. The second part covers all other dangerous goods. An example is given below.

Part 1: Packaged dangerous goods of Packing Group I or Class 2.3									
Building	Room	Chemical Name	DG Class	Subsidiary Risk	UN Number	Packing Group	Quantity kg/l		Emergency Contact
							Average	Maximum	
e.g.									
AA	AA1.08	Sodium Picramate	4.1		1349	1	20	50	

Part 2: All other packaged dangerous goods									
Building	Room	Group Name	DG Class	Subsidiary Risk	Packing Group	Quantity kg/l		Emergency Contact	
						Average	Maximum		
e.g.									
AA	AA1.04	Solvents	3.2		1	40	60		

An Excel spreadsheet template can be downloaded from [here](#).

9. High Consequence Dangerous Goods

Some substances have been designated under the [Dangerous Goods \(HCDG\) Regulations 2005](#) as High Consequence Dangerous Goods because of their potential use by terrorists. At present ammonium nitrate and calcium ammonium nitrate compounds and solutions with over 45% ammonia are regulated. The University is exempt for quantities less than 3 kilograms kept in any secure store. The [OHS Unit](#) should be contacted for advice regarding quantities of 3 kilograms or more. Further information can also be obtained from [WorkSafe](#).

10. Storage Principles

These guidelines assume the quantity of dangerous goods in the building is within Minor Storage limits. Unless otherwise determined by risk assessment in accordance with the [Dangerous Goods \(Storage & Handling\) Regulations 2000](#), science chemicals must be stored as follows:

Security: Operable locks must be fitted to all chemical storeroom doors. Unless access to the storeroom is strictly controlled, operable locks must be fitted to all cupboards within a chemical storeroom.

Access Routes: Dangerous goods must not be stored or handled where they may hinder escape from a room or building in an emergency.

Ventilation: The storage area must have adequate ventilation to prevent the build-up of a hazardous atmosphere. Ventilation must be suitable for the hazards of the substances stored. Guidelines for natural ventilation are provided

in Part 5 of the [Dangerous Goods Code of Practice](#). Where mechanical ventilation is required, reference should be made to the relevant Australian Standard (e.g. [AS 1940 for Flammable Liquids](#), [AS/NZS 3833](#) where there is more than one Class/Division).

Containers: Wherever possible, dangerous goods and hazardous substances must be stored in original containers, labelled as supplied. If transferred to or kept in other containers, these must be compatible, suitable for the purpose and labelled. Containers, including lids, caps and seals, must be checked regularly for deterioration and replaced when necessary.

Storage:

- Packages must be kept on surfaces that are resistant to their contents if spilled.
- Liquids must not be stored above powders and solids and, if in glass bottles, must be stored at lower levels.
- Except when stored in specialised Dangerous Goods cabinets, containers for liquids should be stored on impervious spill trays and, if glass, must not be on shelves more than 1 m above the floor. Spill containment facilities such as bunding must be provided to the storeroom, unless all liquids are stored in cabinets or on shelves with built in spill retention.
- Packages > 1.5 kg or 1.5 L should not be stored on shelves higher than 1.5 m.
- When a subsidiary risk is listed for a chemical, the storage requirements of both the relevant Dangerous Goods Class/Division and the Subsidiary Risk must be followed.
- Suitable absorption materials should be readily available for dealing with spills. Any dangerous goods or hazardous substance spill must be cleaned up immediately, taking appropriate precautions for the hazards of the material.
- Spill procedures should be predetermined, and personnel trained in their application.
- Exposure to hazardous substances should, so far as is practicable, be prevented by physical barriers or procedural measures. Nonetheless, suitable personal protective equipment must be available and must always be worn when handling all hazardous substances, especially those that are Class 8 Dangerous Goods.
- At least one fire extinguisher must be provided near every location where science chemicals are stored. The minimum rating is 3A 60 B(E) Dry Chemical. Each extinguisher must be located such that it is immediately accessible in an emergency, along an exit route.

11. Segregation Guidelines for Minor Storage

Minor storage is quantities below the [Placarding Quantity](#).

The following segregation guidelines will be followed with minor storage:

All chemicals must be stored in their respective classes, taking into account incompatibilities within a class, such as concentrated acids and bases of Class 8, and Subsidiary Risks

Except as indicated on the relevant MSDS, Dangerous Goods should be segregated based on the compatibility chart below,

Except when stored in specialised Dangerous Goods cabinets, fire risk Dangerous Goods must be stored at least 5 m from any potential source of ignition or heat. Fire risk Dangerous Goods include all goods of Class/ Division or Subsidiary Risk 2.1, 3, 4.1, 4.2, 4.3, or 5.2 and C1 Combustible Liquids. This distance may be measured around any intervening vapour barrier.

Class 2 Gases: Class 2 materials, other than Aerosols and compressed air, must not be stored indoors. Particular care is required with Division 2.1 Flammable Gases and Division 2.3 Toxic Gases.

Division 4.3 Dangerous when Wet: Must be in a moisture proof cupboard or Dangerous Goods cabinet which must not contain plumbing fixtures or any liquids.

Division 5.2 Organic Peroxides: Are highly reactive and flammable and must be stored in a cool place, at least 3 m from all other Dangerous Goods and shielded from all heat sources. Particular care needs to be taken with

organic peroxides for which an emergency temperature is specified in the list of currently assigned organic peroxides in the ADG Code, or that has a self accelerating decomposition temperature (SADT) of 50 °C or less.

Division 6.1 Toxic Substances: Chemicals in this division may also have requirements under the 'Drugs, Poisons and Controlled Substances Act' administered by the Department of Human Services. Permits are required for substances that are Scheduled Poisons of S4, S8, S9 and some substances of S7 under the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP). Due to their extreme toxicity, both potassium and sodium cyanide should, so far as is practicable, not be kept. Any inorganic cyanides must be kept under lock and key and at least 5 metres from any acid storage.

Class 7 Radioactive Materials: Must be stored in separate, suitably labelled, containers or compartments within a locked metal container. This locked metal container must be permanently labelled to indicate that it contains radioactive substances. Chemicals in this class are regulated under the Health (Radiation Safety) Regulations. These are administered by the [Department of Human Services](#). Reference should also be made [ARPANSA Codes](#).

Class 8 Corrosive Substances: Includes acids and bases/alkalis. Concentrated strong acids and bases/alkalis should be stored at least 1.5 m apart or separated by an impervious barrier, and provided with separate spill retention. Acids must be at least 5 metres from any inorganic cyanides of Division 6.1.

Minor quantities held in laboratory (Quantities under Placarding Amounts)																	
		2.1	2.2	2.2	2.3	3	4.1	4.2	4.3	5.1	5.2	6.1	7	8	8	8	9
				SR 5.1										Acid	Alkali	Oxid	
2.1		A	B	D	C	B	B	D	B	D	D	C	C	B	B	D	B
2.2		B	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B
2.2	SR 5.1	D	A	A	B	D	D	D	D	B	D	B	B	B	B	B	B
2.3		C	B	B	A	C	C	C	C	C	C	B	B	B	B	B	B
3		B	B	D	C	A	B	D	B	D	D	C	C	C	C	C	B
4.1		B	B	D	C	B	A	D	B	D	D	C	C	B	B	D	B
4.2		D	B	D	C	D	D	A	B	D	D	C	D	B	B	D	B
4.3		B	B	D	C	B	B	B	B	D	D	C	C	D	D	D	B
5.1		D	B	B	C	D	D	D	D	A	D	D	D	D	D	D	D
5.2		D	B	D	C	D	D	D	D	D	A	D	D	D	D	D	D
6.1		C	B	B	B	C	C	C	C	D	D	A	B	E	B	B	B
7		C	B	B	B	C	C	D	C	D	D	B	A	D	D	D	B
8	Acid	B	B	B	B	C	B	B	D	D	D	E	D	F	D	G	B
8	Alkali	B	B	B	B	C	B	B	D	D	D	B	D	D	A	D	B
8	Oxidiser	D	B	B	B	C	D	D	D	D	D	B	D	G	D	A	B
9		B	B	B	B	B	B	B	B	D	D	B	B	B	B	B	A

A	Most dangerous goods of the same class have similar primary hazards and are usually considered to be compatible. Exceptions should be indicated on MSDS. Particular care is required with Class 5 substances.	May be stored together
B	With a few exceptions which should be indicated on MSDS, goods of these two classes are usually non-reactive with each other. However in an emergency such as a spill, leak or fire, the presence of the second class may lead to different hazards or increased risk such that additional control measures are required	
C	While goods of these two classes are usually non-reactive with each other, a fire involving the fire risk goods may lead to the release of large clouds of toxic gases or vapours	Should be stored in defined areas that may be adjacent to each other
D	Goods of these two classes are likely to interact with each other in such a way as to significantly increase risk. In some cases, interaction may result in fire or evolution of toxic vapours. For those that do not interact, a fire involving one may be violently accelerated by the presence of the other. These classes should not be kept in the same area unless it can be demonstrated that the risks are fully controlled	Must be kept at least 1.5 m apart
E	Segregation where 6.1 is a cyanide and Class 8 is an acid. Otherwise (B)	
F	Segregation where the class 8 is a hypochlorite and an acid. Otherwise (B)	
G	Segregate oxidising acids from any combustible material including organic acids. Otherwise (B)	

12. Segregation Guidelines for Quantities above the Placarding Quantity

Storage in excess of Minor Storage is fully subject to the Dangerous Goods (Storage & Handling) Regulations 2000, requiring a much more stringent approach to hazard identification, risk assessment and control. Placarding will be required and, once a further threshold is exceeded, an emergency services manifest and notification to WorkSafe of the Dangerous Goods storage.

Where quantities in excess of Minor Storage cannot be avoided, it is recommended that, except where otherwise indicated in MSDS, the following storage arrangements are made:

Dangerous Goods should, where practicable, be stored in approved Dangerous Goods cabinets as follows:

- Classes 3, 4.1 and 4.3 in a flammable liquids cabinet that complies with [AS 1940](#);
- Class 4.2 is store in a separate cabinet to AS 1940.
- Class 5.1 in a cabinet that complies with [AS 4326](#)
- Class 5.2 in a cabinet that complies with [AS 2714](#)
- Class 6.1 in a cabinet that complies with [AS/NZS 4522](#)
- Class 8 in a cabinet that complies with [AS 3780](#), with separate cabinets for (1) concentrated Acids, (2) organic acids and acid oxidisers and (3) Bases/Alkalis
- Compatible goods of mixed classes in a cabinet/store that complies with [AS/NZS 3833](#)

Where cabinets are not employed, one or more purpose built dangerous goods stores will be required, complying with [AS 1940](#) and [AS/NZS 3833](#) or the appropriate Australian Standard for a single Class. Within that store, Dangerous Goods should be segregated, referring to the compatibility chart below. Spill containment facilities such as bunding must be provided to the storeroom, unless all liquids are stored in cabinets with internal bunding.

The storeroom must be vented in compliance with [AS1940](#) and [AS/NZS 3833](#) as follows:

- Natural ventilation may only be employed where the room has external walls through which the specified openings can be provided
- Mechanical ventilation will be required for all internal storerooms greater than Minor Storage. Simple exhaust fans will not suffice – the installation must comply with the detailed requirements of AS/ NZS 3833 or AS 1940.

Major quantities held in chemical stores																
		2.1	2.2	3.1	3.n	4.1	4.2	4.3	5.1	5.2	6.1	7	8	8	8	9
													Ac	Alk	Oxid	
2.1				F	F	F	*	F	*	*	F	*	F	F	*	S
2.2				S	S	S	F	S	S	F	S	*	S	S	S	S
3.1		F	S			F	F	F	*	*	F	*	S	S	*	S
3.n		F	S			S	F	F	*	*	F	*	S	S	*	S
4.1		F	S	F	S		F	F	*	*	F	*	S	S	*	S
4.2		*	F	F	F	F		F	*	*	F	*	S	S	*	S
4.3		F	S	F	F	F	F		*	*	F	*	F	F	*	S
5.1		*	S	*	*	*	*	*		F	F	*	F	F	F	F
5.2		*	F	*	*	*	*	*	F		*	*	F	F	F	F
6.1		F	S	F	F	F	F	F	F	*		*	F1	F	F	S
7		*	*	*	*	*	*	*	*	*			*	*	*	*
8	Acid	F	S	S	S	S	S	F	F	F	F1	*	(2)	S	(3)	S
8	Alkali	F	S	S	S	S	S	F	F	F	F	*	S		F	S
8	Oxidiser	*	S	*	*	*	*	*	F	F	F	*	(3)	F	(3)	F
9		S	S	S	S	S	S	S	F	F	S	*	S	S	F	

Note (S) = Space separation (> 3m) (F) = Fire separation (>5 m) (*) = prohibited in same room

(1) Segregation where 6.1 is a cyanide and Class 8 is an acid

(2) Segregation where the class 8 is a hypochlorite and an acid

(3) Segregate oxidising acids from any combustible material including organic acids

13. Standards

Standards can be downloaded through the [Library](#). They should be printed within 48 hours as the electronic copy becomes unusable after 48 hours.

- AS 1940 'The Storage and Handling of Flammable and Combustible Liquids'

- AS 2243 'Safety in Laboratories' Parts 1 - 10
- AS 2714 'The Storage and Handling of Organic Peroxides'
- AS 2982 'Laboratory Construction'
- AS 3780 'The Storage and Handling of Corrosive Substances'
- AS/NZS 3833 'The Storage and Handling of Mixed Classes of Dangerous Goods in Packages and Intermediate Bulk Containers'
- AS 4326 'The storage and Handling of Oxidizing Agents'
- AS/NZS 4522 'The Storage and Handling of Toxic Substances'

14. Training and Induction

The induction, information and training provided must include the following.

- Labelling of containers of dangerous goods, information included on each part of the label and why the information is provided.
- How to locate and use an MSDS and the information contained in each part of the MSDS.
- The nature of the hazards and properties of the dangerous goods to which staff are or may use or store.
- Work practises to be followed when using, handling, storing, cleaning up and disposing of dangerous goods.
- Measures used to minimise the risks associated with dangerous goods including the correct use and maintenance of these controls.
- Proper use, fitting and maintenance of personal protective equipment (PPE).
- Measures to be taken in the event of a spill.
- Emergency procedures, including evacuation and special decontamination procedures.
- First aid and incident reporting procedures to be followed in the case of injury or illness.

This training must be provided to staff, students, contractors or volunteers working with or in the proximity of Hazardous Substances. A likely group could include science, art and technology teachers, laboratory technicians, student teachers, grounds and maintenance staff, cleaners, persons working on a volunteer capacity and contractors working in laboratories and stores.

Induction training and refresher training (at least every three years) is also required.

The [Hazardous Substances and Dangerous Goods Training Record Form](#) can be used to record training.