



Government of **Western Australia**
Department of **Mines and Petroleum**
Resources Safety

Dangerous Goods Safety Guidance Note
Marking of dangerous goods packaging

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Introduction

Under the Dangerous Goods Safety (Road and Rail Transport of Non-explosives) Regulations 2007 (Transport Regulations) and *Australian Dangerous Goods Code, Seventh Edition* (ADG7), when packages of dangerous goods are transported by road and rail, they must be marked to ensure accurate information is available about the dangerous goods and allow effective response in an emergency.

This guidance note assists those transporting dangerous goods in Western Australian by road or rail to comply with the relevant package marking requirements.

It does not apply to dangerous goods packages and combination packages of:

- retail distribution loads that comply fully with ADG7 section 7.3
- tanks on tank vehicles.

General obligations

Part 5, Division 1 of the Transport Regulations lists specific responsibilities in relation to marking of packages for consignors, packers, prime contractors and rail operators who handle packages for transport of dangerous goods by road and rail. Fines apply for the incorrect marking of packages that contain dangerous goods or other goods marked incorrectly as dangerous goods.

Terminology

Marking A label fixed to a package or unit load; stencilled or printed information on a package or unit load; or information placed in a frame that is fixed to a transport unit or placardable unit.

Label Means one of more of a class label, subsidiary risk label or mixed class label, which have a specific format, design and colour under section 5.2.2.2 of ADG7.

Package The complete product or packing of goods for transport by road, and comprising the goods and its packaging.

Packaging The container in which goods are received or held for transport by road, including anything that enables the container to receive or hold the goods, or be closed.

Inner packaging Packaging for which an outer packaging is required for transport.

Outer packaging The outer protection (including absorbent materials, cushioning and any other components) used to contact and protect articles; inner receptacles of composite packaging; or inner packaging or combination packaging.

Combination packaging Combination of packaging for transport purposes, comprising one or more inner packagings secured in an outer packaging.

Composite packaging Packaging consisting of an outer packaging and an inner receptacle constructed to form integral packaging. Once assembled, it remains an integrated single unit when filled, stored, transported or emptied.

Intermediate packaging Packaging placed between inner packaging or articles and an outer packaging.

UN number An identification number assigned to the dangerous goods by the United Nations Committee of Experts on the Transport of Dangerous Goods (see ADG7 volume 1, chapter 3).

Marking of packaging

Outer packaging and sole packages

The outer packaging of every combination package, and every sole package, that contains any dangerous goods of Packing Group I or other dangerous goods in a quantity specified in Appendix 1 must be clearly marked on the outside surface with the following standard marking:

- the proper shipping name of each type of dangerous goods in the package (determined in accordance with ADG7 section 3.1.2)
- the UN Number for each type of dangerous goods in the package, prefaced with either “UN” or “UN No.”
- a class label for each class of dangerous goods in the package
- at least one each of any subsidiary risk label that
 - is applicable to the goods in the package
 - is not the same as any class label applicable to the goods in the package
- the name and address in Australia of the manufacturer or consignor of the dangerous goods, or their agent.

Appendix 2 contains examples of the marking of dangerous goods packaging.

For more information refer to ADG7:

- section 5.2.1.1.2 for provisions relating to imported dangerous goods
- chapter 3.4 for dangerous goods in limited quantities
- chapter 7.3 for retail distribution loads.

Note: The HAZCHEM code, packing group and “Dial 000” are not mandatory requirements of ADG7.

Inner packages

Every inner package that contain:

- 20 ml or more of liquid or 20 g or more of solid dangerous goods of Packing Group I
or
- other dangerous goods in a quantity specified in Appendix 1

must be clearly marked with:

- the proper shipping or technical name for the dangerous goods in the inner package
- the class label for the dangerous goods in the packaging
- labels for any subsidiary risk applicable to the goods

Packages may also be marked according to the United Nation’s Globally Harmonised System of Classification and Labelling of Chemicals (the GHS).

Gas cylinders and aerosols

Gas cylinders must also be marked in accordance with Australian Standard AS 2030 *The verification, filling, inspection, testing and maintenance of cylinders for the storage and transport of compressed gases*.

An inner packaging that is an aerosol:

- must be marked with the markings applicable to dangerous goods of Class 2 and, where relevant, any subsidiary risk of the aerosol
- may also be marked with any consumer safety advice in accordance with AS 2278 *Aerosol containers – metal aerosol dispensers of capacity 50 mL to 1,000 mL inclusive*.

Position of markings on a package

Marking on a package should be placed in a position in which it will be visible if the package is stacked with other packages in the normal way.

Where a package must be marked with more than one label the labels should be placed in positions adjacent to one another on the same face of the packaging.

Dimensions of labels on a package

If a class label or subsidiary risk labels must be marked on a package containing dangerous goods, the minimum dimensions of the labels are specified in Appendix 3.

Audit requirements

Consignors, packers and prime contractors of dangerous goods should audit package marking regularly to ensure compliance with the requirements of ADG7.

Audits may be required (as directed by the Chief Officer) under section 46 of the *Dangerous Goods Safety Act 2004*.

Further information

Contact Resources Safety – Dangerous Goods Safety Branch:

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Appendix 1 – Quantities of dangerous goods requiring marking of packages

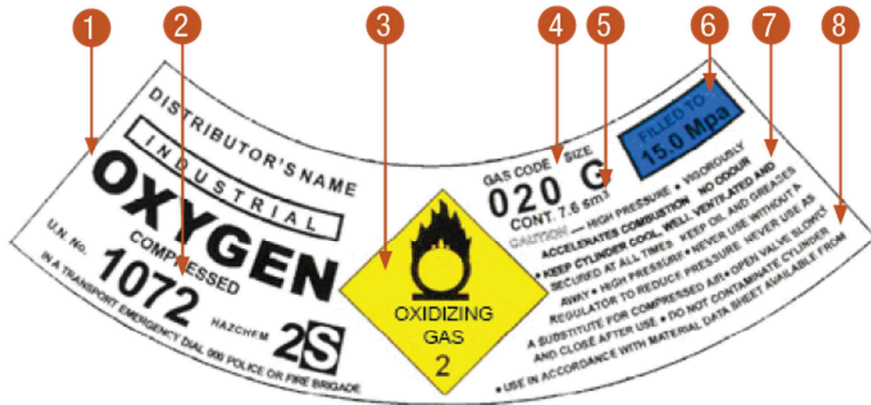
Does not include packages containing dangerous goods of Packing Group I

Source: ADG7 table 5.1

Class / division of dangerous goods	Packing group	
Class 1		As prescribed by legislation relating to explosives in the particular State or Territory
Division 2.1	N/A	Any quantity in packaging of 30 mL capacity or more Aerosols marked in accordance with AS 2278
Division 2.2	N/A	Any quantity in packaging of 100 mL capacity or more Aerosols marked in accordance with AS2278
Division 2.3	N/A	Any quantity in packaging of 30 mL capacity or more
Class 3	I	20 mL or more
	II	150 mL or more
	III (not a manufactured product)	300 mL or more
	III (manufactured product)	2 L or more
Division 4.1	I	20 g or more
	II and III	2 kg or more
Division 4.2	I	20 g or more
	II and III	500 g or more
Division 4.3	I	20 g or more
	II and III	150 g or more
Division 5.1	I	20 mL or more for liquids, or 20 g or more for solids
	II and III	1 L or more for liquids, or 1 kg or more for solids
Division 5.2	I, II and III	150 mL or more for liquids, or 150g or more for solids
Division 6.1	I	20 g (mL)
	II and III	500 mL or more for liquids, or 500g or more for solids
Division 6.2	I, II and III	Category A must be marked for all quantities
Class 7		As prescribed by legislation relating to radioactive substances in the particular State or Territory
Class 8	I	20 mL or more for liquids, or 20 g or more for solids
	II and III	500 mL or more for liquids, or 500g or more for solids
Class 9		2 L or more for liquids, or 2 kg or more for solids

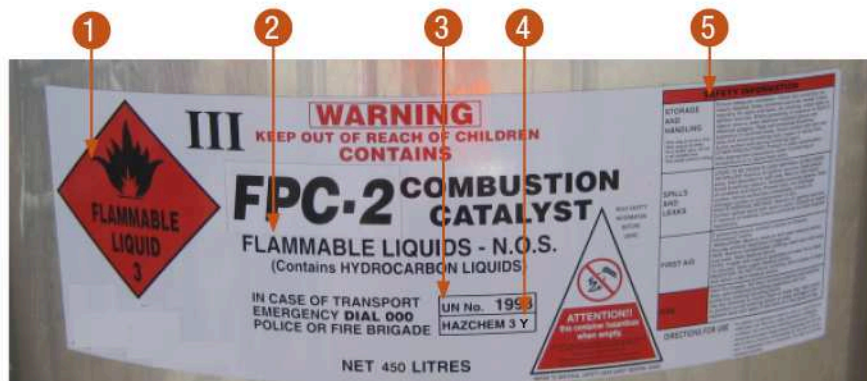
Appendix 2 – Examples of markings

Gas cylinder



- 1 Gas name and grade
- 2 UN numbering system for safe handling, transport and storage
- 3 Dangerous goods class label
- 4 Gas code and cylinder size
- 5 Contents of cylinder at standard temperature and pressure (i.e. 15°C at 101.3 kPa)
- 6 Nominal filling pressure at standard conditions (for permanent gas)
- 7 Caution – indicated major hazards
- 8 General safety information regarding storage and handling

Sole packages



- 1 Dangerous goods class label
- 2 Proper shipping name as specified by ADG7
- 3 UN numbering system for safe handling, transport and storage
- 4 HAZCHEM code
- 5 General safety information regarding storage and handling, spills and leaks, first aid and fire



- 1 General safety information regarding storage and handling
- 2 Proper shipping name as specified by ADG7
- 3 United Nations number system for safe handling, transport and storage
- 4 HAZCHEM code
- 5 Dangerous goods class label
- 6 Name and address in Australia of the manufacturer or consignor of the dangerous goods (or their agent)
- 7 Subsidiary risk labels

Appendix 3 – Minimum specifications for class and subsidiary risk labels

Source: ADG7 table 5.2

Class	Package, packaging or article	Minimum dimensions of labels (mm)	Recommended minimum size of lettering (mm)
Class 2 (other than aerosols)	Cylinder of outside diameter: <75 mm	10 x 10	2.5
	≥ 75 mm < 180 mm	15 x 15	3
	≥ 180 mm	25 x 25	5
	Pressure drum or tube ≤ 500 L	100 x 100	7
Class 2 (aerosols)	Aerosol can containing: ≤ 25 g	10 x 10	2
	>25 g ≤ 0.5 kg	15 x 15	2.5
	> 0.5 kg	20 x 20	3
All others	Package or inner packaging containing: ≤0.5 kg or L	15 x 15	2.5
	>0.5 kg or L ≤ 5 kg or L	20 x 20	3
	>5 kg or L ≤ 25 kg or L	50 x 50	5
	>25 kg (L)	100 x 100	7
	IBC ≤ 500 kg (L)	100 x 100	7
	Large packaging, overpack, segregation device	100 x 100	7