



Government of **Western Australia**
Department of Mines, Industry Regulation and Safety
Resources Safety

Dangerous Goods Safety Guidance Note

Safety equipment for road vehicles transporting dangerous goods

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1 Adelaide Terrace, East Perth WA 6004
Postal address: Mineral House, 100 Plain Street, East Perth WA 6004
Telephone: (08) 9358 8002 Facsimile: (08) 9358 8000
www.dmirs.wa.gov.au

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Introduction

When placard loads of dangerous goods are transported by road, certain personal protective equipment (PPE) and other safety equipment are required by the Dangerous Goods Safety (Road and Rail Transport of Non-explosives) Regulations 2007 and the seventh edition of the *Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG7)*. This is to ensure that, in the event of an accident or incident, the personnel transporting the dangerous goods:

- have a reasonable degree of protection
- if practicable and safe to do so, can effectively respond to either control the situation or mitigate the effects while waiting for the arrival of emergency services or the approved emergency responder.

This guidance note assists vehicle owners, prime contractors and drivers transporting dangerous goods on Western Australian roads to meet their obligations regarding the provision of safety equipment.

Minimum requirements

Table 1 details the PPE and other safety equipment that must be included on vehicles transporting placard loads of dangerous goods.

Three portable warning devices complying with the latest edition of Australian Standard AS 3790 *Portable warning triangles for motor vehicles* are mandatory on all vehicles carrying placard loads.

Other items may be required depending on the load. For example, appropriate electric torches complying with the latest edition of Australian Standard AS/NZS 60079.11 *Explosive atmospheres – Equipment protection by intrinsic safety* are required for some dangerous goods.

All safety equipment must be stowed in an accessible position in the vehicle except for respiratory protective equipment, which must be carried securely and in an accessible position in the vehicle cabin.

Respiratory protective equipment

Respiratory protection is required when transporting a placard load of Division 2.3, 6.1 or Class 8 dangerous goods that may give rise to harmful vapours, gases or dusts. The minimum requirement is an air supplied short-term breathing apparatus suitable for escape purposes.

Note: Cartridge Respirators do not meet the requirements of the ADG Code.

Where the driver also attends to the loading or the transfer of the goods then a Self-Contained Breathing Apparatus with a duration greater than 15 minutes may be required by other legislation.

Fire extinguishers

Fire extinguishers are mandatory on all vehicles carrying placard loads of dangerous goods. As listed in Table 2, the number, type and size of extinguishers required vary with the nature of the load.

Each fire extinguisher must be:

- located so it is readily accessible for use
- on road tank vehicles, located and stowed in accordance with the latest edition of Australian Standard AS 2809.1 *Road tank vehicles for dangerous goods – General requirements for all road tank vehicles*.

Where two or more fire extinguishers are required for the load area of a vehicle, one should be located on the left (near) side towards the rear of the vehicle and, wherever practicable, another should be mounted on the right (off) side towards the front of the vehicle.

Except in the case of a combination vehicle, where only one fire extinguisher is required for a vehicle, it should be located, where practicable:

- on the discharge side of a road tank vehicle
- or
- in the cabin for all other vehicles.

Fire extinguishers should be maintained in accordance with the latest edition of Australian Standard AS 1851:2005 *Maintenance of fire protection systems and equipment*. The standard nominates regular inspections at six monthly, yearly and five yearly intervals.

Other equipment

Although not specified in the regulations or ADG7, a shovel or spade is recommended where it may be useful for cleaning up or emergency bunding of a spill.

Note: For flammable dangerous goods, the potential for spark generation must be considered when choosing an appropriate tool.

Further information

Contact – Dangerous Goods:

Phone 08 9358 8001

Email dgsb@dmirs.wa.gov.au

Web www.dmirs.wa.gov.au

Table 1 Minimum requirements for safety equipment for road vehicles transporting placard load of dangerous goods

Class, Division or Subsidiary Risk	Three double-sided reflector signals complying with AS 3790	Eyewash kit filled and ready for use (250 mL minimum)	Respiratory protective equipment for escape purposes	Gas tight goggles or full face shield as appropriate	Chemically resistant gloves or gauntlets	Thermally insulated gloves or gauntlets	Chemically resistant suit or coveralls	Chemically resistant boots	Any electric torch	Electric torch complying with AS/NZS 60079.11 or other recognised code
2.1*	Yes	No	No	Yes, if cryogenic liquid or in receptacles with capacity > 500 L	No	Yes	No	No	No	Yes
2.2	Yes	No	No	Yes, if cryogenic liquid or in receptacles with capacity > 500 L	No	Yes	No	No	Yes	No
2.3	Yes	Yes	**	Yes	No	Yes	No	No	Yes	No
3	Yes	Yes	No	No	Yes	No	No	No	No	Yes
4	Yes	Yes	No	No	Yes	No	No	No	No	Yes
5.1 solids	Yes	Yes	No	No	Yes	No	No	No	Yes	No
5.1 liquids	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	No
5.2	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes
6.1	Yes	Yes	**	Yes	Yes	No	Yes	Yes	Yes	No
8	Yes	Yes	**	Yes	Yes	No	Yes	Yes	Yes	No
9	Yes	Yes	No	No	Yes	Yes***	No	No	Yes	No

Notes:

* A gas detector suitable for the detection of LP gas must be carried on a vehicle transporting unodourised LP gas

** The minimum requirement is air-supplied short-term breathing apparatus suitable for escape purposes, except when, even in an emergency, the dangerous goods will not give rise to harmful vapours, gases or dust. When a driver attends to the loading or transfer of goods, SCBA with a duration of longer than 15 minutes may be required by other legislation (e.g. occupational safety and health)

*** Yes if the goods are elevated temperature substances or dry ice

Table 2 Minimum fire extinguisher requirements for road vehicles transporting a placard load of dangerous goods

	Dangerous goods being transported	Fire extinguisher requirements
1.	<p>All types of dangerous goods packed in:</p> <ul style="list-style-type: none"> • packages, drums, overpacks, segregation devices • intermediate bulk containers (IBCs) containing non-flammables – any quantity • IBCs containing flammables with up to (and including) 10,000 L total capacity or containing up to (and including) 10,000 kg in total 	1 x 30B dry powder that is to be placed in the cabin (see Note 3), or at the front of any trailer transporting a placard load
2.	<p>Non-flammable goods packed in:</p> <ul style="list-style-type: none"> • pressure drums, tubes, multiple element gas containers (MEGCs), tanks, bulk containers (solids) 	<ul style="list-style-type: none"> • 1 x 60B dry powder, or 2 x 30B dry powder, in the load area • 1 x 10B dry powder in the cabin (see Note 3)
3.	<p>Flammable goods packed in:</p> <ul style="list-style-type: none"> • Pressure drums, tubes, MEGCs, tanks, bulk containers (solids) • IBCs > 10,000 L total capacity or containing > 10,000 kg in total 	<ul style="list-style-type: none"> • 2 x 60B dry powder, or 1 x 80B dry powder and 1 x 20B foam, in the load area • 1 x 10B dry powder in the cabin (see Note 3)

Notes:

- *Note 1: In this table “flammable goods” means dangerous goods of Division 2.1, Class 3 or Class 4, or having a subsidiary risk of 2.1, 3 or 4.*
- *Note 2: In cases of combination vehicles, these directions apply to every separate trailer transporting a placard load.*
- *Note 3: If Table 2 requires that a fire extinguisher be located in the cabin, as an alternative to being located in the cabin the fire extinguisher may be located directly behind the cabin or may be mounted on the rear of the cabin.*