

Vehicle guidance: Tanker/Tanker Trailer



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Protection
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Industrial waste resource guideline (IWRG)

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About the vehicle guidance

This guidance lists the requirements for vehicles that transport prescribed industrial waste (PIW). It is a condition of the Permit to Transport Prescribed Industrial Waste that the vehicle meets the requirements for the type of waste being transported.

The *Environment Protection (Industrial Waste Resource) Regulations 2009* (the Regulations) require that a person who applies for a new permit, or who renews an existing permit, must sign a declaration that the vehicle is fit for the purpose of safely transporting the PIW specified in the application or permit. It is the responsibility of the transporter to ensure compliance with these and any other Regulations, Acts or rules that relate to the transport of PIW and, where not specified, their conduct ensures the safe and secure transport of PIW.

Important note: Any method of assembly, or alternative designs, which are not mentioned in this guidance, but which give equivalent results, could be considered appropriate, pending further assessment by EPA.

Additionally, if you want to apply for a waste code that does not correspond with the permitted codes, contact EPA's Development Assessments Unit on 1300 372 842 (1300 EPA VIC) or email contact@epa.vic.gov.au to discuss your permit application further.

For a summary of the vehicle feature/fittings requirements and the permitted waste codes for each type of tanker refer to Appendix 1 of this guidance.

1. Safety equipment

1.1 Driver safety kits

The safety of drivers is the responsibility of the company or the individual (in the case of owner drivers). For further information, the Australian Code for the Transport of

Dangerous Goods (ADG Code) contains recommendations on the selection of personal protective equipment and safety equipment for the particular UN Class. This may include full-length overalls, abrasion or chemical-resistant gloves, dust masks, respirators or breathing apparatus, safety footwear or chemical-resistant boots, goggles or face shields, eye rinse bottle.

1.2 Fire extinguishers

Fire extinguishers must be located where they are clearly visible, unobstructed and readily available.

Cabin extinguisher

A 1 kg x 10B (E) dry powder type fire extinguisher must be mounted in a properly attached quick-release bracket.

Load area extinguisher

For Class 3, 4 and 5 fire extinguishers must be in accordance with the ADG Code.

A vehicle transporting classes other than Class 3, 4 or 5 should be equipped with at least one portable fire extinguisher with a minimum capacity of 4.5 kg x 60B(E) or equivalent.

1.3 Emergency procedure information

The following is required to ensure that the necessary information is available to drivers and emergency workers in the case of an emergency.

Source the appropriate emergency procedure information from either the Emergency Procedure Guide (EPG) or the Dangerous Goods Initial Emergency Response Guide.

The Emergency Procedure Information document should be placed in a holder and marked with the words 'Emergency Procedure Guide' or 'Emergency Information' in red letters at least 10 millimetres high on a white background. It must be attached to the door of the cabin (or other appropriate accessible position, where the door is not suitable).

2. Electrical

2.1 Battery

To avoid the risk of fire or explosion, all sources of sparks and ignition must be kept away from the battery. The battery must be firmly secured and well ventilated, with an acid resistant cover in an accessible area.

2.2 Electrical wiring

(Applicable if you transport Class 3, 4 or 8 prescribed waste.)

All electrical wiring must be contained within a properly fitted conduit which is in good condition with secure mounting points.

This guidance forms part of the Industrial Waste Resource Guidelines, which offer guidance for wastes and resources regulated under the *Environment Protection (Industrial Waste Resource) Regulations 2009*.



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Conduits and cables outside and to the back of the cabin, are to be securely fastened and protected.

3. Spill kit

A spill kit, which is appropriate for the waste being transported, must be carried and located in an easily accessible position. It should include the following: containment tubes or absorbents, broom and shovel, container(s) as appropriate to carry the spill, such as a sealable bucket.

Please note: if transporting clinical waste, the spill kit must include hospital grade disinfectant in a sprayer and enough plastic bags to double enclose 15% of the maximum load.

4. The tank

4.1 Tank construction

The tank must be constructed from materials that are resistant to the waste being transported.

4.2 Tank mountings

For information on effectively securing the tank container to the vehicle, refer to the ADG Code (Chapter 4), and/or AS/NZS 3711.10.

4.3 Tanker fittings and accessories

(Including valves, caps, hoses, outlets, sample points and vacuum system.)

It is a condition of the permit that all tanker fittings and accessories meet the requirements for safe, secure and leak-free transport of PIW and the safety requirements of the driver and/or company.

Tanker fittings and requirements include:

- coaming (roll over) meets Australian standards
- manhole of at least 400 mm diameter
- venting meets the requirements of the waste transported
- valves meet ADG Code requirements (e.g. Class 3, 4 and 8).

If the tank is used for the transport of Class 3, 4, or 8, all fittings should be in accordance with relevant Australian Standards *(AS2809).

4.4 Tanker baffles

The function of the tanker baffles is to control liquid surge during transport. They are generally welded inside the tank and, over a period of time, can break down or fail. When baffles are broken or become ineffective, liquid surge poses a very serious hazard.

Therefore, each baffle should be accessible through a manhole to allow inspection and maintenance work.

Large compartments (in excess of 2.5 metres) of tanks should be fitted with baffles.

The distance between a bulkhead and a baffle should not exceed 2.5 metres.

Where multiple baffles are required to satisfy the 2.5 metre spacing requirements, the surface area of the baffles should not be less than 70 per cent of the maximum area of the cross section.

5. Rear bumper

The bumper must be frame mounted, attached to the subframe/chassis and extend the full width of the tank.

There must be a 'collision buffer' present, with a gap of 150mm between the rear of the tanker and the bumper.

The bumper must protect all external rear fittings on the tank (i.e. inlet, outlet, sample point or hose hook must not protrude beyond the bumper).

6. Safety features and devices for transporting flammable liquid (Class 3 & 4 prescribed waste)

For tankers transporting flammable liquid (Class 3 or 4 ADG Code), the following applies:

- Flammable or combustible vapours, dust and mists may be generated or evolve within a loading environment. These can form explosive mixtures with air, in certain proportions. It is important to reduce the amount of vapour and dust generated during loading operation.
- To guard against static electricity discharge, all tankers should be equipped with an earth plug.

An AS2809 tanker design approval must be provided with an EPA permit application for prescribed industrial waste that can be classified as dangerous goods, and the following safety features and devices used, as appropriate to the design of the tanker:

- pressure relief valves (roof-mounted)
- shield to guard spills from ignition source or hot spots
- quick-acting shut off valves
- antistatic earth plug
- ventilation (roof-mounted)
- diverter to direct emissions from ignition source or hot spots
- wiring shrouded in conduit
- diverter equipped with emission control devices
- exhaust air cleaner (if applicable, e.g. carbon filter).

7. Placards

7.1 Class labels

A class label is a sign that indicates the type of hazard related to the waste being carried. The format of a class label is standardised across Australia and internationally. More information about class labels can be found in the ADG Code.

Positioning of class labels:

Where a vehicle is used for the transport of liquid PIW, (which is also classified as a dangerous good by the ADG Code) it must be provided with a class label at the front, as outlined in the diagram below.

A class label is not required at the rear, since EIPs would provide such information.

Where more than one class of waste is carried over time, you may wish to install flip-over class labels or fitted frames at the front of the vehicle. These accommodate a number of class labels.

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7.2 Emergency information panel (EIP)

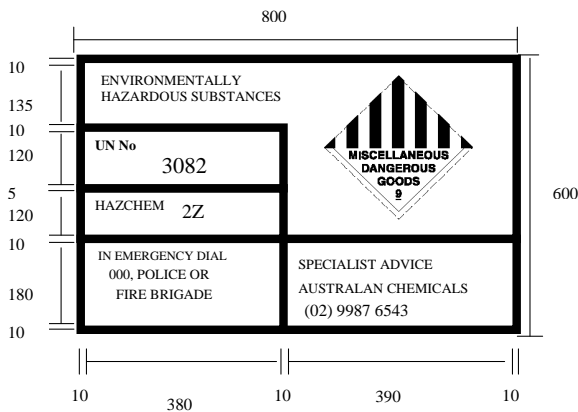
An emergency information panel (EIP) is a standardised panel that sits in a predetermined position on the vehicle. It decodes information about the waste being carried. The information on the EIP is used by emergency response personnel in the event of any emergency. All tankers require an EIP.

Wastes that require an EIP:

- waste classified as Dangerous Goods as per the ADG code in a tanker with a capacity of more than 500 kg(L).
- 30XY waste in a tanker with a capacity of more than 500 kg(L).

EIP format for hazardous waste

If a vehicle is used for the transport of liquid PIW in bulk (which is also classified as a dangerous good as per the ADG Code), the vehicle must be provided with EIPs in the following format:

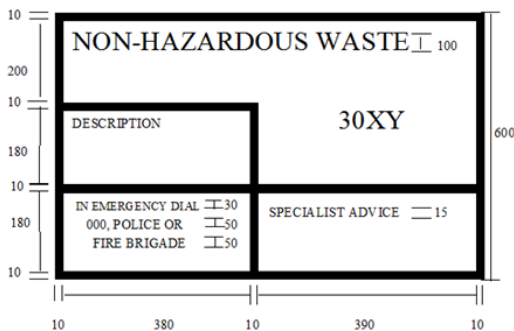


Format of emergency information panel for environmentally hazardous substances (liquid)

Example of a placard used to transport dangerous goods in bulk (measurements in mm)

EIP format for 30XY non-hazardous waste

A vehicle transporting 30XY waste, as per Schedule 4 of the Regulations, must be provided with signs bearing the information '30XY Non-hazardous waste'.



Format of emergency information panel (EIP) for 30XY non-hazardous waste

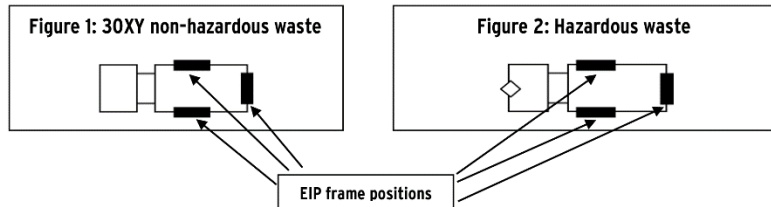
(measurements in mm)

Positioning of EIPs and class labels

There should be fitted frames to accommodate an EIP or EIPs on each side of the vehicle; and

There should be a fitted frame to accommodate an EIP at the rear of the vehicle.

See Figures 1 and 2 below.



If in the case of an obstruction on the vehicle or tank, it is not possible to mount a full size EIP, a half size panel may be mounted. Half-size panels must have dimensions of not less than half of that shown in the diagrams above.

8. Additional information tanker types 3 & 4

Big rear doors with a diameter of more than 400 mm, must have a minimum of six closure points. The door must be securely latched into hold downs. If the door operation is automated (pneumatic or hydraulic), the door must remain locked in the event of system failure. The seals must be multi-lip compression seal.

Appendix 1

Summary table of vehicle feature/fittings and permitted waste codes

The following table (see next page) summarises the vehicle features/fittings that your vehicle may have in place depending on the waste codes that you wish to take and the type of vehicle that you have. Before you select waste codes in your application for a permit to transport prescribed industrial waste, you must assess your vehicle against the vehicle features listed in this table. For example, tanker type 5 has the following features/fittings, which restricts the permitted waste codes to N120, N121 and T130:

- meets the basic requirements (fire extinguisher, suitable spill kit etc.) as specified in this guidance document
- large rear manhole
- capped valves.

Any alternative measures that are not mentioned in this guidance, but which give equivalent results, could be considered appropriate, pending further assessment by EPA. If you want to apply for a waste code that does not correspond with the permitted codes, please contact EPA to discuss your permit application further.

A single letter in the 'waste codes' column indicates that all waste codes beginning with that letter are acceptable for that type of vehicle with the controls described. For example, 'H' includes waste types H100, H110, H160 and H170. A list of waste codes and what they mean can be found in the waste codes guidance document [IWRG822](#).

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Table of vehicle feature/fittings and permitted waste codes

Vehicle features/fittings	Guidance section reference	1. Tanker type 1 (Compliant with Australian Standard AS2809)	Waste Codes	2. Tanker type 2 30XY plus – Rigid tankers or vacuum tankers (30XY streams plus some dangerous goods waste streams)	Waste Codes	3. Tanker type 3 30XY – Vacuum tankers (30XY streams, non-dangerous goods waste)	Waste Codes	4. Tanker type 4 – Gully sucker type	Waste Codes	5. Tanker type 5 – Inert sludges and slurries	Waste Codes
Meets basic requirements (fire extinguisher, suitable spill kit etc.) as specified in this guidance document	1, 2 & 3	✓	A100 B100 C100 D141 D300	✓	A100 B100 C100 D141 D300 D390	✓	C D141 D300 D390 F100 F110	✓	F100 F110 H J130 K L M250	✓ (Spill kit only)	N120 N121 T130
Fully compliant with ADG standard (Australian Standard AS2809)	1, 2, 3, 4, 5, 6 & 7	✓	F G H J K L M		F H J K L M		K L M130 M250		N119 N120 N121 N130 N140		
AS2809 tanker design approval	6	✓									
Tanker baffles (tank >2.5 metres)	4.4	✓		✓		✓					
Small rear manhole	4.3			✓							
Large rear door (**this fitting is a deviation from AS2809)	*		N140 N210 R140 T120 T130		N140 N210 N220 R140 T120 T130	✓	N119 N120 N121 N130 N140 N150 N160 N170 N180 N190 N200 N210 N220 N230 N250	✓	N150 N160 N170 N180 N190 N200 N210 N220 N230 N250	✓	
Minimum six close points or equivalent arrangement (requirement for manholes and rear doors)	8	✓		✓		✓		✓			
Full width rear bumper	5	✓		✓		✓					
Rear protection of all fittings	5	✓		✓		✓		✓			
Shut off valve(s) on tank	4.3	✓		✓			N200		N250		
Hose trays fully sealed	4.3	✓		✓			N210		N260		
Capped valves	4.3	✓		✓		✓	N220	✓	N260 T130 T160	✓	
Coaming meets ADG standard	4.3	✓		✓		✓	N230 N250 N260 R140 T120 T130 T160				
Roof mounted safety rail or fall protection device (**Occupational Health and Safety (Prevention of falls) Regulations 2003)	**	✓		✓		✓					