

Load Restraint Pocket Guide

Disclaimer Consolidated Group and its subsidiary companies are not responsible or liable in any way for the use of this guide or if it has been interpreted correctly.

Important Information Always contact your supervisor if you have any concerns, queries, or doubt about any aspect of the job scope. All loads must be restrained to meet the performance standards of the Nation Transport Commission (NTC) Load Restraint Guide and any other applicable requirements.

This document is ONLY TO BE USED AS A GUIDE and is NOT a replacement of:

- Technical advice from mechanical trained personnel or manufactures instructions
- NCT Load Restraint Guide or applicable Australian Standards
- Australian laws, codes of practice or industry codes

Seek site specific advice or consult the documents above for individual loading issues.

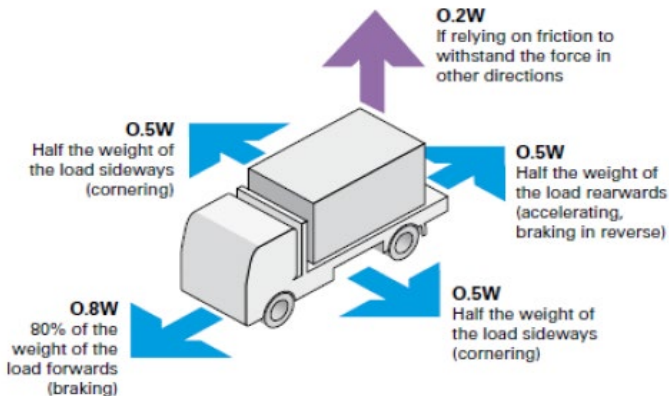
V1 2022

Contents

<u>Load and Unload Goods</u>	<u>Load and Unload Dangerous Goods</u>
Performance standards of load restraint Angle lashings – protractor 50mm webbing – blocked / not blocked 8mm chain – blocked / not blocked 10mm chain – blocked / not blocked 13mm chain – blocked / not blocked Direct restraint Oversized loads – signage Delineation of projections on oversized loads Oversized trailers flow sheet Road train oversize Trailer weight placement Staging of trailers	Classes / divisions of dangerous goods Hazchem emergency action code Determining emergency action codes for multi loads Warehouse segregation chart Transport segregation chart Where a vehicle must not be parked Parking restrictions for placard loads Placard load (minimum quantities) Bulk vs packaged dangerous good placarding Notes

Performance standards of Load Restraint

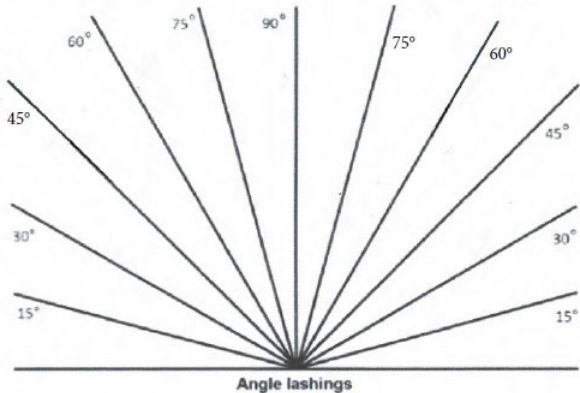
The performance standards set out the minimum amount of force a restraint system must be able to withstand in each direction. For heavy vehicles these forces are as follows:



W = weight of the load

Angle Lashings

Lashings must be angled in a direction **opposite to the expected load movement**. To stop a load from moving forward, the required lashing must be angled rearward and not vertically. To provide the required vertical restraint, a small downward angle is necessary.



Maximum Weight 1 x 50mm Webbing Strap Can Restrain Push up binders		
Front of Load BLOCKED		
Strap Angle	Timber on smooth steel	Rubber mat used
At least 75°	2,300 kg	2,800 kg
At least 60°	2,000 kg	2,500 kg
At least 45°	1,600 kg	2,100 kg
At least 30°	1,200 kg	1,500 kg
At least 15°	620 kg	770 kg

**Maximum Weight 1 x 50mm Webbing Strap Can Restrain
Push up binders**

Front of Load NOT BLOCKED

Strap Angle	Timber on smooth steel	Rubber mat used
At least 75°	570kg	1,700kg
At least 60°	510kg	1,500kg
At least 45°	420kg	1,200kg
At least 30°	300kg	900kg
At least 15°	150kg	460kg

Maximum Weight 2 x 50mm webbing straps can restrain Push up binders		
Front of Load BLOCKED		
Chain Angle	Timber on smooth steel	Rubber mat used
At least 75°	4,600 kg	5,700 kg
At least 60°	4,100 kg	5,100 kg
At least 45°	3,300 kg	4,200 kg
At least 30°	2,400 kg	3,000 kg
At least 15°	1,200 kg	1,500 kg

Maximum Weight 2x 50mm webbing straps can restrain Push up binders		
Front of Load NOT BLOCKED		
Chain Angle	Timber on smooth steel	Rubber mat used
At least 75°	1,100 kg	3,400 kg
At least 60°	1,000 kg	3,100 kg
At least 45°	840 kg	2,500 kg
At least 30°	600 kg	1,800 kg
At least 15°	310 kg	930 kg

Maximum Weight 1 x 8mm chain can restrain Turnbuckle tensioners**Front of Load BLOCKED**

Chain Angle	Timber on smooth steel	Rubber mat used
At least 75°	7,700 kg	6,900 kg
At least 60°	6,900 kg	8,600 kg
At least 45°	5,600 kg	7,000 kg
At least 30°	4,000 kg	5,000 kg
At least 15°	2,000 kg	2,500 kg

Maximum Weight 1 x 8mm chain can restrain Turnbuckle tensioners**Front of Load NOT BLOCKED**

Chain Angle	Timber on smooth steel	Rubber mat used
At least 75°	1,900 kg	5,700 kg
At least 60°	1,700 kg	5,100 kg
At least 45°	1,400 kg	4,200 kg
At least 30°	1,000 kg	3,000 kg
At least 15°	510 kg	1,500 kg

**Maximum Weight 2x 8mm chain can restrain
Turnbuckle tensioners**

Front of Load BLOCKED

Chain Angle	Timber on smooth steel	Rubber mat used
At least 75°	15,000 kg	19,000 kg
At least 60°	13,000 kg	17,000 kg
At least 45°	11,000 kg	14,000 kg
At least 30°	8,000 kg	10,000 kg
At least 15°	4,100 kg	5,100 kg

**Maximum Weight 2 x 8mm chain can restrain
Turnbuckles tensioners**

Front of Load NOT BLOCKED

Chain Angle	Timber on smooth steel	Rubber mat used
At least 75°	3,800 kg	11,000 kg
At least 60°	3,400 kg	10,000 kg
At least 45°	2,800 kg	8,400 kg
At least 30°	2,000 kg	6,000 kg
At least 15°	1000 kg	3,100 kg

Framed Ore Cart Wheels

REMEMBER: 800kg per pallet.

Rubber placed under the pallet on the deck of the trailer allows a minimum of 3 straps to be used on ore cart wheels.

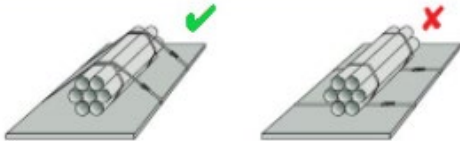
4 pallets get put down on top of the king pin a pallet space back off the headboard. The 6 pallets sit on the middle axle at the back going forward. This will give more stability for the vehicle in transit.



Pipe Lengths



Pipe must come in bundles as pictured. Load must be shrink wrapped at the end to stop lengths protruding or becoming a projectile during transit. The load needs to be belly wrapped.



When belly wrapping, the lashings must be looped over the top of the load to prevent tie down. If the lashings are looped underneath a rounded load, they will not prevent it from rolling.



Tyre Stack

To ensure adequate restraint, tyres when stacked 4 or 5 high **MUST** be secured to the pallet with banding and heavily shrink wrapped so they don't break apart.

Mantle

Two chains go through the mantle and are pulled back and crossed. Pull the item down. Put rubber under the gluts.

Bowls

Four chains as per Mantles, with two extra chains choked in the same manner as described above.



Cable Reels/ Belts

Three chains per reel.

2 chains for direct restraint.

1 for downward force friction.

Reels are butted up against the goose neck and have gluts at the rear.



Concrete sleeper

Concrete sleepers must be strapped together as a bundle and each layer restrained.

Make sure gluts are in line along the restraints and there is rubber under the dunnage.



Crane boom

Ensure all straps are carefully placed as the ratches will cause damage if they rub against the crane boom.

These cannot be damaged in any way as they will be subject to an integrity check prior to use by an authorised inspector.



Lighting Tower

Pallets are to be used to support the frame of the lighting tower.



V1 2022

Sizer

23,000kg:

To secure a sizer use 5x8mm chains directly over and hard up against the goose neck of the drop deck without ramps blocked on rubber = 31,875 T of restraint.

This is the correct method for loading and restraining sizers.



Communication Towers

These should be loaded across the trailer as shown and cross strapped to prevent sideways movement.



V1 2022

Conveyor Belt

Up to 30,000kg. to secure conveyor belts, use 7x 8mm chains on rubber. For belts over 15,000kg but under 30,000kg use 10mm chain. This method must be used with chains on correct restraint points as shown.



Tracks: 2 chains crossed over the tracks with rubber under the steel frame.



V1 2022

Framed Motor: 12,200kg

To secure the framed motor use chains 6x8mm on rubber 45-65 degree angle = 3,150kg per chain. 15,750kg tie down. Chain on manufactures restraint points.



V1 2022

Chute

24 tonne. To secure the chute use 4x13mm crossed chains from the top of the load. 2 front & 2 rear with 4x10mm chains restraining the base. Use 1x10mm chain at each corner of the frames base. The base of the chute must be loaded facing forward in the frame towards the cab.



Isolation Frame

Place float blocks with rubber under the blocks and ensure it is butted up to the goose neck of trailer using 10mm chains and straps with this method of restraint. Isolation frames must be loaded on a drop deck trailer with the high end of the load over the tri-axels as below.



Pulley

16,500kg. To secure the pulley use 4x10mm chains on rubber.

Direct restraint NOT blocked at 30-45° angle = 3,450kg per chain. Use 3x 2,500kg straps tie down restrain at 60-90° angle = 1,530kg per strap. Total restraint = 18,390kg



Forklifts

Direct restraint with chain.



V1 2022

Vehicles

All vehicles with suspension must be restrained to travel in its natural suspension. For LV restrain like this.

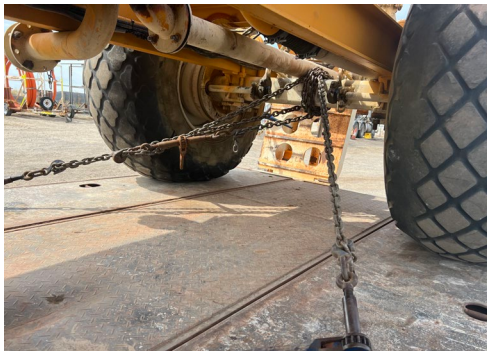
Tyres are recommended under the vehicle for chocking purposes.



Trucks

When restraining 12 T trucks use 10mm chains to pull truck to the rear of the trailer.

Second set pulling to the rear of the front axel. 10mm chains are recommended for holding medium size trucks from forward movement as well as restraining in a downward force. 8mm chains pulling forward on the axels.



Radiator

Use 4x8mm chain at 30 – 45°.

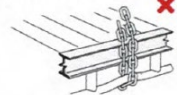
On rubber, blocked using restraint points = 3,750kg per chain.

When restraining a radiator to the trailer attach and **ADDITIONAL** strap over/ across the restraint points to ensure the uprights stay secured in transit.

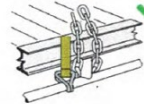


The horizontal section of the tie rails is not strong enough for use with chain lashings without bending.

Chain tied to the centre of the tie rail



Chain tied to the tie rail support



Cone Crusher Shaft

22,000kg

Drop deck trailer without ramps or float must be used. Load bell end facing rear, on rubber hard up against the goose neck. No less than 6x8mm chains and binders are to be used for this method of restraint. DO NOT use frame lifting points for restraint.



V1 2022

Liners

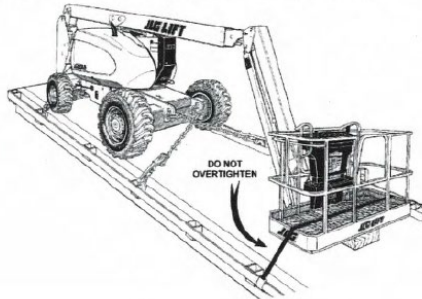
Rubber must be placed under gluts on the tray of the trailer. Then place liners 3 wide on gluts with 3 tyres on the middle liner restrained with 3 chains and binders across all 3 lines as well as tyres. This will ensure the restraint is secured on the middle liner. This is the minimum standard for transport liners.



EWP

The EWP should be secured with tie downs as per the manufactures or suppliers manual that will be located on the EWP. The platform/ basket should be chocked. It may require an additional strap to be placed over the boom to stop movement during transport. Secure the turntable with the turntable locking pin before stowing for travel.

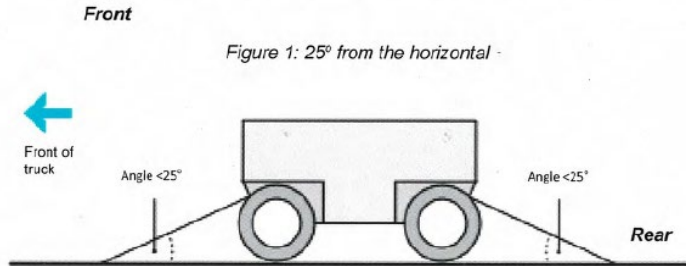
Warning: Do not use excessive downward force when securing the boom as this can cause damage due to excessive bouncing in transit.

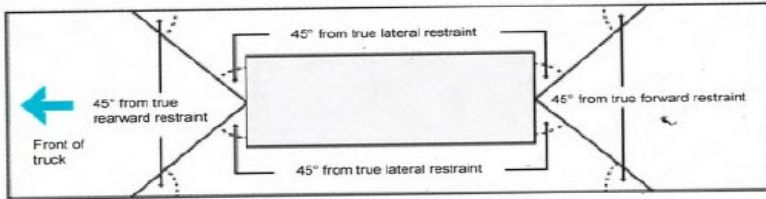


Direct restrain using simple rule

Direct lashing angles – your direct lashing angle should be less than 25 degrees from the horizontal.

All lashings should be the same type, of similar lengths & 45 degrees from the relevant restraint directions.





Check direct lashings angles for all directions of movements (forwards, backwards, sideways). The simple rule is to select lashings that have a combined capacity of:

- In the forward direction = **twice the weight of the load**, each lashing has a capacity that matches the weight of the load
- In the sideways direction = **the weight of the load**
- In the rearward direction = the weight of the load, lashings has a capacity that matches half of the weight of the load

Direct Restraint

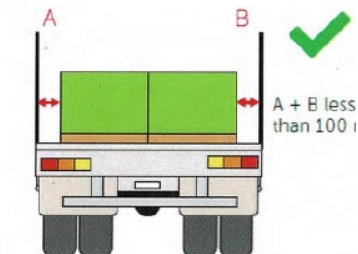
Direct restraint can be used for most loads. Those that are difficult to tie down or where there is little or no friction.

A load can be directly restrained by:

- Attaching the load directly to the body structure
- Blocking the load against a body structure or attachment
- Containing the load within the body structure

A cumulative gap of up to 200mm front to back and up to 100mm side to side is acceptable when using containment and blocking methods.

V1 2022



Oversize Loads – Signage

PUD oversize curfew hours during peak traffic periods

For all loads wider than 2.7m or longer than 22m:

- Monday – Friday (no public holidays)
- NO Travel between morning peak 7.30am – 9am
- NO travel between afternoon peak 4.30pm – 6pm
- Consult exceptions for public holidays

Maximum Dimensions

- Width 2.5m
- Height 4.3m
- Any dimension that exceeds these **MUST** consult the *CLASS 1 RAV OPERATING CONDITIONS* and *RAV PERMIT REGULATIONS*

Restrictions on Metro highway and freeway travel

NO oversize load can EVER travel on freeways or through tunnels.

Delineation of Projections on Oversize Loads

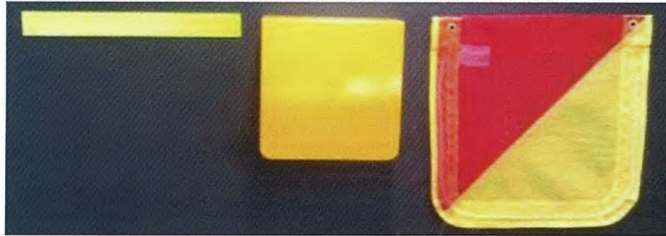
It is a requirement to fit a delineator to a projection on a load that is less than 500mm in thickness and projects more than 150mm from the side of the vehicle. A delineator is defined as a retro reflective rigid panel of sheeting that is:

- At least 300mm long and at least 300mm wide.
- Yellow in colour.
- Compliant with class 1 or 2 of Australian Standards AS/NZS 1906.1:2007 Retroreflective materials and devices for Road Traffic Control Purposes.
- If at the front of the projection, attach so reflective surface is facing forward of the vehicle.
- If at the rear of the projection, attach so reflective surface is facing rearward of the vehicle.

Following consultation with the transport industry, Main Roads recognises the difficulty associated with fitting conventional delineators to some projections on oversize loads.

As a result, where it is not practicable to fit a conventional delineator to a projection, Main Roads will accept the following methods of delineation a projection in order to improve the visibility:

- High vis retro-reflective tape can be attached to the projection in a manner that makes the projection clearly visible to oncoming motorists.
- A warning flag can be attached to the projection, provided the flag is secured in such a manner to remain perpendicular to the road when the vehicle is travelling forward and not blow rearward to such a degree that it becomes ineffective.

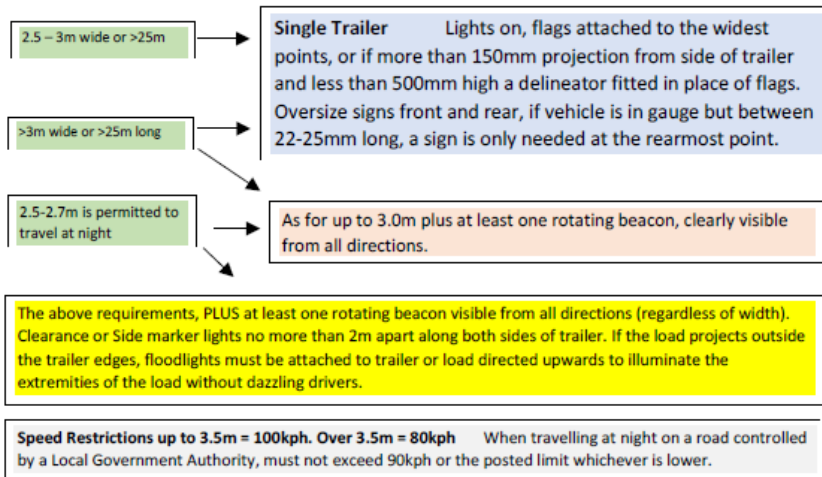


Reflective
Tape

Conventional
Delineators

Warning Flag

Oversize Trailers Flow Sheet



Road Train Oversize

<3.5m maximum width



Headlights on, amber beacon on for all loads wider than 2.5m.

OVERSIZE signs front and rear and flags at front and rear of wide loads in addition to any requirements listed in single oversized.

Night time travel

Vehicles <2.7m



Same as Day travel PLUS side marker lights no more than 2m apart, floodlights illuminating overhanging load (as per single)

SPEED RESTRICTIONS

Unless otherwise specified, a restricted access vehicle (RAV), shall NOT travel at a speed **EXCEEDING** 10kmh below the posted limit where the limit is greater than 60kmh.

Trailer Weight Placement

Trailer weight placement is worked on an overall basis of 22.5 tonne of freight, the reason being is to keep within the limits of the trailers gross weight as some trailers tare is heavier than others.

Any freight over 22.5 tonne must be carefully checked with the brand and type of trailer that is going to be used. If the freight can be placed in the correct position on the trailer to evenly distribute the weight across the trailer and axel groups.

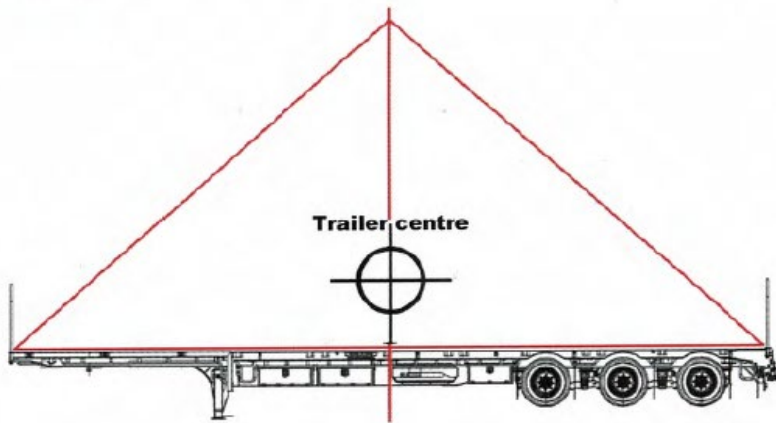
Look at the centre of the trailer as a pivot point. Putting more weight one side or the other of the centre will increase the risk of bring overloaded on one of the axel groups.

With a flap top trailer, it is designed with the leading end of the trailer higher than the rear of the trailer because of this weight tends to transfer to the rear of the trailer.

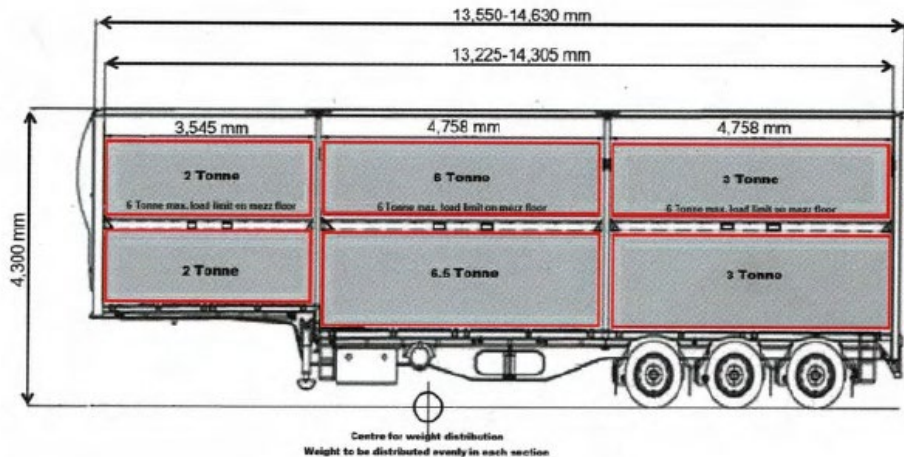
With a mezzanine deck or drop deck trailer, it is designed similar to a wheelbarrow, with the gooseneck being the handles, so anything loaded close to the step puts extra weight on the gooseneck.

The following diagrams are a basic reference to placement of weight over various trailers.

The following pages of loa placement on trailers are a guide only and should be checked for weight over all axle groups to ensure they are compliant before transporting on road.

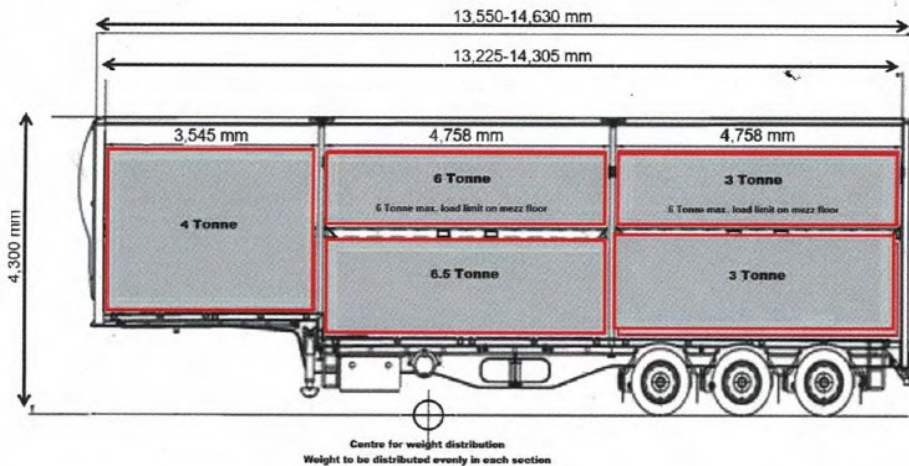


V1 2022



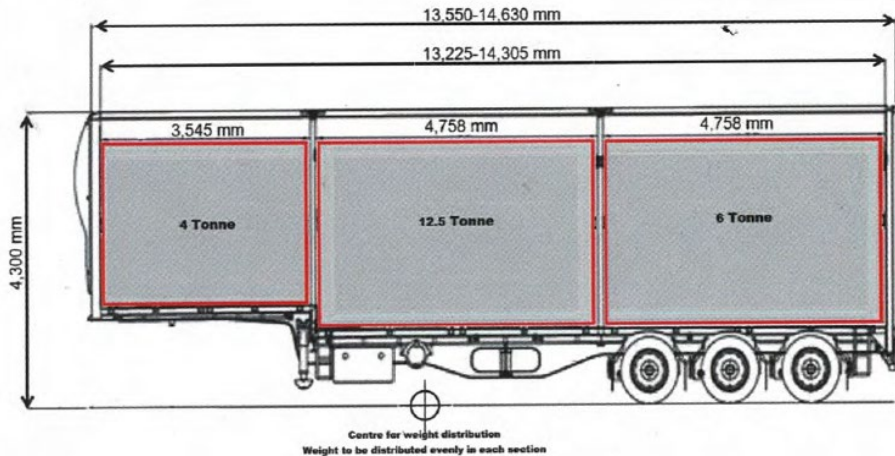
Based on 22.5 tonne of freight

V1 2022



Based on 22.5 tonne of freight

V1 2022

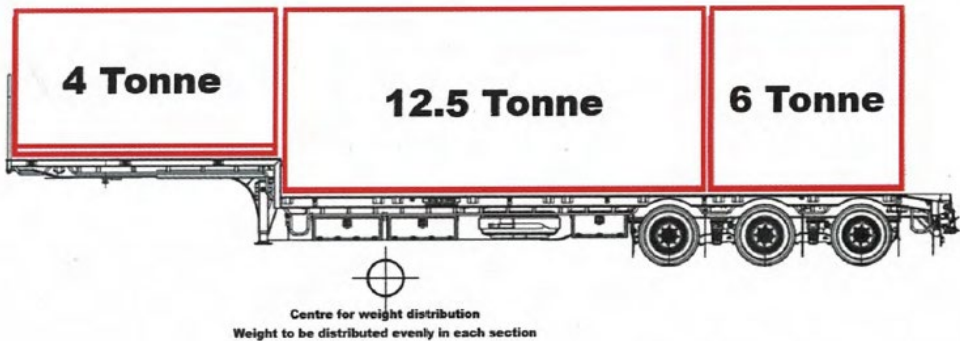


Base on 22.5 tonne of freight

V1 2022



Based on 22.5 tonne of freight



Based on 22.5 tonne of freight



Based on 22.5 tonne single item



Based on 22.5 tonne of freight



Suggested maximum 22.5 tonne of freight

Staging of Trailers

Road laws state that towing vehicles must be heavier than the trailer being towed.

Part 8 Division 1 r.167 Road Traffic (vehicle) Regulations 2014

(3) The loaded mass of a dog trailer or pig trailer must not exceed the loaded mass of the towing vehicle.

A prime mover that is connected to a trailer that is loaded to maximum legal weight, will weight 22.5 – 23t and the weight on the trailer axles can only have a maximum of 20t.

The prime mover weights more than the trailer it tows.

A fully laden semi weighs 43t max and a 5 axle dog trailer has a maximum weight of 36.5t, so the towing vehicle is heavier than the vehicle being towed.

Correctly loaded and correctly placed trailers lead to optimum stability.

LOAD AND UNLOAD DANGEROUS GOODS

In reference to the Australian code for the Transport of Dangerous Goods by Road and Rail



Class 1 EXPLOSIVES

Explosives produce heat & gasses which exert sudden pressures on their surroundings. As they contain both fuel & oxidant they can function independently.

Eg: gunpowder, fireworks, fuses, detonators.



Division 2.1 FLAMMABLE GAS

Most flammable gases are heavier than air & can create an explosive atmosphere when mixed with air if an ignition source is present.

Eg: acetylene, LPG, many aerosols.



Division 2.2 NON-FLAMMABLE NON-TOXIC GAS

The compressed and sometimes liquefied gases in this class are not flammable when exposed to ignition sources. However, many can cause suffocation by diluting or displacing oxygen in the air.

Eg: carbon dioxide.



Division 2.3 Toxic Gas

These gases can cause death or serious injury if they are inhaled. Most toxic gases have an unpleasant odour which alerts you to their presence.

Eg: Chlorine, anhydrous ammonia.



Class 3 Flammable Liquid

The vapours from these liquids can ignite in air on contact with a source of ignition. Prolonged inhalation of these vapours may result in unconsciousness or even death.

Eg: Petrol, kerosene, paint thinners.



Division 4.1

Flammable solid

These are readily combustible solids which may cause fire through friction.

Eg: Sulphur, red phosphorus, matches.



Division 4.2 Spontaneously Combustible

Self-heating of substances leading to spontaneous combustion is caused by reaction of the substance with oxygen in the air.

Eg: Carbon, white phosphorus, sodium



Division 4.3

Dangerous when Wet

Certain substances in contact with water may emit flammable gases that can form explosive mixtures with air.

Eg: Calcium Carbide, Aluminium phosphide.



Division 5.1 Oxidising Agent

If oxidising agents come into contact with combustible materials, they can both start and support fires with the need for oxygen. The main hazard is they produce and yield their own oxygen.

EG: Calcium Hypochlorite,
Ammonium Nitrate.



Division 5.2 Organic Peroxide

They are liable to decompose at low, normal, or high temperatures. Decomposition may be started by heat, friction, impact or contact with impurities. The primary risk is the production of flammable gases or vapours.



Division 6.1 Toxic

They are likely to cause death or serious injury if swallowed, inhaled or brought into contact with skin.

Eg: Calcium Cyanide, Lead Arsenate, Many Pesticides.



Class 7 Radioactive

Radioactive are materials or a combination of material that spontaneously emit radiation.



Class 8 Corrosive

These are substances which, by chemical action, will cause severe damage when in contact with living tissue. In the case of a leak, corrosive substances will materially damage or even destroy other goods or the vehicle itself.

Eg: Hydrochloric acid, Sodium Hydroxide, Acetic acid.



Class 9 Miscellaneous Dangerous Goods

These are substances and articles which present a danger and are not covered by other classes.

Eg: Dry Ice, Asbestos, Hot Bitumen, Lithium Batteries.



Mixed Class

Only used when a road vehicle is transporting a placard load of dangerous goods in small packing and there is more than one class of those type of dangerous goods on the vehicle during the journey.



HAZCHEM Emergency Action Code

FOR FIRE OR SPILLAGE

Substance	Class Label
UN No. HAZCHEM	
Contacts	

- 1 **COARSE SPRAY**
- 2 **FINE SPRAY**
- 3 **FOAM**
- 4 **DRY AGENT**
- **ALCOHOL RESISTANT FOAM**

P	V	LTS	DILUTE
R			
S	V	BA & FIRE KIT	
T			CONTAIN
W	V	LTS	
X			
Y	V	BA & FIRE KIT	
Z			

E	PUBLIC SAFETY HAZARD
---	----------------------

Additional Information

DRY AGENT

Water **must not** be allowed to come into contact with the substance at risk.

ALCOHOL RESISTANT FOAM •2 or •3

Alcohol resistant foam is the preferred medium.

If not available:

- If •2 – use Fine Spray or Water Fog
- If •3 – use Normal Protein Foam

V

Substance can be violently or even explosively reactive, including combustion.

LTS

Liquid-Tight Chemical Protective Suit with BA.

Full **FIRE KIT** should also be worn for thermal protection if the substance is:

- or Liquid Oxygen
- or Liquefied Toxic Gas (Division 2.3)
- or Toxic Gas with sub-risk 2.1 or 5.1
- or Class or sub-risk 3
- or Division 5.1 PGI with sub-risk 6.1 or 8
- or carried at temperature > 100 °C

DILUTE

May be washed to drain with large quantities of water.

CONTAIN

Prevent, by any means available, spillage from entering drains or water course.

E

People should be warned to stay indoors with all doors and windows closed, –but evacuation may need to be considered. Consult Control, Police and product expert.

Determining Emergency Action Codes for Multi Loads

To determine the combined Hazchem code for more than one bulk receptable on or within a vehicle (example on next page):

- The number forming the first character is the highest number occurring. EG: if you had a 1 and a 2 in your two sperate Hazchem codes you use the number 2.
- If one of the multi load Hazchem is a 2 or 3 and has a bullet in one of the Hazchem codes for alcohol resistance, you must include the bullet. If one of the loads has a 4 in the Hazchem DO NOT include the bullet.
If there are different letters, compare the first letter horizontally and the second letter vertically. Where the two intersect this is the appropriate Hazchem letter. If there are additional letters, follow the same criteria.
- If the letter E appears on any of the Hazchem codes E must be the last character.

	P	R	S	T	W	X	Y	Z
P	P	P	P	P	W	W	W	W
R	P	R	P	R	W	X	W	X
S	P	P	S	S	W	W	Y	Y
T	P	R	S	T	W	X	Y	Z
W	W	W	W	W	W	W	W	W
X	W	X	W	X	W	X	W	X
Y	W	W	Y	Y	W	W	Y	Y
Z	W	X	Y	Z	W	X	Y	Z

Warehouse Segregation Chart

Class/Division		2.1	2.2	2.3	3	4.1	4.2	4.3	5.1	5.2	6.1	8	9
2.1	Flammable gas	5	3		5	5	5	5	5		3	3	
2.2	Non-flammable non-toxic gas	3	5		3		5			5		3	
2.3	Toxic gas			5									
3	Flammable and combustible liquid	5	3		5	3	5	5	5		3	3	
4.1	Flammable solid	5			3	5	3	5	5	5	3		
4.2	Spontaneously combustible	5			5	3	5	3	5		3	3	
4.3	Dangerous when wet	5			5	5	3	5	3	5			
5.1	Oxidising agent	5			5	5	5	3		5	3	3	
5.2	Organic peroxide		5			5		5	5	5	3	3	
6.1	Toxic	3			3	3	3		3	3	5		
8	Corrosive	3	3		3		3		3	3			
9	Miscellaneous dangerous goods												5

V1 2022

Warehouse Segregation Chart

OK	Dangerous goods of the same class should be comparable, consult SDS or suppliers about requirements for individual substances.
	Dangerous goods of the same class could be comparable or react dangerously. Consult SDS or suppliers about requirements for the individual substances.
Refer to SDS	Segregation of those Classes may be necessary. Consult the SDS or supplier. All Class 9 dangerous goods should be segregated in accordance with the SDS.
Separate	Dangerous goods of these Classes should be kept apart by at least 3m. Consult the SDS or supplier.
Segregate	These combinations of dangerous goods should be segregated by at least 5m and kept in separate compounds or building compartments.
	This requirement applies to organic peroxides, for which dedicated stores or storage cabinets are recommended. Adequate separation from other buildings and boundaries is required.
	Segregation may be necessary.

Transport Segregation Chart

Class/Division	2.1	2.2	2.3	3	4.1	4.2	4.3	5.1	5.2	6.1	7	8	9
2.1 Flammable gas	✓	C	✓	B	×	×	×	×	×	✓	×	✓	✓
2.2 Non-flammable non-toxic gas	C	✓	D	✓	✓	×	✓	✓	×	✓	✓	✓	✓
2.3 Toxic Gas		D	✓	×	✓	×	✓	×	×	✓	✓	✓	✓
3 Flammable and combustible liquid	B	✓	×	✓	✓	×	✓	×	×	F	×	✓	✓
4.1 Flammable solid	×	✓	✓	✓	✓	×	✓	×	×	✓	×	✓	✓
4.2 Spontaneously combustible	×	×	×	×	×	✓	✓	×	×	✓	×	✓	✓
4.3 Dangerous when wet	×	✓	✓	✓	✓	✓	✓	×	×	✓	×	×	✓
5.1 Oxidising agent	×	✓	×	×	×	×	×	F	×	E	×	×	E
5.2 Organic peroxide	×	×	×	×	×	×	×	×		E	×	×	E
6.1 Toxic	✓	✓	✓	F	✓	✓	✓	E	E	✓	✓	F	✓
7 Radioactive (G)	×	✓	✓	×	×	×	×	×	×	✓	✓	×	✓
8 Corrosive	✓	✓	✓	✓	✓	✓	×	×	×	F	×	F	✓
9 Miscellaneous dangerous goods	✓	✓	✓	✓	✓	✓	✓	E	E	✓	✓	✓	✓

V1 2022

Transport Segregation Chart

- A. EXPLOSIVES are incompatible with all other dangerous goods in all quantities except as provided in the Australian Explosives Code or, for division 1.4S where the aggregate quantity of all other dangerous goods in the transport unit does not exceed 1000kg (L). See 9.1.2.2.2
- B. Division 2.1 and Class 3 are incompatible in transport if both are in tanks or other receptacles with a capacity individually exceeding 500L capacity.
- C. Division 2.1 is incompatible in transport with Division 2.2 gases that have a subsidiary risk 5.1 except when all are packaged in cylinders or pressure drums not exceeding 500L capacity.
- D. Division 2.3 is incompatible in transport with Division 2.2 gases that have a subsidiary risk 5.1 except when all are packaged in cylinders or pressure drums not exceeding 500L capacity.

- E. Class 5 is incompatible with those class 6 or Class 9 materials that are fire-risk substances.
- F. Some specific examples of these classes or divisions are incompatible. See table 9.2.
- G. See the code of practice for the Safe Transport of Radioactive Substances regarding the compatibility of class 7 with undeveloped photographic film, personnel and mail.

FOOD EMPTIES and FOOD STUFFS: food and food packaging are incompatible with 2.3, 6.1, 7 and 8 in all quantities, except where 9.1.2.3 of the ADGC applies.

Where a vehicle must not be parked

A road vehicle transporting dangerous goods must not be parked or left standing:

- a) In a built up area with public access
- b) Within 15 metres of any building in which there is or is likely to be a concentration of people (other than a building on premises where the vehicle is loaded or unloaded)
- c) At any other place in which there is or is likely to be a concentration of people
- d) Within 8 metres of another vehicle which is transporting placarded dangerous goods

Parking restrictions for placarded loads

A vehicle may be parked or left standing in circumstances mentioned if it is reasonably necessary to do so:

- For the purpose of loading or unloading Dangerous Goods onto or from the vehicle
- Because the vehicle has broken down
- Because of a dangerous situation involving the vehicle
- To comply with the requirements of the law OR For a brief rest or refreshment break
- The vehicle is not parked or left standing for any longer than is necessary and the dangerous goods are kept secure
- Where the Competent Authority or other Local, State or Territory Authority have provided designated Dangerous Goods parking areas.

Placard load (minimum quantities)

Dangerous Goods in Transport Unit	Placard Load Quality
(a) Any Dangerous Goods in a receptacle (other than an article) with a -capacity > 500L -Net mass >500kg	One or more such receptacles (ie. One or more placardable units)
(b) Includes any quantity of -Division 2.1 (except aerosols) -Division 2.3 -Packing Group 1 of any Class or Division	Aggregate quantity of all dangerous goods in a cargo transport unit >250KG(L) Example – 240 litres of 2.1, 2.3 or PG1, plus 10kg/L of any other class of DG. Total = 250kg/L
(c) Division 6.2 Category A	All Quantities
(d) Division 6.2 (other than category A)	>10Kg(L)
(e) Limited quantities dangerous goods and or domestic consumer commodities (defined as 12.1) SEE NOTE 2	>2000kg(L)
(f) Loads where a-e do not apply	Aggregate quantity of dangerous goods >1000kg(L) – unless the load is: - A fumigated unit (UN3559- see note 1)

NOTE 1: *A fumigated unit (UN3359) complying with Chapter 5.5 that does not contain any other dangerous goods is not a placard load and should not be included in the aggregate quantity of dangerous goods when determining a placard load.*

NOTE 2: *when transporting a load of limited quantities dangerous goods and or domestic consumer commodities (defined in 1.2.1) with other dangerous goods, the applicable placard load quantity applied to the most stringent requirement.*

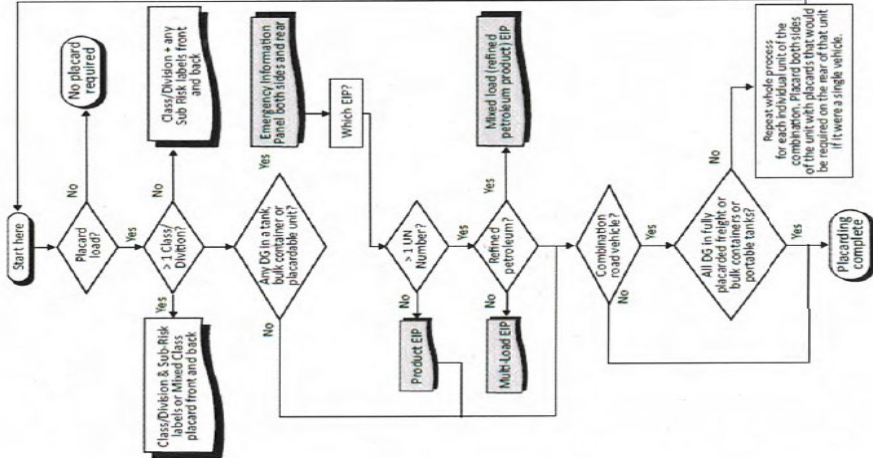
PLEASE NOTE:

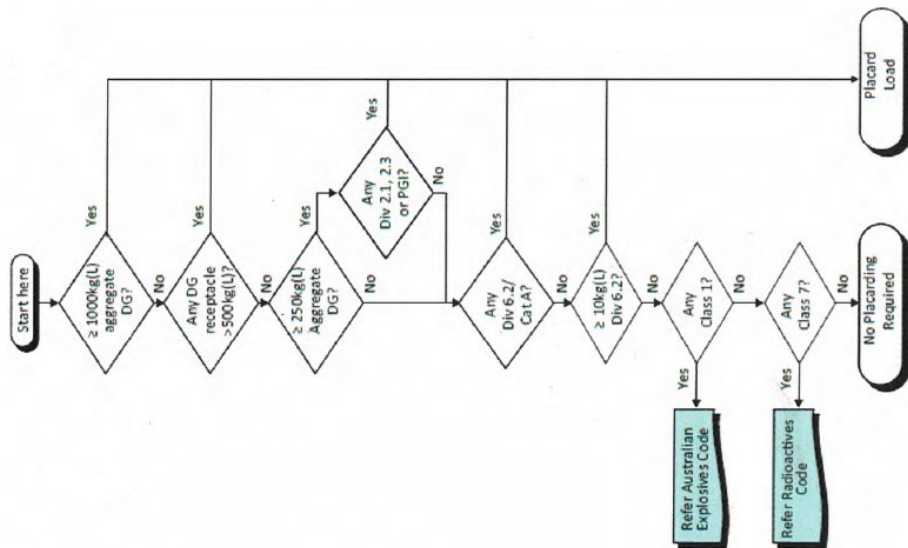
Placarding refers to a sign placed on a vehicle regardless of whether it is a class diamond or an emergency information panel (EIP). Up to 3 IBCs (3x1000 litres) may be transported without a DG drivers licence provided they are not decanted from or to whilst in transit. (Placarding is still required).

RULE A is a bulk load that requires an EIP and a Dangerous Goods Drivers Licence.

RULE B-F are packaged load and require a class diamond and no DG drivers licence.

Bulk vs Packaged Dangerous Goods





V1 2022