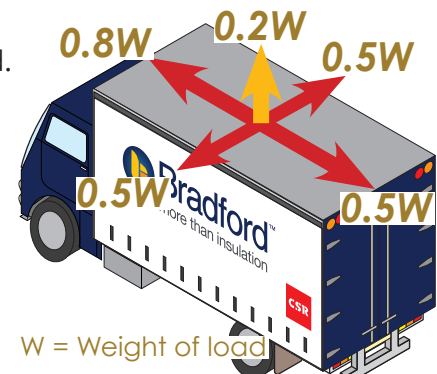


This guideline:

- Covers transportation of Bradfords freight (including insulation batts, palletised boards, palletised rolls, etc) for branches transported via road.
- Is the loader and driver guide to the certification E00682-LRC2 to meet the loading performance standards listed in Schedule 7 of the *Heavy Vehicle (Mass, Dimension and Loading) National Regulation* (22 February 2021).

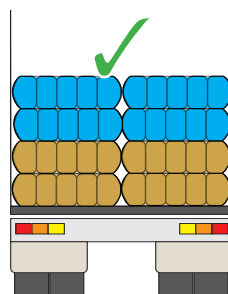
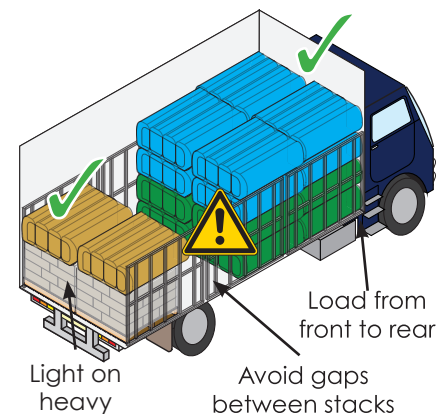
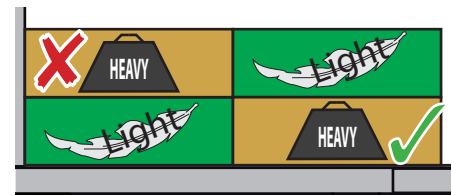
Key Elements

- ✓ Trucks/Trailers with rated curtains and gates are preferred.
- ✓ Equipment must be in good working order.
- ✓ Insulation packs should be consolidated wherever possible.
- ⚠ Avoid loose individual packs of insulation if possible.
- ✓ Heavy products, such as foil rolls, should be unitised to a pallet.



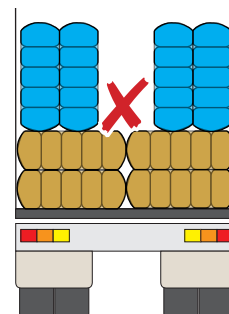
Loading Rules - General

- ✓ Always load heavy items on the tray and lighter items above.
- ✓ Take note of any special rules for the product being loaded to avoid damage.
- ✓ Load from the front to the rear, so the load is blocked forwards wherever possible.
- ✓ Containment - To be secured by containment, there must be no large gaps (gaps are to be less than 100 mm to the front, 50 mm to the side and 1000 mm to the rear).
- ✓ Tie Down - If large gaps exist or the load is above the gates, or in excess of limits on page 4 then tie-down must be used.






Butt items together at the centre. Note rated systems may have specific maximum gaps.

Don't leave gaps between items. This is likely to move in transit.






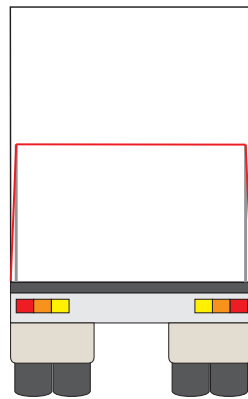
Containment Systems - Rated Systems

-  For further information relating to the rating of gates and curtains, see Appendix 1.
-  Trucks and trailers with standard curtains and gates are generally not rated to provide restraint to the load.
-  Rated systems such as rated gates and/or rated curtains are certified to provide sufficient restraint to the load.

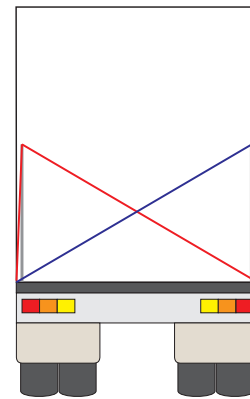


Containment Systems - Non Rated

-  Trucks and trailers with curtains and gates are preferred for secondary benefits, (i.e. Weather protection).
-  For non rated gates, they must be reinforced with webbing lashings to provide the strength to restrain the load.
-  When not using a rated system, you can not rely on only the gates for any form of load restraint.






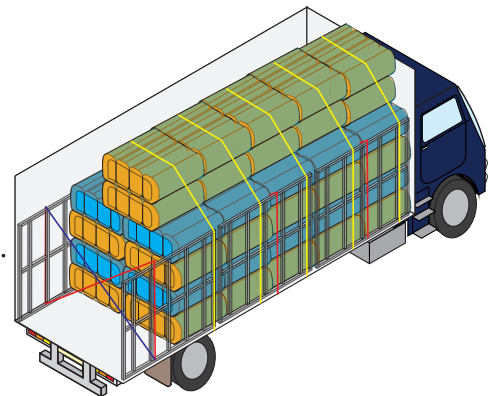
Lashed Gates



Braced Gates

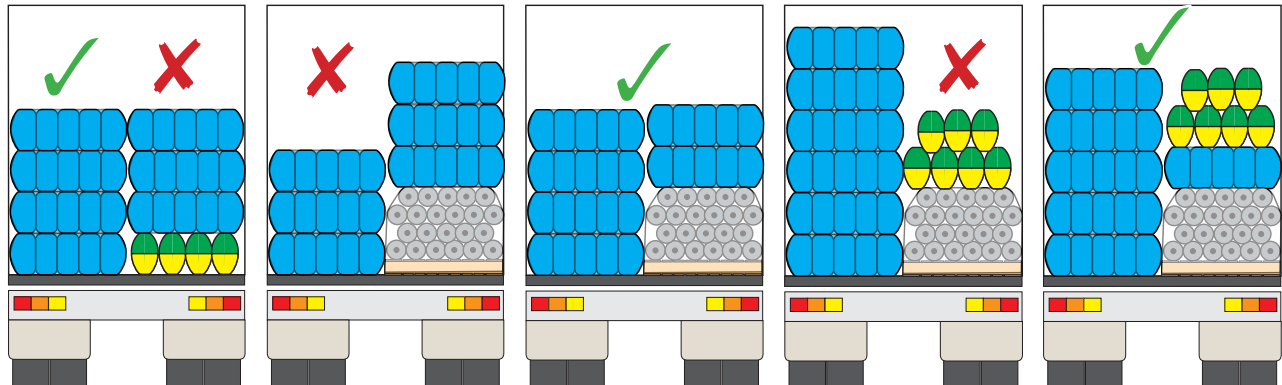
Tie Down System

-  Tie down restraint involves attaching a webbing lashing over the load and utilising friction to provide sufficient restraint (lashed / strapped).
-  When the load is above a rated gate or lashed / braced non rated gate the load must be tied down.
-  If part of the load is above the rating of the containment system, they must be tied down separately.



Containment - General Loading (All containment systems - Rated Gates / Curtains or Pantech or non-rated Gates / Curtains)

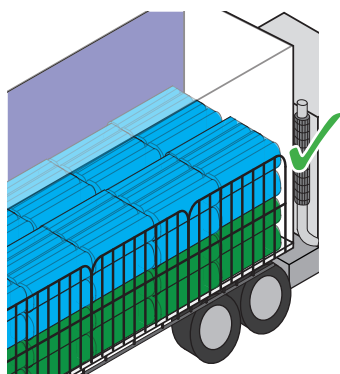
✓ When loading with pallets ensure they are evenly spread side by side where possible.



No loose packs on the bottom of a stack

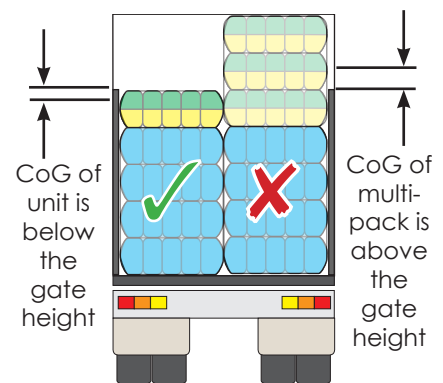
Ensure loads are even side by side

Ensure loads are even side by side



The load, and CoG of the load is below the gate

For **rated gates**, the centre of gravity (CoG) of units and multi-packs is to be below the gate

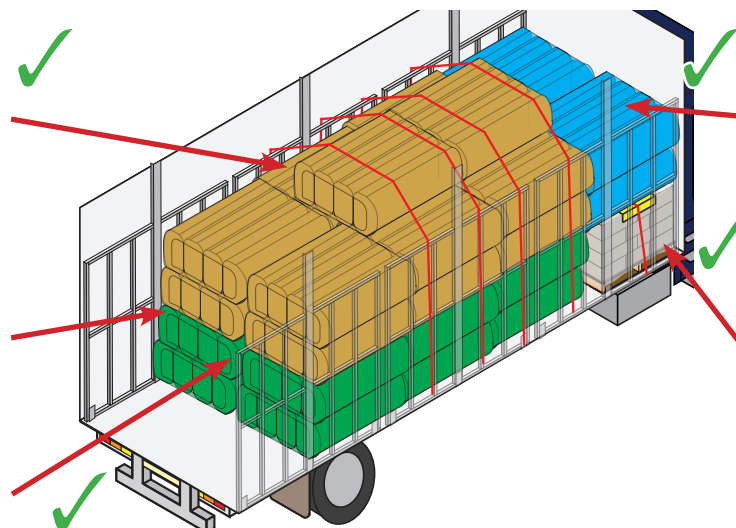


⚠ If part of the load is greater than the rating of the gates or curtain, apply tie down lashings as per tie-down section.

Bottom of load restrained by rated containment. Top of load above gates tied down.

Where possible load solid object such as multipack or pallets in the last row to prevent the load falling during unloading

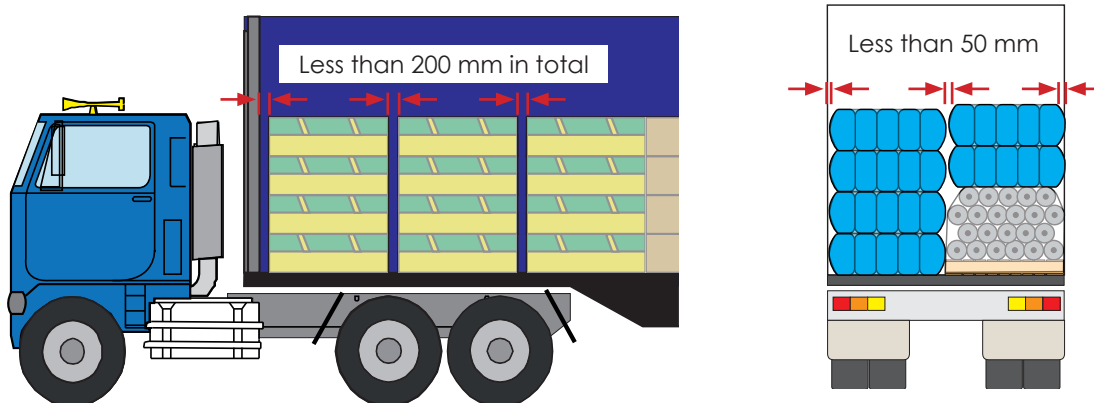
Restrain as per rated containment



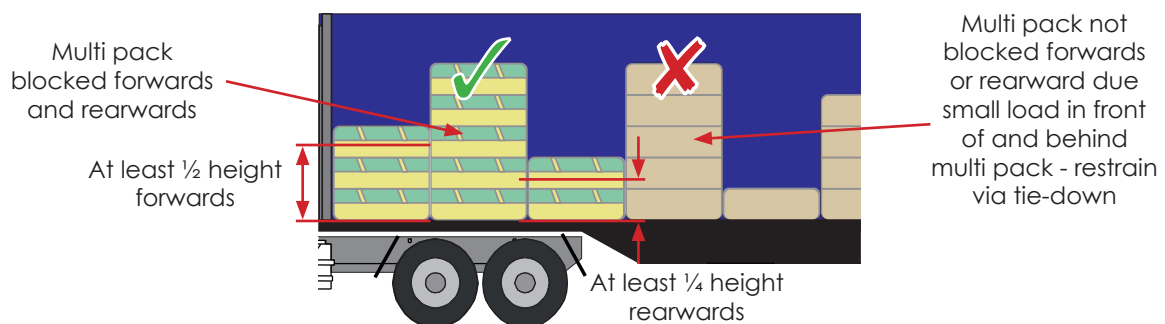
Restrain as per rated containment

Bottom of load greater than gate rating restrained by tie down.

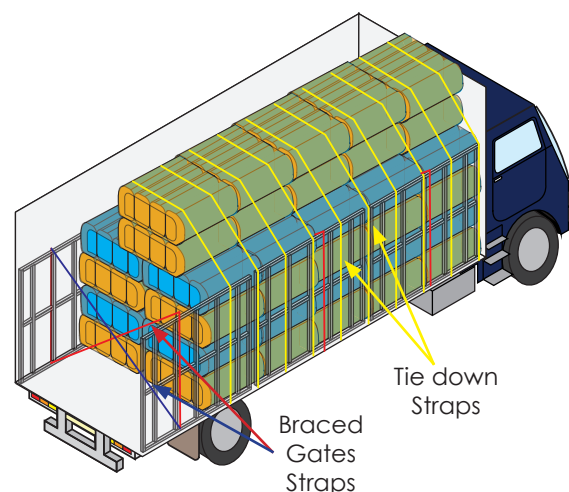
- ✓ Gaps to the front must be less than 200 mm cumulative to be considered blocked.
- ✓ Gaps to the side must be less than 50 mm cumulative to be considered blocked.
- ⚠ If the load does not meet these limits it will need to be restrained via tie-down.



- ✓ To block something forwards, the item blocking must be at least half the height of the load. I.e. A pallet is blocked to a tower or loose rolls are blocked to a pallet higher than the rolls.
- ✓ To block something rearwards, the item blocking must be at least quarter the height of the load. I.e. A tower is blocked to a pallet higher than 25% of the height of the tower.
- ✓ Stagger items in the load to achieve blocking requirements, if needed.

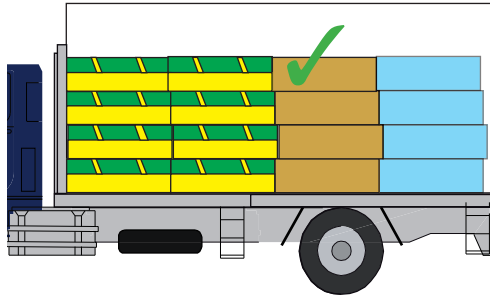


- ✓ The loads must be restrained throughout the entire journey.
- ✓ The load must be contained throughout drop offs or apply tie-downs to each drop of the load if required.
- ⚠ If rear gap more than 1 m, each unrestrained row will need to be restrained rearwards.

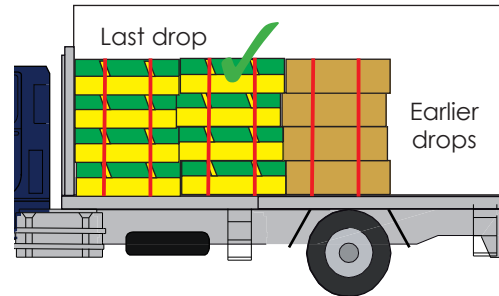


Containment - Rated and non Rated Gates and/or Curtains Specifics

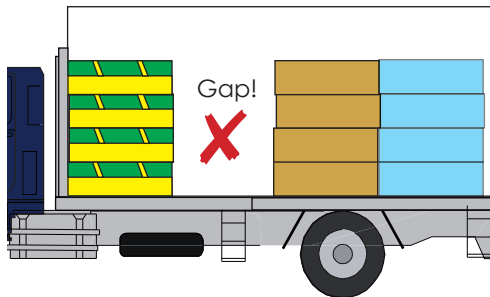
- ✓ For loads that have gaps of 1000 mm or more to the rear, the load will need to be restrained via tie down.
- ✓ Knowing that drops will occur, if the load will be able to move after delivery then additional load restraint will be required.



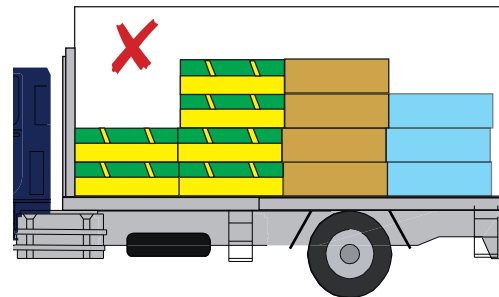
Whole load blocked - See E00682-LRG1-Insulated Products-Linehaul



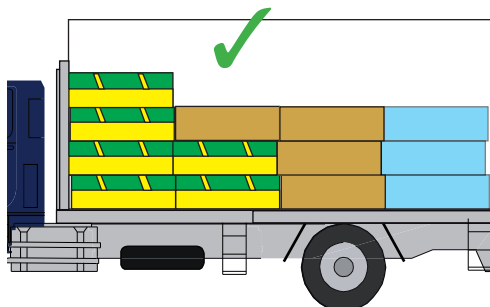
Part load, rear restrained for 0.5 g of load to allow for sideways and forwards blocking



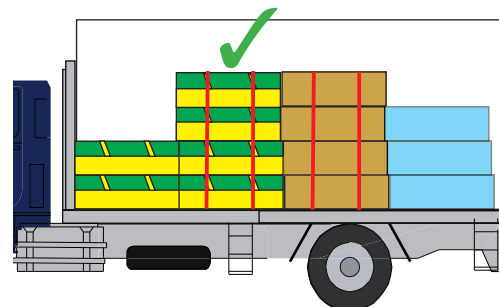
Rated Curtains/Gates only restrain sideways. Rear and forward also need restraint.



Upper packs must be blocked or tied down. Restrain upper layer with straps; lower layer may be considered blocked.

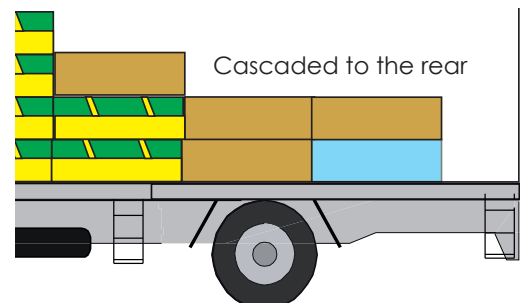


Single pack permitted on top layer. Lower layer may be considered blocked. All parts of the load must be in containment area.



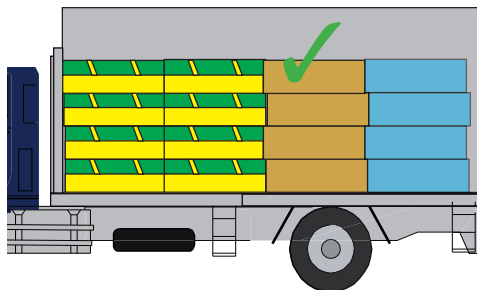
Upper packs must be tie down. Lower layer may be considered blocked. Where packs are loose they cannot be used as blocking device.

- ✓ Single loose batts are permitted to be cascade stacked to the rear of the load when a gap to the rear exists.
- ⚠ Do not load units or multi packs with a gap to the rear, they must be restrained if gaps exist.

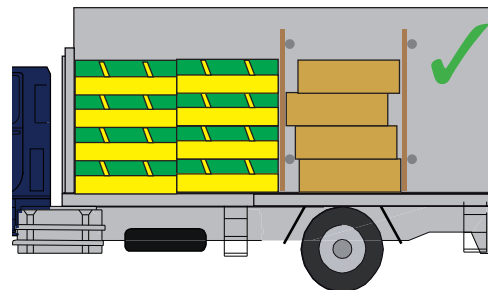


Containment - Pantech Specifics

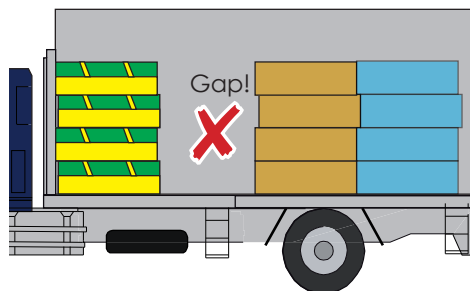
- ✓ For loads that have gaps of 200 mm to the rear, the load will need to be secured by containment with pogo sticks and plywood or tie down if anchor points exist.
- ✓ Depending on the mass of the load, pogos may need to be placed throughout the load. With loads blocked against the headboard the maximum mass restrained by a single pogo stick is 450 kg.
- ✓ Always use two or more pogo sticks for blocking a load.
- ✓ Single loose batts are permitted to be cascade stacked to the rear of the load when a gap to the rear exists.
- ⚠ Do not load units or multi packs with a gap to the rear. They must be restrained if gaps exist.



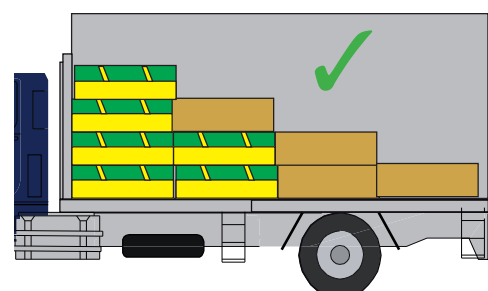
Whole load blocked - See E00682-LRG1-Insulated Products-Linehaul



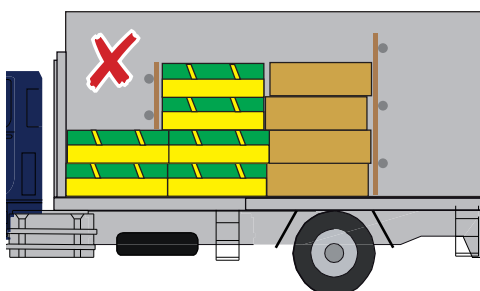
Multi-drop loads can be restraint for each drop to reduce the requirement to reinstall restraint once a drop is completed.



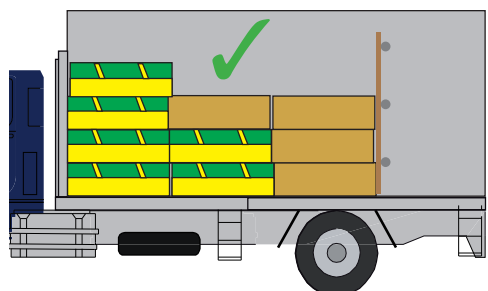
Curtains/Gates only restrain sideways. Rear and forward also need restraint.



Part load cascaded rearwards to prevent movement



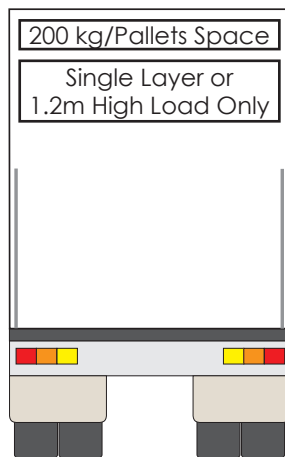
Pogo sticks are not strong enough for forwards blocking. Upper packs must be tie down or restack to block all layers.



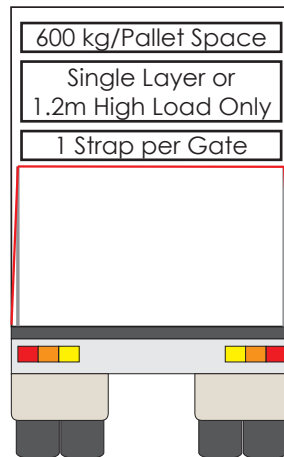
A single pack above the containment area is permitted. Lower layer may be considered blocked.

Containment - Non Rated Gates Specifics

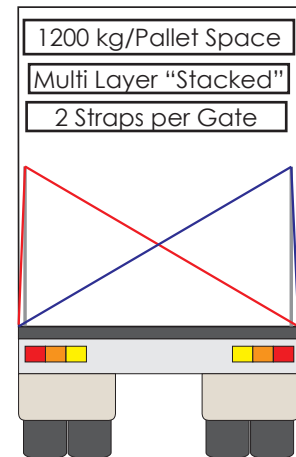
- ✓ Trucks and trailers with curtains and gates are preferred for secondary benefits, (i.e. Weather protection).
- ✓ For non rated gates the load limits (see below) must be used in conjunction with specific gate restraint method.
- ⚠ No product is to be loaded above the gate unless it is tied down as per the Tie down Method.



Unlashed Gates

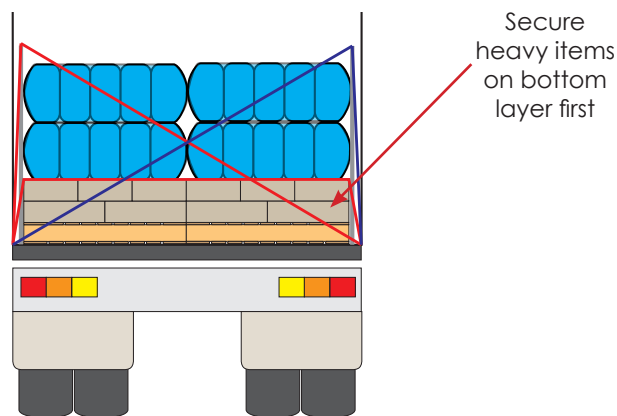


Lashed Gates



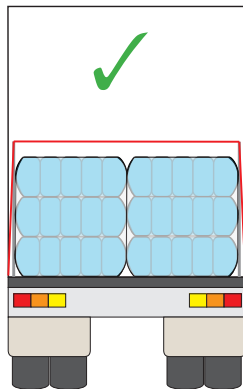
Braced Gates

- ✓ Heavy items (i.e. pallets of foil, pallets exceeding) must be secured separately before light insulation packs are loaded on top. See table 1 for number of straps.
- ✓ If round items are not packaged, palletised or insert through the load they should be belly wrapped/load choked.
- ⚠ Heavy items must be loaded on the base with crushable items on top.
- ⚠ Tie-down lashings over the insulation packs and heavy items will not secure the heavy item due to the compressibility of insulation packs.

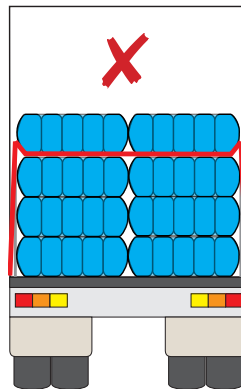


Heavy items must be restrained prior to loading light insulation packs.

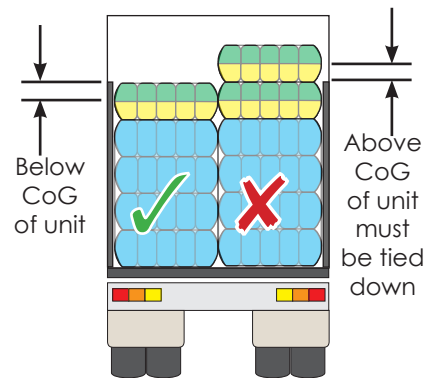
- ✓ Webbing straps must go across multi-packs/packs, not along them.
- ✓ Product must sit under lashings not on them
- ✓ Lashings used to lash gates must be between bundles of products.
- ✓ Where product is stacked & restrained above gates the gate lashings must not have product sitting on top of these. Secure gates between packs on the trailer.



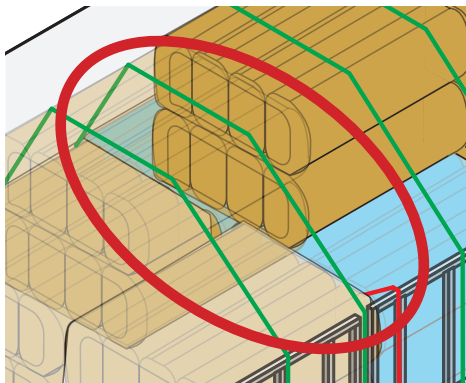
Gates are lashed with no product loaded on lashing



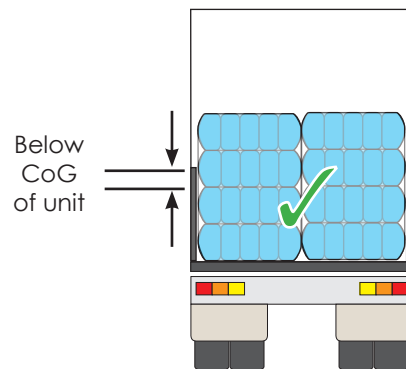
Lashed gates with product loaded on lashing.



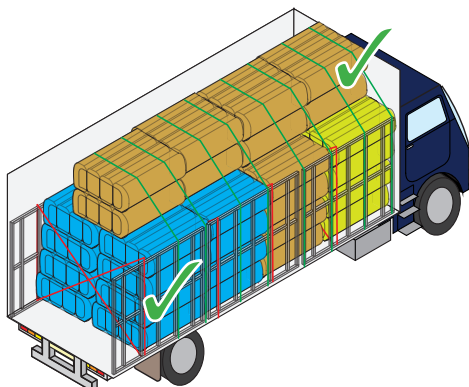
The centre of gravity (CoG) of individual packs and multi-packs is to below the gate



Lashing for gates in between bundle of insulation



The centre of gravity (CoG) of multi-packs is to below the gate



Gates are braced and top load is tied down and blocked forward.

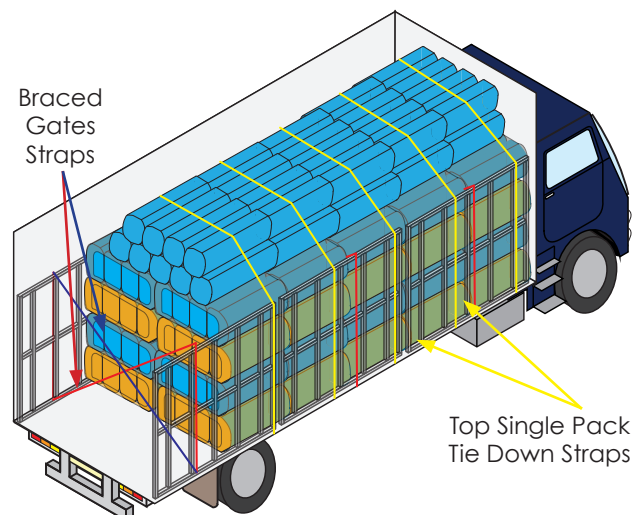
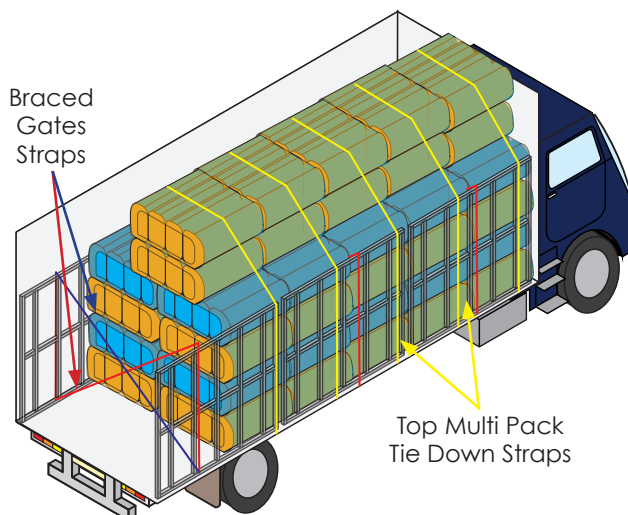
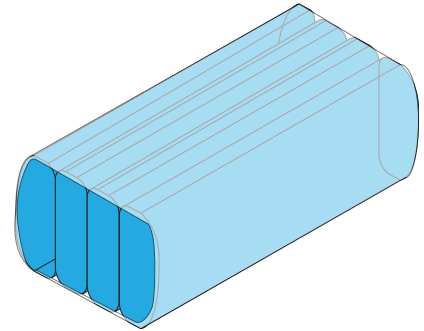


Gates are braced but product is loaded above the top of the gate with no tie down restraint

Tie Down Specifics

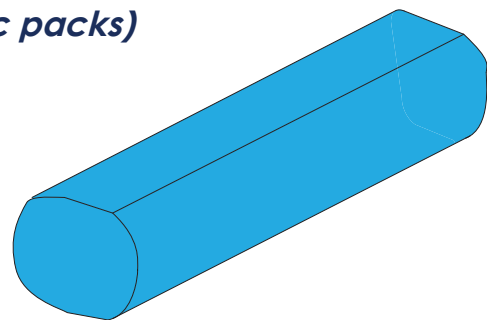
Multi-packs of insulation batts and other semi-rigid non gloss packs

- ✓ Fully tension webbing straps (ie don't stop for concern of compressing the pack. Only stop if bag packaging begins to break).
- ✓ Multi-packs are to be blocked forwards at all times.
- ✓ For multi-packs above the braced gates, tie down with a webbing straps for each 200 kg of product per load above the gates.
- ✓ If rear gaps exist tie down entire load. Single batts permitted at the rear of the load.



Individual bags of insulation batts (glossy plastic packs)

- ✓ Moderately tension webbing straps over individual bags.
- ✓ Individual bags are to be blocked forwards to headboard or other products in the load at all times.
- ✓ For individual bags above the gates, tie down with a webbing straps for each 200 kg of product per stack. This is additional to any restrain required for multi-packs.
- ✓ Always strap down multi-pack first (ie strap under individual packs if multi-packs are above the gates).
- ⚠ Do not tie down whole stack of loose individual bags. Use a containment with braced gates.

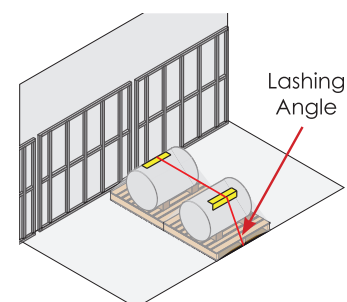


Tie down - Palletised loads

- ✓ Items on pallets are to be secured to the pallet and capable of withstanding the forces applied by road transport.
- ✓ Palletised goods should be placed at the front of the truck against a headboard, where possible.
- ✗ Do not block heavy loads to light loads.
- ⚠ If heavy loads are loaded against light loads forwards then tie down as per unblocked loads.
- ⚠ Caution is to be taken when tightening straps on sensitive freight. Corner protectors should be used to distribute the lashing force. If full tension cannot be applied then additional lashings required.
- ✓ Tie down with 50 mm webbing straps, fully tensioned with standard binders.
- ✓ Gaps to the front must be less than 200 mm combined gaps to be considered blocked.
- ✓ The pallets must be packaged to meet the requirements of the performance standards and expected on-road forces. These can include packaging straps, chocks for round objects, stretch wrap, etc.

Loading Pallet Row - 2 Abreast

- ✗ No gaps between pallet.
- ✓ Refer to the table 1 below for weight limits per strap.



Loading Pallet Row - Single File

- ✓ Refer to the table 1 below for weight limits per strap.
- ✓ Pallet is to be centrally loaded on deck.
- ⚠ Caution is to be taken with tall and top heavy loads due to toppling.

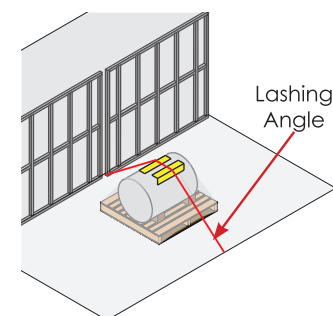


Table 1: Pallet row - Tie down weight per strap

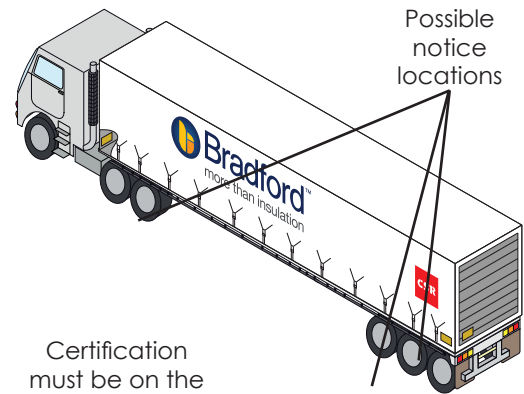
Tensioner Type	Lashing Angle			
	30° - 44°	45°-59°	60° - 74°	75° - 90°
Unblocked	300 kg	420 kg	510 kg	570 kg
Blocked	1200 kg	1600 kg	2000 kg	2300 kg

Appendix 1: Rated System Details

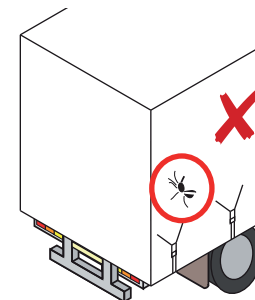
Rated Curtains

Are all curtains load restraint rated?

- No! Curtains are only rated for load restraint if they have a certification on the curtain, vehicle body, or the manufacturer supplies a letter certifying them (normally with truck/trailer serial number).
- In all cases, the certification will list what they are rated to hold.
- In the case of a letter, it must be carried by the driver in the cab of the truck.



Certification must be on the vehicle or with the driver.



Do not rely on damaged load rated curtains (or gates)

Rated Gates

Are all gates load restraint rated?

No! Most gates do not have a rating. They typically rely on two or three flat metal tongues to stop the gate from moving/bending.

How to tell if gates are load restraint rated?

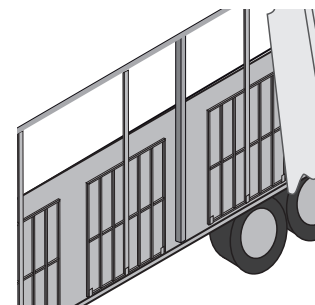
Either:

- The trailer has a certificate explaining the rating; This may be found on the gate or vehicle body.

OR

- The driver must carry and produce a letter of certification from the body vehicle builder explaining the rating and serial number of the body covered.

Such gate systems will typically have a central locking column in the gate or be fixed to a full height vertical post.



Rated gate with centre support

Understanding the rating of curtains or gates

Ratings typically are stated as either:

- Allowable weight per pallet width (So mass of pallet A + pallet B must be less than Rating).

OR

- Allowable weight per pallet footprint (So each individual mass of both pallet A and B, must be less than Rating)

