

Load Restraint Guideline Retail Customer Pick Ups

This guideline applies to:

• Alspec product on retail customer vehicles up to 4.5 tonne gross vehicle mass (GVM).

Information covered includes:

- Customer safety on Alspec sites;
- Application of Chain of Responsibility legislation to Alspec customer pick ups;
- · Loading general conditions;
- · Loading dimension requirements;
- · Load Restraint.

1. Customer Safety on Alspec Sites

- Customers must remain in the safe area at all times unless otherwise directed by an Alspec representative.
- Customers must obey all site requirements as indicated upon entry. Such requirements may include:
 - Personal Protective Equipment;
 - Speed Limits;
 - Restricted area access.

2. Chain of Responsibility

- Alspec is committed to the safe transport of goods. This extends to the transport of products despatched on customer vehicles.
- ✓ Alspec applies the key tenets of Chain of Responsibility for the safe transport of goods:

"Any Party who has control in a transport operation can be held responsible and may be made legally liable"

Alspec has the following Chain of Responsibility requirements for customer pick ups:

Customer (Consignor / Transporter)

- Ensure the vehicle is not overloaded by mass or dimension;
- Apply required load restraint (section 5).

Loader

- Ensure products are packed suitably;
- Ensure load placed within dimensional and mass limits;
- Assist customer to satisfy their responsibilities where necessary.

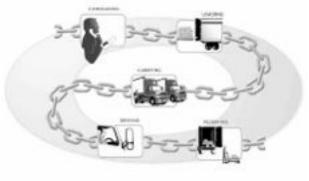
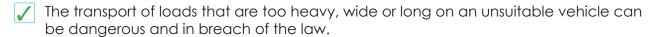
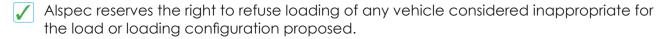


Image Courtesy of the NTC

3. Loading conditions











4. Daytime Load Dimensions and Rack Requirements

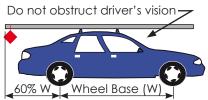
Legal projection (overhang) limits may not be suitable for all products due to flex in product or design of vehicle. Thus other limits may apply.

Vehicle specific:

Drivers vision must not be obstructed.

Rear overhang maximum 60% of wheel base from rear axle.

Roof racks must not exceed manufacturer limits (both rack and vehicle). If not specified, maximum 40 kg (total).



Common to Trailer and Vehicle:

Product must be supported to prevent flex more than 100 mm.

Flexible material should not overhang the sides.

Flexible material should not project beyond racks by more than 20% of their length.



Length (L)

Flexible product 20% overhang

Maximum side projection 150 mm (excluding mirrors). Total width must be less than 2.5 m.

Trailer specific:

✓ Product placement should provide some weight on tow ball (approx 5-10% of load).

The rear overhang requirement is "the lesser of: the length of the load carrying area, or body, ahead of the rear overhang line; and 3.7 metres." Below are some interpretations.

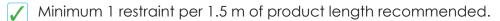
NSW / WA / QLD / TAS / ACT / SA Victoria / Northern Territory Dimension limits for loads on Trailers **Dimension limits for loads on Trailers** lesser of L1 or 3.7 m lesser of L1 or 3.7 m LMax 150 mm Max 150 mm min 300 mm Max 2.5 m Max 2.5 m Y Forward load overhang must not Forward distance is from the centre of project outside drawbar area. the axle group to the front of the load carrying area. This is the "box" for a ✓ Load carrying area must be suitable box trailer. to support load with appropriate restraint points. No overhang beyond the "box".

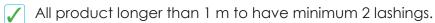


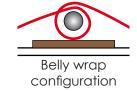
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5. Load Restraint Requirements









- Use belly wrap or choke lashings for: round objects, any bundles, for objects with a low lashing angle, and multiple abreast packs (more than 2).
- All product loaded on an incline must be lashed, preferably belly wrapped.
- Any product loaded into a passenger compartment must be placed on the floor and be unable to slide.
- No metal on metal contact. Products must be placed on surfaces such as timber or rubber.
- Cargo nets or covers highly recommended over utes and box trailers.

Mass Limits per restraint

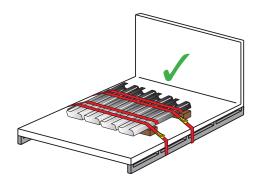
Lashing angle to horizontal	50mm webbing strap and ratchet	35mm webbing strap and ratchet	25mm ratchet tightened webbing	25mm hand tightened webbing	8mm synthetic rope with single hitch
30 - 45 degrees	160 kg	135 kg	54 kg	19 kg	27 kg
45 - 60 degrees	230 kg	190 kg	76 kg	27 kg	38 kg
60 - 90 degrees	280 kg	230 kg	93 kg	33 kg	47 kg

Note: If load is on racks, check rack capacity is not exceeded.

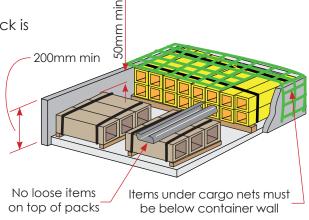
Restraint of product to the vehicle & trailer

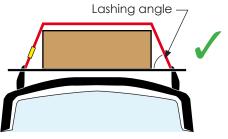
All items not restrained by lashings must:

- Be contained so that the bottom of the pack is at least 200 mm from the top of the trailer;
- Be blocked in a way that will not allow the load to pierce the trailer;
- Not be prone to movement;
- 🗶 Not have loose items on top of a pack; and
- If placed under a cargo net, not extend above the top of the trailer.



Belly wrap all long product where possible





Steep lashing angles above 60° are preferred



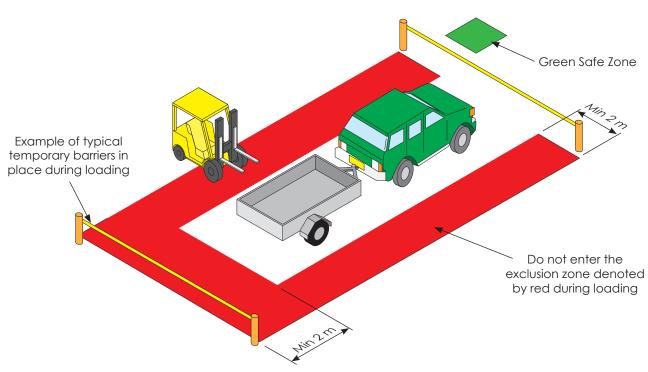




6. Loading Areas

- When vehicle is being loaded by forklift or over head cranes customers must remain in the designated safe location as directed by Alspec personnel. This may include inside the vehicle.
- Customers may only access the area once loading is complete or advised by Alspec personnel.
- Customers must not get into the ute/truck trays at any time during the loading process.
- The opposite side of the vehicle from the forklift or an over head crane is a high risk area. Do not access the exclusion zone during loading.

Sample Loading Area for Retail Customer Pick Ups



Key Assumptions:

1. Minimum coefficient of friction between load and support (rack or tray) is $\mu_s = 0.28$ (worst case friction plastic wrapping sheet to timber).

This document is provided for guidance only. Engistics has developed this guideline to comply with the relevant standards and legislation, however it remains the responsibility of the user to ensure that the methods used are adequate for a particular situation. Additional requirements maybe necessary under some conditions. Engistics makes no warranty as to the use of this guideline in all circumstances. The information contained in this guideline is confidential to and remains the property of Aluminium Specialities Group and Engistics. Any changes to this guideline must be approved by Engistics.

