

Australia and New Zealand – Safe Loading Guide

1. Australian and New Zealand packing and loading requirements

Any shipments bound for or to be transported within Australia must be packed, loaded and restrained in accordance with the principles set out in this guide, to ensure that:

- (a) containers are not overloaded;
- (b) goods within containers are loaded and restrained securely so that they will not shift in transit, cause or vessel/vehicle carrying them to become unstable or become dislodged from any vessel/vehicle carrying them; and
- (c) Swire Shipping is provided with all relevant particulars of a consignment and made aware of any particulars that may affect any of the above matters.

This guide is intended as a guide only. It does not set out all applicable packing, loading and restraint issues (e.g. VGM requirements, CTU Code). You must comply with any such requirements, in addition to those set out in this guide.

By consigning shipments with Swire Shipping, you warrant that you have complied with the principle set out in this guide.

2. Packing, loading and securing principles

2.1 Packing and loading

When packing and loading a container, the following general principles should be followed:

- (a) Follow a loading plan when packing goods in a container;
- (b) Do not overload any shipping container;



Figure 1: Manufacturer-specified capacity

- (c) Load heavy goods first and, ideally, at the bottom of a container;
- (d) Load light goods on top of heavy goods;

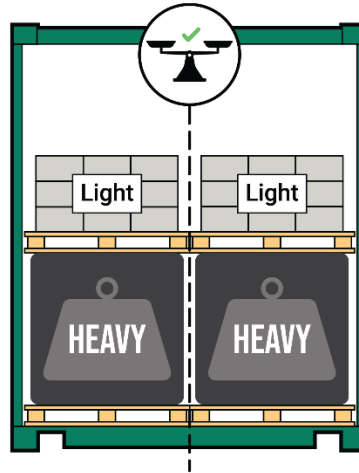


Figure 2: Light on heavy load

- (e) Pack the goods in approximately even size/weight layers – irregular cargo stacks will impair blocking, stowing and securing;
- (f) Try to distribute overall weight of the goods across the width and length of the container as evenly as possible;

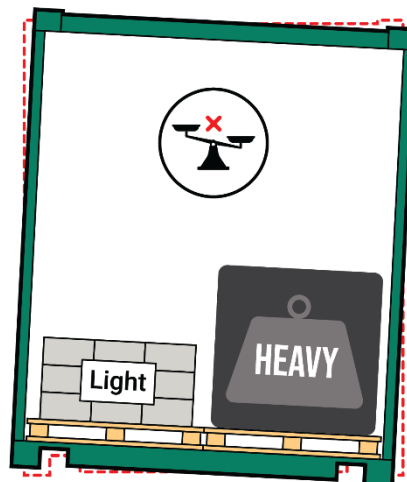


Figure 3: Unbalanced load

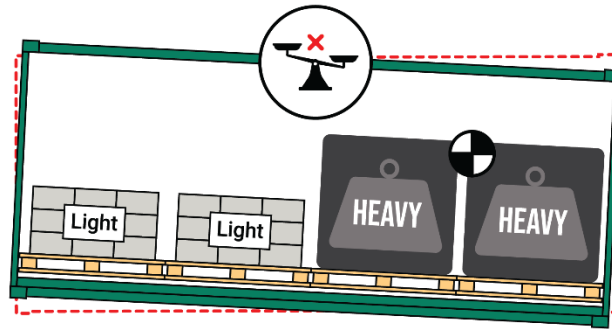
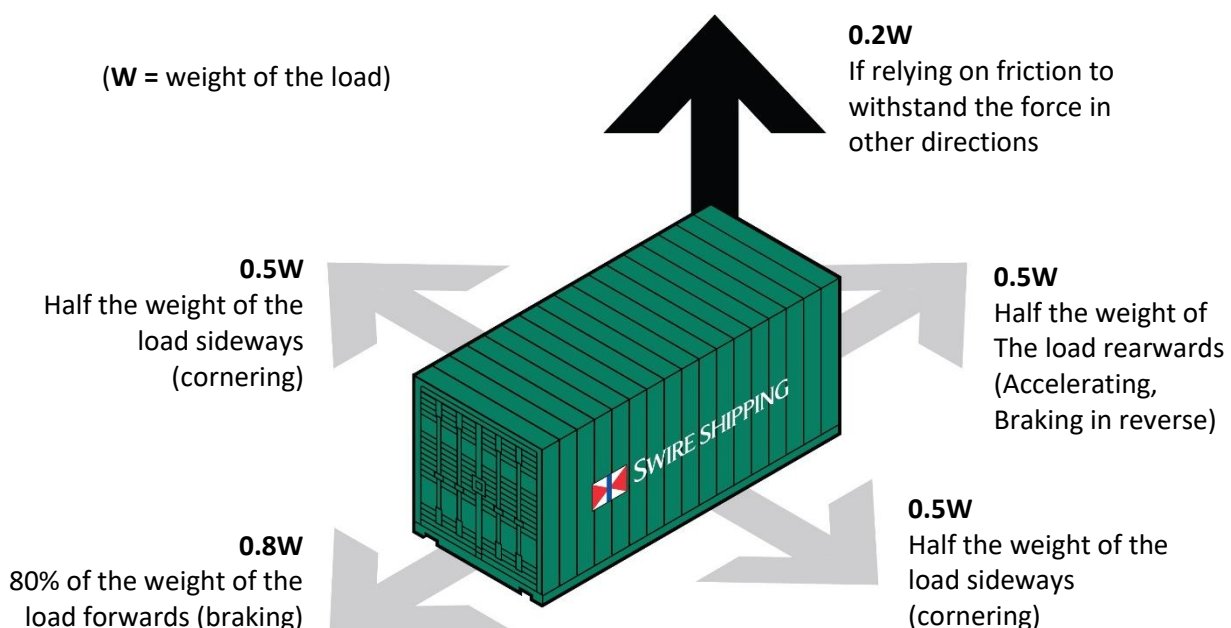


Figure 4: Offset centre of gravity

- (g) Heavy and dense cargo loads must be distributed on the major structural components of the container;
- (h) Mark or advise the centre of gravity on the container if it is more than 10% of the container length or height away from the container centre;
- (i) Cargo packaging must be of sufficient strength to accommodate stacking of goods within a container;
- (j) Packaging must be able to withstand the ordinary forces that will be experienced by the shipment during all legs of its voyage, at sea or on land;
- (k) Clearly mark, label and segregate dangerous goods in accordance with the International Maritime Dangerous Goods (IMDG) Code.

2.2 Securing the cargo

All containerised shipments bound for Australia and New Zealand must be secured so that, **at a minimum**, they are capable of withstanding the following forces:



The above forces are:

- (a) 0.8 g deceleration in a forward direction;
- (b) 0.5 g deceleration in a rearward direction;
- (c) 0.5 g acceleration in a lateral direction; and
- (d) if friction or limited vertical displacement is relied on to comply with any of the above – 0.2 g acceleration in a vertical direction relative to the load.

Securing of goods within a container must be sufficient so that they do not shift in transit, cause or vessel/vehicle carrying them to become unstable or become dislodged from any vessel/vehicle carrying them.

When packing and loading a container, the following general principles should be followed:

- (a) Follow a loading plan when securing goods in a container;
- (b) Try to pack contained loads tightly with adjacent goods to minimise horizontal movement (forward/aft or port/starboard);

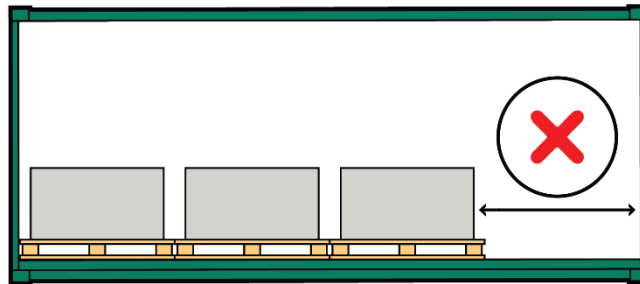
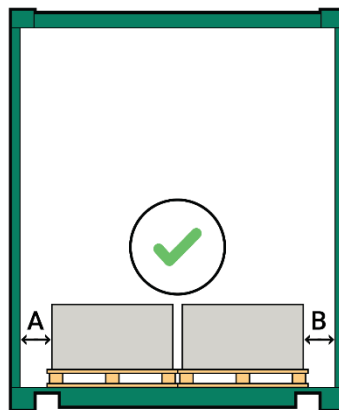


Figure 5: Gaps in containerised load

- (c) Where tight packing is not possible, the cumulative total of all gap widths in any direction must be no more than 200 mm front-to-back and 100 mm side-to-side;



A + B less than 100mm

Figure 6: Maximum gap width

- (d) For loads with cumulative gaps greater than 200 mm front-to-back or 100 mm side-to-side:
- (i) use extra restraint, such as lashings, webbing nets or gates; or
 - (ii) move goods to consolidate all gaps in one void, then fill the void with appropriate dunnage or blocking;

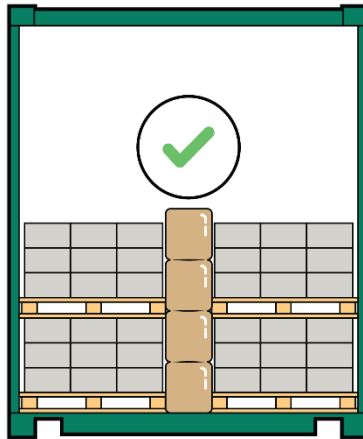


Figure 7: Load packed with air bags

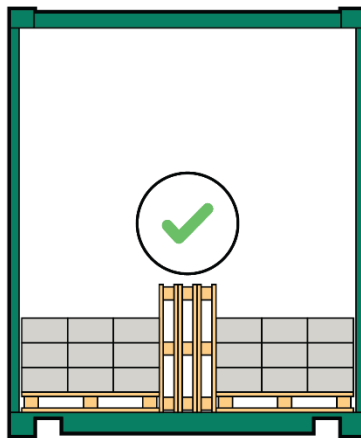


Figure 8: Gap filled with pallets

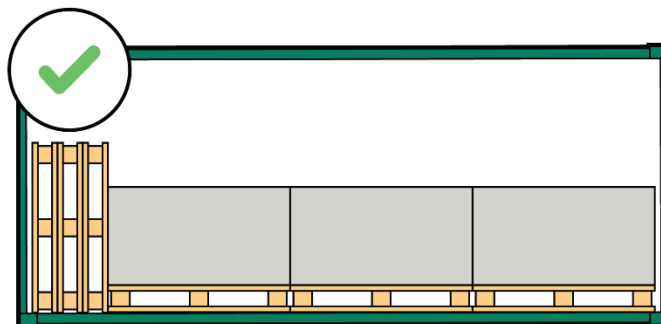


Figure 9: Containerised load – gaps filled

- (e) Consider locking, blocking or lashing individual goods, or using a combination of these methods, to prevent cargo sliding or tipping;
- (f) Do not overtighten lashings;
- (g) Use hooks or shackles to fasten lashings where necessary, don't use knots
- (h) Ensure that lashings are not twisted or knotted;
- (i) Fill gaps in cargo stows with empty pallets, dunnage, foam or other suitable materials;
- (j) Try not to load low-friction materials on other low-friction materials (e.g. metal on metal);
- (k) Where greater friction is necessary, use non-slip material;
- (l) Use rated lashing equipment;
- (m) Only use well-maintained packing, loading and load restraint equipment;
- (n) Do not use packing, loading and load restraint equipment that is worn, torn or broken;
- (o) Inspect all restraint equipment to confirm that is in good working condition and strong enough to restrain the load before each trip. If there is any doubt about equipment reliability and safety, replace it with equipment in good working condition;
- (p) Check all locking and latching mechanisms are fully functional.

3. Shipping the cargo

Before shipping any goods, you must provide all necessary particulars to Swire Shipping to ensure that the container can be handled, loaded, shipped, unloaded and transported by road or rail to its destination, including but not limited to:

- (a) goods type;
- (b) quantity;
- (c) mass;
- (d) dimensions;
- (e) any special handling or securing requirements;
- (f) any unusual or irregular particulars (e.g. asymmetrical mass distribution or off-centre centre of gravity etc.);
- (g) advice on any matter contained in this guide that has not been met.