



Packing Guide for Cargo Shipments

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Introduction

DP World Paramaribo is part of DP World group who is the leading provider of smart logistics, enabling the flow of global trade. Our range of services covers the integrated supply chain – from maritime and inland terminals to marine services and industrial parks and technology-driven customer solutions. We deliver through multiple digital platforms and a global network and operate through an integrate sustainability and responsible corporate citizenship into our activities. With this approach we striving for a positive contribution to the economies and communities where we live and work.

DP World Paramaribo is a Multi-Purpose terminal and aims to deliver operation excellence through efficient, secure and safe cargo handling.

Therefore, it is essential that the shipper of the cargo ensures that the packing material is appropriate to ensure that the cargo is sufficiently protected during shipment overseas and handling within our premises.

Packing of cargo remain as a responsibility of the shipper to ensure adequate packing is used and therefore (according to 18.4 in our General Terms and condition) DP World Paramaribo will not be held Liable for damaged caused due to defected protection of packing of the cargo.

With this document we provide our customer the packing guidelines for the various cargo types to ensure that damage during cargo handling and movement within our premises is minimized.

1

Assessing Packing needs

Quality packing is key when it comes to prevention of damage. As assessing your packing needs is an essential step to determine what's best for the type of goods you with to transport. Your large or palletized pieces need to be suitable for express transportation where goods are handled through a uniform network of trucks, planes and automated handling facilities. Listed below are the four key handling requirements that you should consider when packing your items.

1.1 Considerations that will help you determine your packing requirements:

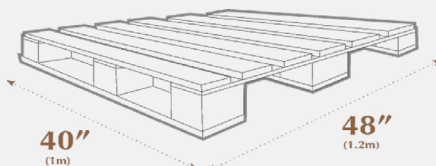
Weight	Consider the strength and durability of the packing material and the container or pallet to be used.
Size and Shape	Items should not touch the outer wall of the packing material odd shaped our rounded packing may need extra attention
Form of content	Special packing materials and packing techniques are required for liquid shipments and powders
Value of contents	Extra cushioning and protection may be required for high value goods
Fragility	Extra cushioning and protection are required for fragile items. Apply special handling label
Final Use	Confirmation from customer if cargo is going to be retail ready and if it can be marked
Regulations	Some Regulated items may require specialist packing

2 Using pallets

The following section will outline the DPWP/IPS recommended standards for palletized shipments such as what pallet to use, how to stack your pallet, and how to protect and secure your goods. Strict weight and dimensional restrictions apply to pieces carried through the DPWP/IPS network to ensure that all goods are handled safely and securely through our facilities. In order to minimize the risk of loss or damage during transport of goods between the supplier's facilities and consignees' warehouse, DPWP/IPS recommends the use of standard-sized pallets to avoid incurring oversized piece surcharges. If in doubt about whether your pallet is considered standard-sized, please note that all standard pallet types have length and width measurements of less than 120cm.

2.1 Tips for stacking cargo on pallets

- Use standard sized pallets for shipments with a L x W below 1.2mts
- Do not stack the cargo higher than 2.0mts as it can collapse easily
- Ensure that your pieces can be safely stacked
- Odd-shaped and non-stackable items will incur a surcharge
- Ensure that the pallets are durable enough to carry loads of any kind. Also, check the pallets for any damage before stacking the goods
- As per the OSHA regulations, do not stack products with sharp corners or edges in pallets in a manner such that they face main aisles and injure any person coming near them
- Avoid keeping stacked pallets in high traffic areas
- Do not stack products only on one side of the pallet. The load must be evenly distributed.
- Always take care to stack the heaviest load at the bottom of the pallet
- Use strapping or banding to secure shipment to the pallet and stretch wrap (use a minimum of 60 gauge, five revolutions recommended) to prevent pieces from getting lost or separated from the load.



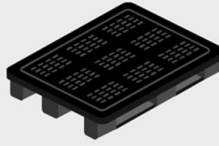
2.2 Selecting the right pallet

To make decision when choosing pallets, it is important to understand the implications. Wooden pallets at their very core can be divided into two main groups based on their construction material. This will either be hard or softwood. Typically, hardwood is more expensive yet stronger, but softwoods are usually readily available. Below you will find an overview of the common pallet types and the aspects to consider for cargo shipment.



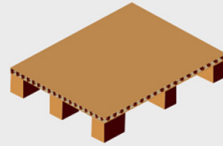
Wooden

- Strong and suitable for heavy items
- Reusable
- Widely available & less expensive than plastic
- If shipping internationally, be sure the wood meets international treatment standards for the markets where it will be used
- Ensure the pallet has bottom bracing to increase stability |



Plastic

- High loading capacity and anti-slip surface
- Low weight
- Resistant against humidity and corrosion
- More expensive compared to wooden pallets



Cardboard

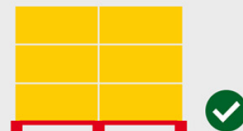
- Light weight
- 100% recyclable
- Single use only
- Not suitable for heavy items and in humid environments
- Low cost

2.3 Stacking of the pallet

Stacking pallets properly will not only save space in your shop but also helps eliminate hazards for tripping and collision. It also helps to categorize the goods, which in turn eases the material storage and transportation activities. If pallets are stacked carelessly or too high, it can result in collapsing causing material damage, injuries or death to those in their direct surroundings. The following are the measures majorly suggested by OSHA when it comes to stacking pallets.

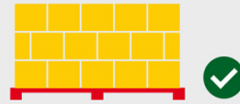
Column Stack

- Column stacking boxes to a pallet is the best way to maintain the strength during transport and protect goods against compression.
- Stack boxes in columns, corner-to-corner and edge-to-edge, for the greatest stacking strength. The pallet can then be stabilized and secured with banding or stretch-wrap.



Interlocking Stack

- If the goods inside a box are rigid, interlocking stacks will result in increased pallet stability.
- If the goods inside a box are not rigid, interlocking stacks can reduce compression strength by as much as 50%, leaving goods susceptible to damage.
- Stack boxes corner-to-corner and edge-to-edge, for better stacking strength.



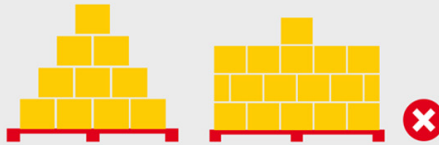
Overhang Stack

- Boxes must not overhang the pallet edge as it unduly exposes the goods to damage during normal handling. Using an overhang pallet stacking method can also reduce individual box strength by more than 30%.



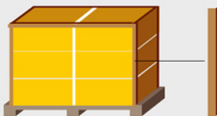
Pyramid Stack

- Pyramid-shaped pallet loads do not provide a level top surface and expose goods to damage, risk of delay & additional surcharges.
- To create a level top surface with an odd number of boxes, consider how the boxes are stacked, using empty boxes to create a level top layer, or shipping the excess boxes as loose pieces.



2.4 Protecting your palletized goods

To prevent damage to your goods during transit you may use a variety of measures as outlined below. These methods are not exhaustive and other forms of protection may be employed, for example, foam cushioning and wooden crating.



Edge Protectors

Vertical edge protectors not only reduce damage to box edges during transport but also help to stabilize the load. Horizontal as well as vertical edge protection is advised.



Paperboards

Paperboards positioned on the top, base and sides provide a protective barrier. They help to spread the weight of shipments placed on top of and against the base slats of the pallet.



Bracing

When shipping outside pieces such as cable reels or engines, ensure that the items are braced against the pallet with wood or metal. The bracing should prevent sideways movement that may occur during transportation.

2.5 Securing palletized cargo

Banding and shrink-wrap are the two primary methods of securing goods to a pallet and must be employed for outsize or palletized shipments. The types of banding to be used can include steel, nylon, polyester (PET) and polypropylene. Metal is more suited to heavier solid items whereas nylon and PET are recommended for boxes and lighter items. If using plastic strapping, ensure that it is highly durable and will create an unbreakable seal.



Shrink Film / Shrink-wrap

- To apply shrink-wrap, secure the leading edge of 70 gauge stretch or shrink-wrap to the pallet or forkable base.
- Apply the shrink-wrap by tightly rotating the film horizontally around the goods.
- Continue applying the film upwards whilst ensuring a 50% overlap on the previous layer of film.
- At the top, diagonally crisscross the film from each corner until the top is fully covered.
- Finally, angle the film downwards and apply a tight overlap around the base of the pallet.



Banding / Strapping

- When applied correctly, strapping is an ideal way to secure your shipment.
- If manually applying the strapping, loop the first piece underneath the pallet void and over the top of the goods to secure it vertically.
- Repeat the strapping in all directions so that at least four straps tightly secure the load.
- Use horizontal edge protectors to avoid bands cutting into edges of the top boxes.
- Use shrink-wrap to further protect the shipment from environmental damage during transportation.

2.6 Label placement palletized cargo

Precise placement of labels on pallet cargo depends on the shape and weight of the products on the shipping units and whether the products or on finished pallet are wrapped. The below pictograph illustrates the proposed heights the label on the pallets.

Location of the label on the pallets

Pallets less than 40 cm high:

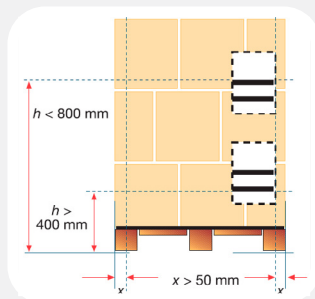
As high as possible, without negatively affecting the height of the symbol, and more than 50 mm from the vertical edge, including the empty margins.

Pallets more than 40 cm high:

At a height of between 400 and 800 mm from the base of the pallet, and more than 50 mm from the vertical edge.

All cargo **MUST** be provided with the below information to ensure proper handling and correct delivery:

- Handling Marks
- Weight Marks
- Consignee name
- Country of Origin Markings (optional)
- Cargo Number and Size Markings



3

Commodity specific guidance

The following section provides commodity specific guidance for frequently shipped large and heavy items. This guidance will help ensure your item is safe, secure and ready for Express transportation. If your goods are not packed correctly, DPWP/IPS will not pick-up or process your shipment as it will pose a risk to other shipments, equipment and personnel. If your goods are not packed optimally.

3.1 Handling labels

Although DP World Paramaribo cannot guarantee maintaining the stable orientation of shipments during transport, our team actively looks for visible handling label instructions on the cargo. Proper use of handling instruction labels can help ensure the appropriate transport, handling and storage of your shipment during transit.

Handling Labels are preprinted labels that identify proper handling directions and in some cases destination information. These labels may indicate contents of package such as Flammability or Fragile or they may indicate directions for handling.

Here are examples of commonly used labels:



This Way Up
The upward arrows show the direction that the package must be transported handled and stored.



Fragile, Handle with Care
The package must be handled carefully.



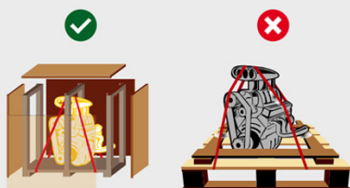
Keep Dry
The package must be protected from excessive humidity and be stored under cover.

Displaying the cargo labels clearly is important in ensuring that your shipment moves swiftly through DP World Paramaribo's networks. Below are a few key points to note:

- Fix the cargo label securely on the top surface of the shipment unit. This will help us keep your shipment in an upright position as much as possible during transit!
- Ensure the label is wholly visible on one surface and that the label does not cover any seams.
- Do not let other labels, tapes or paperwork cover the cargo label.
- We never recommend using an old box but if you do, ensure all outdated cargo labels are removed prior to use.
- Placing a spare label inside the package will help us identify your cargo if the original label becomes detached or damaged
- If you need to apply other labels on your shipment, please avoid, placing them on the same surface as the cargo label.
- Use a plastic self-adhesive clear window pouch to hold any loose documents that are required to be placed outside of the box.

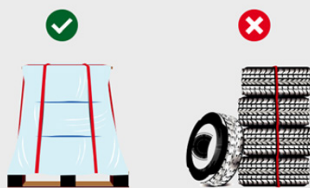
3.2 Securing cargo

All cargoes should be stowed and secured in a manner that will avoid unnecessary risks for injuries and damages. The following section will outline the DPWP/IPS recommended cargo securing techniques for the various breakbulk cargo types.



Engines & Other Vehicle Parts

- Engines and other vehicle parts must be shipped in a crate or securely braced to a pallet and squarely covered with reinforced cardboard and edge protectors.
- All liquids/fuels must be drained from the engine or part prior to transportation.
- Parts must not overhang from the pallet itself, as this risks damage during handling. If parts do not squarely fit onto a pallet, they should be placed inside a crate or on an appropriately sized fork-movable base.



Car & Other Vehicle Tires

- Car and other vehicle tires must be shrink-wrapped to a standard pallet and then secured using metal or unbreakable plastic banding.
- Cardboard, wooden or plastic protector boards must be placed on top of the tire wall to prevent damage to the tires and other shipments.
- If using customized car tire boxes, they should be suitable for the weight of the tire and have flat, non-rounded edges.



Industrial Equipment

- Industrial equipment must be shipped in a crate or securely braced to a pallet and squarely covered with reinforced cardboard & edge protectors.
- All liquids/fuels must be completely drained from the equipment prior to transportation.
- Large top-heavy items should be loaded on a wide base to help prevent instability during transportation.
- Surcharges apply for shipments that cannot be safely stacked upon.



Cable Reels & Spools

- Cable reels are not suitable for loose transportation and must be packed on a pallet.
- To avoid potential surcharges, load the cable reel sideways on an appropriately sized pallet so that items can be safely stacked on top.
- Heavy reels need to be braced to the pallet with wooden blocking (above 50kg).
- The reel and blocking must then be firmly secured to the pallet with 2 horizontal and 2 vertically placed metal or unbreakable plastic strapping.
- If cables wound to the reel are highly sensitive, we recommend crating the reel or covering the reel with a corrugated shell.



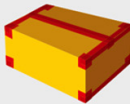
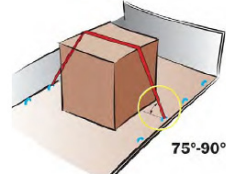
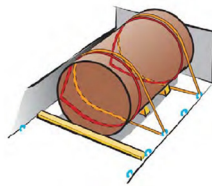
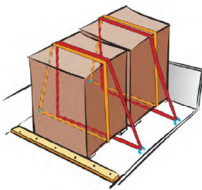
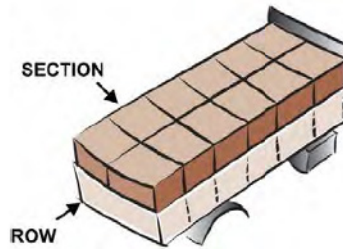
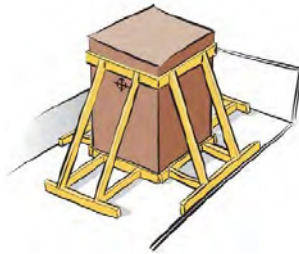
Panel Glass / Windscreens

- Panel glass and vehicle panels must always be packaged inside a box or wooden crate to ensure protection from torsional forces, other boxes, and material-handling equipment used during normal handling.
- Surround the panel or glass edge with Styrofoam piping and fully cover with bubble wrap.
- Specially molded Styrofoam inserts suitable for the size of the outer box should be placed around all edges of the glass or panel.
- The panel and molded inserts must then be placed inside a two-wall corrugated outer box.
- The Styrofoam inserts should prevent any movement of the panel or glass within the box and maintain a minimum separation distance of 6cm from the outer box wall.
- Affix 'GLASS' special handling labels on all sides of the box.



Oil Drums

- Oil drums must be shipped on a plastic or hardwood pallet with plank gaps of less than 2cm.
- Fiberboards must be placed on top of and in between the oil drum(s) and pallet base to prevent movement and damage during transport.
- Secure drum to pallet using a minimum of two metal or unbreakable plastic straps. Use corner cleats/strap protectors between the drum and straps to prevent cosmetic strap damage during transit.
- When shipping multiple drums, band the drums together before securing to the pallet base.



Box It

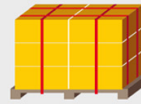
Caution should be taken for structurally weak, long, and narrow cardboard packaging (>120cm). Reinforce the packaging or opt for crating.



Crate It

Heavier, larger items such as engines or industrial equipment should be crated.

Fully enclose your goods with quality hardwood and brace your crate diagonally to increase its strength. Ensure the wood is heat-or chemically treated prior to use.



Palletize It

For bulk shipping or heavily boxed pieces, place the items on a pallet and secure using the methods outlined in this guide.

Ensure a level and even surface on top of the pallet, and do not allow boxes to overhang the pallet's edge.



STACKABLE

Ensure your piece is packaged to enable it to be stacked or have items stacked upon it.



FORKABLE

Larger pieces will be handled by a forklift; the pieces must be loaded to a pallet or a fork-movable base to ensure safe and damage-free handling.



TILTING

Ensure your item is secure and stable both on a pallet and within the packaging. Goods will tilt during flight.



SHOCK & VIBRATION

Vibrations and minor shocks can occur while under mechanical handling. Ensure your items are sufficiently packaged.

4

Consequences of insufficient securing

Cargo which is insufficiently packed and secured in a transport unit may move inside the unit when it is exposed to acceleration, e.g. by hard braking of a vehicle on the road or by heavy ship motions at sea. Moving cargo resulting from improper securing may cause accidents, damage to the cargo, to other cargo or to the cargo transport unit. In particular, heavy cargo items may develop inertia forces under such traffic accelerations, which may let them break through the unit's boundaries, menacing persons, environment or property of third parties.



Figure 4.1 Lack of proper securing during movement



Figure 4.2 Cargo damage due to vehicle accident

Cargo breaking out of a unit is of danger on board RO/RO vessels, where shifting cargo and containers may affect safe operations on the vehicle deck or the stability of the ship (Figure 4.3 and Figure 4.4).



Figure 4.3

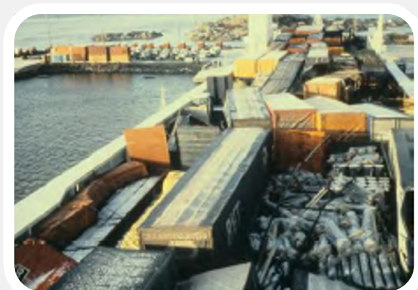


Figure 4.4

Damage to the cargo is always an economic loss. Additionally, in case of dangerous goods, any damage to a receptacle may impair its containment capability and cause spillage of the contents (see Figure 4.6), thus endangering persons and affecting the safety of the transport vehicle or ship.



Figure 4.6



Figure 4.7

Spilled cargo may also endanger the environment. Cargo from road or rail transport may cause contamination of the soil and/or water, and marine pollution when released at sea.



Figure 4.8



Figure 4.9

4.1 Consequences of insufficient control of humidity

Some units present a closed box with a specific microclimate. During a long-distance transport, the humidity contained in the goods and in the packing, material including timber used for blocking and protection may condensate on the inner boundaries of the unit or on the cargo or even within the cargo. If sensible goods are packed carelessly into such a closed unit, mainly box containers for sea transport, metal parts, if not properly protected, may corrode, clean surfaces may be stained, and organic materials may suffer from mould or rot or other degradation.



Figure 4.10

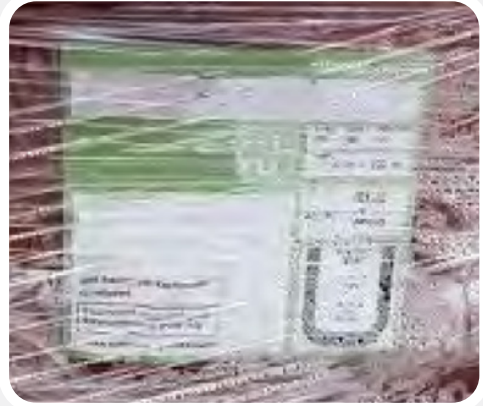


Figure 4.11

Hygroscopic cargoes have variable water content. In ambient air of high relative humidity, they absorb water vapors, while in ambient air of low relative humidity, they release water vapors.

If packed into a unit in a climate of high relative humidity they would bring a considerable amount of water into the container, providing for an internal high relative humidity.

This water may be released from the goods during temperature changes and may condensate with the above-mentioned consequences. If this threat has not been averted by pre-drying the cargo to a so-called "container-dry" state, the high-water content may result in mold, rot and biochemical changes. For some products, these phenomena are also associated with self-heating, which may go as far as spontaneous combustion, for example with oil seeds, oil seed expellers and fish meal.

4.2 Consequences of the use of unsuitable shipment units

Climatically sensitive cargoes may require ventilated containers with controlled atmosphere (reefer or heated container). Heavy packages or packages with small footprints may require shipment units capable of carrying concentrated loads. Dry bulk powders and granules may require packing units with stronger end walls to avoid structural failure, overloading, serious damages or cargo losses.

Shipment units showing structural deficiencies may fail under normal transport conditions, e.g. the bottom of a damaged container may collapse when the container is lifted, the front wall of a damaged road vehicle may give way upon hard braking or goods in a unit with leaking roof may suffer from entering water. This makes a thorough pre-check of each unit indispensable before packing may commence.



Figure 4.12



Figure 4.13

4.3 Consequences of overloading/over stacking

Overloading or over stacking by excess mass presents a serious threat to the safety of work of the various persons along the chain of transport, who oversee handling, lifting or transporting the cargo. This applies to all modes of transport on road, rail and sea.

There are many hazards associate with an overloaded or over stacked cargo: When loading or unloading cargo on or off a ship, vehicle or railcar and handling by mobile lifting equipment in a terminal area may result in a failure of the lifting equipment. While attempting to lift an overloaded or over stacked shipment unit from a ship, vehicle or railcar, the lifting equipment may have inadequate lifting capacity and the lift fails (see Figure 4.14). An unacceptable delay will occur while a replacement device with greater capacity is sourced or to re-wrap the collapsed pallet.



Figure 4.14

5 Liability

The terminal operator and customer liabilities are defined in the general terms and conditions. Based on clause 18.4 in our general terms and conditions, the terminal operator shall not be held liable for any loss or damage to a Container or Cargo, death or personal injury to the extent that such loss, damage, death or injury caused by or contributed by defective protection or packing, latent or natural wastage or contamination of Cargo, mis-declared Cargo information, failure or malfunction of refrigerated container equipment or refrigerants or defective or malfunctioning twistlocks, or any other equipment of the Customer.

For more detailed information regarding our general terms and conditions please visit our website by clicking on the following link

<https://www.dpworld.com/en/paramaribo/terminal-services/general-terms-and-conditions>

6 Customer Service Contact

Should you have any more concerns or questions with regards to the requirements mentioned in this guide feel free to contact our customer service on the below contact details

Email:	customerservicesPAR@dpworld.com
Mobile/Whatsapp contact:	+597-8881275
Website:	<u>www.dpworld.com/en/paramaribo</u>

