



# The Ultimate Packaging & Labeling Guide

Everything You Need to Know



Packaging and labeling are critical elements for any product-based business. Proper packaging can ensure that your products arrive safely and in good condition, while labeling provides critical information that helps to streamline the shipping process and ensure compliance with regulations. However, with so many different types of packaging materials, sizes, and shipping requirements, it can be challenging to know where to start. In this guide, we'll provide you with essential tips and best practices for packaging and labeling your products for shipping, so you can protect your merchandise, streamline your shipping process, and improve your customer's experience

## Levels of Packaging

All products are enclosed in different levels of packaging during the shipping process. This is done to ensure the safe delivery of products to their final point. There are 3 main levels of packaging that are used in packing in the shipping industry, including:

- **Primary Packaging**

Primary packaging or the first level packaging is the one that has direct contact with the products and is referred to as a consumer unit as well. The purpose of this level is to protect or preserve the finished goods. Moreso, this primary packaging is intended for the end customer to make it appealing for them.

- **Secondary Packaging**

This level of packaging comes outside the primary package to combine different products, creating a Stock Keeping Unit (SKU). This is done to make handling of small materials easy, and to add more protection to the primary packaging. This type of packaging is made of multiple components that includes separators, padding, bags, papers, reinforcements, boxes, and padding. The secondary packaging helps with ecommerce delivery as it ensures safe shipping of the small cargo packages.

- **Tertiary Packaging**

The tertiary packaging is also known as transit or bulk packaging, where larger quantities of SKUs are combined together for transportation by warehouses. At this stage, goods are treated as distribution

units to move the larger cargo securely. The example of tertiary package includes the pallets on which the bulk shipments are placed on, corrugated wraps, and stretch wraps.

## Type of Packaging

There are many types of cargo packaging with each having its own perks and disadvantages. Some of the most common ones used during the shipping process includes:

### Cardboard

These types of boxes can be made using two kinds of fiberboard, white paperboard and brown paperboard. The prior one is used to pack the products that are sensitive to light; whereas the latter is a more appropriate choice for products not sensitive to light, for instance, food products. Cardboard packaging can further be categorized in the following:



- **Corrugated Carton**

This cardboard box is widely used due to its affordability, strength, recyclability, and lightness. They are a popular choice for food, cloth, books, plastic, and similar non-breakable commodities for their high quality.

- **Double-Walled Corrugated Carton**

This type of packaging is mostly used for large goods, like furniture. The cargo is first wrapped in a material like Styrofoam and bubble wrapped tightly to prevent any movement, then they are palletizing properly and strapped to ensure they do not move from their place.

- **Double Carton**

The double cartons are used for fragile products that need special handling, like glass, porcelain, or smaller items. Each of the products added in the double carton is individually packed in an industrial bubble wrap, which is then put into an inner shipment box, 2-3 inches deep, to be loaded on actual boxes.

## Bagged Cargo

As the name suggests, the products in this type of packaging are enclosed in a bag. This is useful to protect smaller items from damage. Usually, the shippers place bagged cases with other types of cargo in the container, like crates or boxes.



The packaging is made of sturdy material; however, they can only keep the contents in place and not offer any extra protection from external elements. Dried fruit, grains, fertilizers, seeds, coffee, coconut, flour, vegetables, fresh fruits, and raisins are the common examples of bagged cargo.

## Wooden Crates



Wooden crates are usually utilized to ship heavy and large objects. They are made using plywood or lumber, and joined together using screws, bolts, or nails. These crates can be customized based on the size of the cargo and are usually used to ship products like machinery, furniture, or appliances. These crates offer protection against all kinds of impact and vibration during transportation. Furthermore, the crates are mostly used as an exterior package when combining different cartons or increasing safety.

## Wooden Cases

Wooden cases are the most widely used form of packaging because of their versatility and durability. They are made using high-quality wood, like mahogany or oak. They can be used for different kinds of material including electronics, heavy machinery, or art items.

Besides being durable, these cases are also lightweight, making them easy to move around during the shipment. They can also be stacked onto one another if large numbers of items need to be transported.



## Steel Drums

This packaging can be used to store and ship different kinds of material. The typical size for steel drums is around 55 gallons; however, they can vary in size. Steel drums are mostly used for liquid cargo, like oil or chemicals. Some of the shipping companies also use them for storing food products, like flour or sugar.

This packaging type is among the most durable and solid and can withstand the rigorousness of the shipping process. Another reason for their common use is they can be easily cleaned and reused, leading to sustainability in the shipping process.



## Palletized Cargo

This is a type of packaging where the shipping products are placed on a pallet for transportation. This is preferred by many as they offer more security, efficiency, and safety. It is a great method to optimize the space in a container or trailer, allowing to move more cargo at the same time. There are different pallet sizes that can fit in the intermodal containers for shipment, the standard ones are:

- Europe, Asia: 1000 X 1200 mm
- North America: 1016 x 1219 mm
- Australia: 1165x 1165 mm
- Asia: 1100 x 1100 mm
- Worldwide: 1067 x 1067 mm
- Europe: 800 x 1200 mm



## Bales

Bales are compressed blocks of material that is wrapped in plastic or water-resistant materials for shipping cargo. The bales are made using straw, paper, hay, cotton, cardboard, or wool. This type of packaging is more common in industrial, agricultural, and recycling applications. The grouping of the plastic in the packaging gives more flexibility and adaptability in terms of the size of the packaging.



## Containers



This standard-size rectangular box is also known as intermodal containers as they can be used across different transportation modes. The International Organization of Standardization (ISO) sets all the standards for designing containers that are easy to load and unload during shipment.

The containers are usually divided in two categories, including:

- **Dry Containers:**

They are used to transport non-perishable goods. These are made from steel or aluminum with corrugated and solid walls. Though they are available in different sizes, the most common ones are 20-foot or 40-foot.

- **Refrigerated Containers:**

They are used to move perishable goods, and also known as reefers. They are made from stainless steel with insulated walls. Similar to dry containers, they come in different sizes, with 20-foot and 40-foot the most common ones.

## Packing your Shipment, the Right Way

### Quick Tips

If you are short of time, here are some basics of good packing.

#### Step 1 - Assess

- Consider the weight & fragility of shipment contents
- Value of content being shipped
- Packing requirements prescribed by transportation regulations



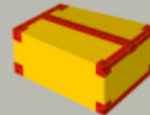
#### Step 2 - Pack

- Use quality double wall boxes
- Ensure 6cm distance between shipment content and all walls of the box
- Fill all void space



#### Step 3 - Seal

- Use pressure sensitive tapes of at least 48mm width
- Adopt H-taping method to seal all edge and seams



#### Step 4 - Label

- Apply shipment label to the top surface of your package
- Clearly display shipment label on a single surface



## Assessing the Packaging Needs

During any shipment, packing is the most crucial aspect to avoid damage. Assessing the packaging needs is the first step in finding the right kind of packing for your cargo.

## Handling Requirements

In this section, we will discuss the right handling requirements that you should consider when packing the items.

## Weight

Consider the strength of the packaging box, as it should be durable enough to hold the weight of the products that are being shipped.



## Shape and Size

If the content that is being shipped is oddly shaped, you might need extra protection for them. The products inside should not touch the wall of the box.

## Form of Content

For shipping liquids or powders, special packaging material and techniques should be used to ensure the safety of the product.

## Value of Cargo

For high value goods, you might need to add extra cushioning and protection inside the box.

## Fragility

For packing the fragile items, extra protection and cushioning should be added, along with special handling labels on the box.

## Final Use

Keep the final use of cargo in mind while packing. Considering that will decide if you want retail ready packaging, or if there is any marking that you should avoid.

## Regulations

Some items might require specialist packaging, depending on the regulations that are on the product by the country you are shipping it to.

# Choosing the Right Material

## External Packing Materials

These are the commonly used external packing materials:

### Parcel

For parcel deliveries, always use durable corrugated cardboard boxes. Whereas, for heavy or fragile items, choose double or tri-wall constructions. You should also look out for manufacturer's recommendation about the strength and construction type that they suggested for product shipment. Furthermore, consider the size of the box as well, since under or over filled boxes might burst.



## Flyer Bag

While shipping out the flyer bag cargo, make sure to consider the tensile and seam strength of the packaging to avoid any sort of damage to your product.



## Internal Packing Materials

All the internal packaging materials have different qualities, so it is important to recognize the correct one for your cargo. Some of the common packaging materials are bubble wraps, cardboard, airbag, and foam peanuts. The following table can help you pick the right material for your products.



Packaging Functions					
Material Type	Cushioning	Void Fill	Protection	Divider	Other Functions
<b>Bubble Wrap</b>	✓	✓	✓		
Small Cell (¼ inch) (For lightweight items)					Interleaving
Large Cell (½ inch) (For medium weight products)					Blocking
<b>Foam Wrap</b>	✓	✓	✓		
<b>Foam Peanuts/ Pallets</b>	✓	✓		✓	
<b>Air Bags</b>		✓			
<b>Crumpled Paper</b>		✓	✓		
<b>Corrugated Inserts</b>		✓	✓	✓	
<b>Shredded Cardboard</b>		✓	✓	✓	Shock absorption

## Crucial Packing Principles

Here are some of the important packing techniques you should be aware of while preparing the shipment:

### Leave no Empty Space

While packing the cargo, it is important not to leave any space within the box to prevent the content inside from moving. You can add any void fillers in the base of the box and around the product, so there is no space left for movement.

When choosing the material for the void filler, it is important to make sure that they provide enough support for the materials inside. This way the material will not sink or deflate under the weight of the shipment.



### 6 cm Distance

Another technique of packaging is to place the product in the center of the box with a minimum of 6 cm distance from the external walls of the box. For this technique, you need to consider the size of the box relative to the size of the contents inside.



## Using Dividers or Individually Wrapping the Items

This method is useful when you are shipping multiple items in a package. Wrap each item separately with corrugated inserts or other divider material. Doing so will help to prevent any kind of damage to the items during transit, especially if the products are stacked. For loose and small items, they should be first placed in an inner container, so they don't separate during shipping.



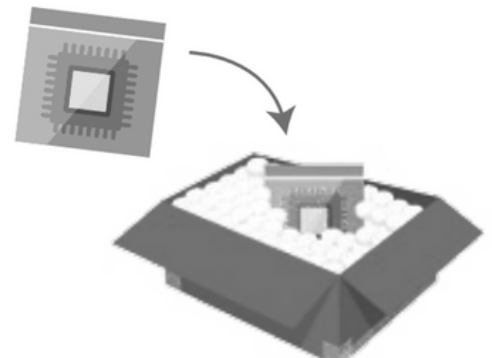
## Packing Methods

The appropriate packing method for the shipment depends on the need assessment of the packaging. However, the following are some of the packaging methods that are recommended by the shipping companies.

### Basic Packing Method

This method is most suitable for non-fragile items, like machinery parts, metal parts, etc. A double wall box should be selected for basic packing; however, if you are using a single wall box, make sure it is durable enough to hold against the weight of the products inside. Some of the other considerations for this packaging method are:

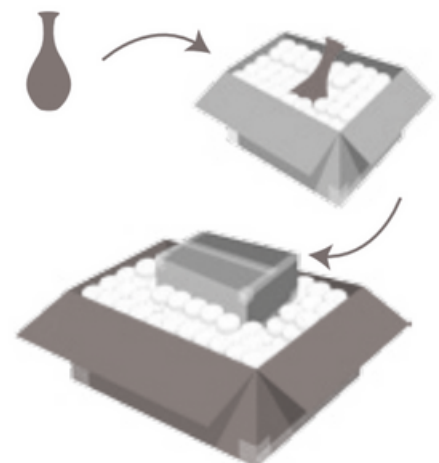
- Items that can be affected by the stains and moisture should be packed in separate plastic bags or containers for more protection.
- The items should be placed at least 6cm away from the walls of the box.
- If there are multiple shipments within a single package, then each item should be individually wrapped and separated from one another.
- To fill the empty spaces, add void fillers in the box.



### Box-in-Box Method

This method is ideal if you want to get a higher protection level for your shipment. This packaging method includes the use of a second box to add additional security to the internal contents. It is utilized for more fragile items or in the case if the inner packaging is for retail purposes.

Here are some of the recommended instructions for this packaging method:



- It is recommended to use the manufacturer's box as an inner box, if possible. These boxes should then be packed using the basic method technique mentioned above.
- In comparison to the size of the inner box, the outer box should be at least 14 cm in all dimensions. Use a double-wall outer box; however, if you a single-wall one, it should be of suitable strength for the weight of the products.
- Before putting the inner box, fill 6cm of void fillers in the outer box. Cover all sides by filling the empty spaces before sealing it for shipping.

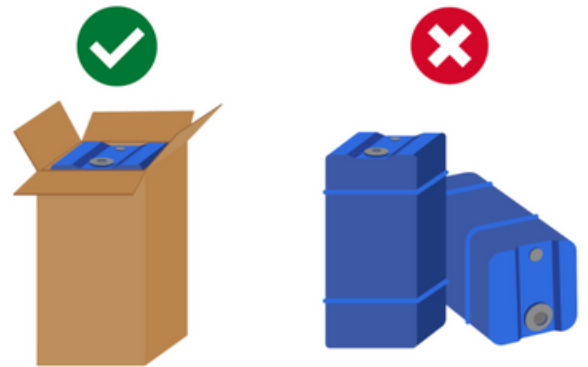
## Commodity-Specific Packaging for Safe Shipment

Here are some recommended packaging methods for different types of commodities to ensure they are safely transported to their final destination:

### 20 liter/5-gallon cans

The 20 liter/5-gallon cans should be packed in the following way for a safe shipment:

- The cans should be packed in individual packages before; for instance, in a fiberboard carton to avoid any abrasion or puncture.
- These cartons then should be secured on wooden or plastic pallets with an overpack slipcover.
- Cover the entire pallet to ensure it is safely packed and secured.
- Lastly, vertical bandings (with 2 bands each way) should be added to secure the slipcover to the pallet and cargo.



### 200 liter/ 55-gallon drums

The 200 liter/ 55-gallon drums should be packed in the following way for a safe shipment:

- The drums should be shipped on hardwood or plastic pallet with plank gaps (gap should be less than 0.8in).
- The pallets should also be placed on top of the drums as well with a strong pallet base to prevent any movement during transportation.
- Then the pallets must be secured in place using metal or unbreakable plastic strap. The corner cleats are used between straps and drums to prevent damage to the cargo.
- If more than one drum is being shipped, they should be banded together before securing them on the pallet base.
- A total of three pallets are acceptable, since the combined weight cannot exceed 1 ton.
- The overcovers added on the pallet should cover its entire area to protect it from dents and damage.

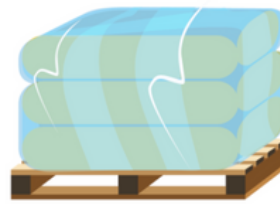
\*The covers should be made of 2-ply or 3-ply cardboard.



## Bags/Sacks

The bags/sacks should be packed in the following way for a safe shipment:

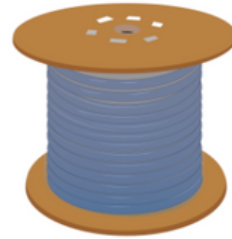
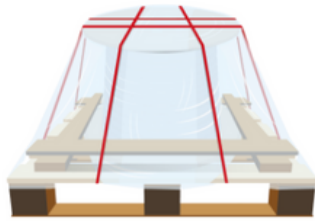
- This kind of cargo should be transported on plastic or wooden pallets that have a gap of around 0.8in.
- The cargo should be secured by placing it on corrugated cardboard trays covered with 70 gauge shrink wrap.
- The overcovers should be on the entire pallet to protect the bags/sacks from any kind of scratches or other damage.
- After that, vertical bandings should be added (2 bands on each side) to secure the cover to the pallet and cargo.



## Spools and Cable Reels

The spools and cable reels should be packed in the following way for a safe shipment:

- The cable reels should not be, in any case, transported in a loose form, and they must be packed on a pallet.
- The reels should be loaded sideways on a properly sized pallet, so the other pallets can also be stacked on top of it. This helps in avoiding the potential surcharges.
- If the spools are heavy (above 50kgs/110 pounds), they should be braced with wooden blocks on the pallet.
- Furthermore, they should be secured on a pallet with the help of 2 horizontally and 2 vertically placed unbreakable plastic or metal straps.
- If the cables wound is highly sensitive to the reel, then, it is recommended to cover it with a corrugated shell.



## Vehicle Tires

The vehicle tires should be packed in the following way for a safe shipment:

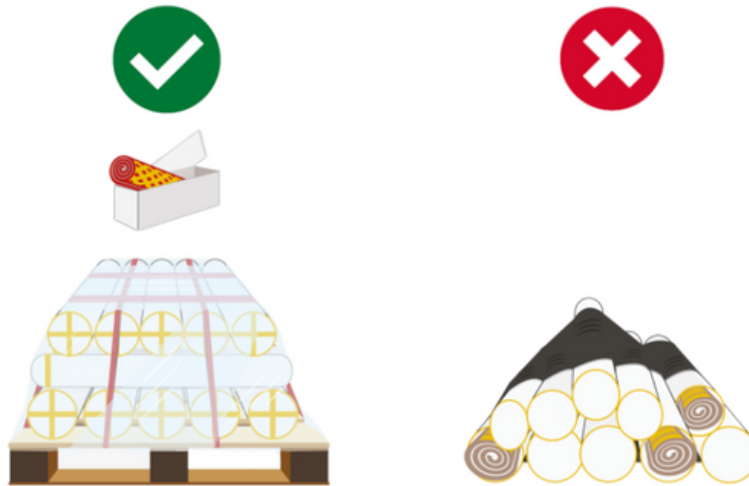
- Car or any other vehicle tires must be covered with shrink-wrap to the pallet first, and then secured with unbreakable plastic or metal bands.
- Cardboard or wooden boards should be added to the top of tire wall, which will help to avoid damage to the tires and other shipments.
- In the case of customizable tire boxes, make sure they are suitable for the tire's weight and have flat, non-rounded edges.



## Textile Rolls and Carpets

The textile rolls and carpets should be packed in the following way for a safe shipment:

- The carpets or fabrics should always be rolled along the shortest length.
- To avoid any sort of bending, they should be rolled around spiral and strong cardboard tube.
- Protect the end of the rolls using heavy-duty hardboard or paperboard to prevent damage during transportation.
- The rolls should then be placed inside a thick plastic bag. Or they can be rolled with plastic sheets multiple times, then seal the seams and ends properly with cable ties or polypropylene tape.
- The pieces that are under 66 lbs. or less than 48 inches, should be placed inside double-walled corrugated boxes. Whereas the pieces exceeding 66 lbs. or 48 inches length, they should be packed in a crate or a fork-moveable base.
- Make sure you do not combine and pack multiple rolls together. Instead, place them inside a specialist package individually in a cardboard.
- The fabric or carpet rolls can be stacked on a pallet, but they should not be in alternating stacking pattern.
- Lastly, they must be wrapped and strapped properly for stability during transportation.



## Engine and Other Vehicle Parts

The engine and other vehicle parts should be packed in the following way for a safe shipment:

- Engine or other vehicle parts should be shipped packed in a crate or braced on a pallet, covered with edge protector and reinforced cardboard.
- Before packing, it is important to ensure that there are no oils or liquids inside a vehicle part prior to transporting it.
- No vehicle part should overhang from the pallet as it increases the risk of damage during handling and shipment. If they can't fit on a pallet, it should be placed inside a crate or fork-moveable base of appropriate size.

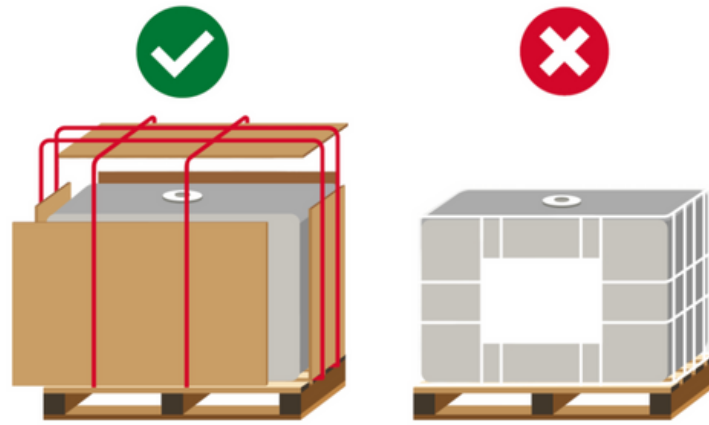


## IBCs/Totes

The IBCs/Totes are containment devices made of plastic, lodged within a tubing frame made of aluminum. They are used to transport liquid products. The IBCs/Totes should be packed in the following way for a safe shipment:

- Add overpack slip covers that surround the entire pallet and protect the bags inside from scraps or other damage.
- To secure the overpack slipcovers to pallet and the cargo, add vertical banding, with 2 bands on each side.





## Industrial Equipment

The industrial equipment should be packed in the following way for a safe shipment:

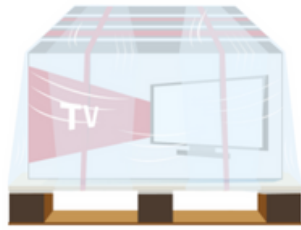
- All the industrial equipment should be transported in a crate or securely placed on a pallet, covered with reinforced cardboard or edge protectors.
- The fuel or liquid should be drained completely before shipping the equipment.
- The heavy products should be secured on a wide base to provide proper stability during transportation.



## Large Electrical Items

The large electrical items should be packed in the following way for a safe shipment:

- First, ensure that the empty spaces in the manufacturer's boxes should be filled with void fillers.
- If the original packaging box does not have any double walls, then overpack the item in a double-walled cardboard box.
- While shipping multiple large electronic items, place all the products on a large pallet so there is no overhang. Then secure the products to pallet using unbreakable plastic straps, followed by a shrink-wrap.
- For soft loading, add cushioning material to all sides of the boxes.



## Long Pipes/Blinds/Tubes

The long pipes/blinds/tubes should be packed in the following way for a safe shipment:

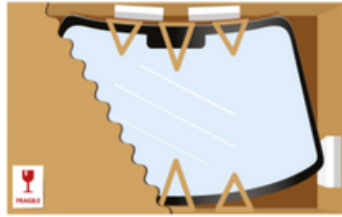
- The long cardboard boxes are weak and can easily be damaged. Therefore, the longer items should be shipped in triangular packages, or if possible, inside spiral-wound tubes inside square outer box. It will stop the products inside from rolling during transit.
- A long item that weighs more than 66 lbs. should be shipped inside a fork-moveable crate.
- The pallets should be long enough to accommodate the entire product, so it doesn't overhang during shipment.
- Secure the pipes/blinds/tubes on pallet using metal or unbreakable plastic straps and use wooden or plastic blocking on the ends to ensure the product doesn't slide out.



## Windscreens/Panel Glass

The windscreens/panel glass should be packed in the following way for a safe shipment:

- All the vehicle panels should be packed in a wooden box or crate to make sure they are protected from external forces.
- Surround the panels using Styrofoam piping and cover it with bubble wrap.
- The panel and the molded inserts should be added inside a two-wall corrugated outer box.
- The added Styrofoam prevents all kinds of movement within the box and should maintain a separation distance of 2.36in. from the outer box.



## Plastic Containers

The plastic containers should be packed in the following way for a safe shipment:

- Each item should be dried properly before packing in the plastic containers.
- Check the plastic containers as well to ensure they are 100% dry.
- Do not wrap the items in bubble wraps since it is also plastic, and moisture could potentially form.
- Once all the items are placed inside, fill the plastic containers to the top. However, do not overfill it to ensure the lid closes normally.
- Once the lid is closed, pick up the box and shake it to ensure none of the materials inside are moving. If they are add more cushioning material like crumpled paper to immobilize the items inside.
- Add proper labeling to the plastic containers.
- Lastly, stack the plastic containers carefully. The heaviest should be at the bottom, while stacking the lighter ones vertically on top. The bin tower shouldn't be too high, which can put it at the risk of falling over during transit.

The items that can be placed inside the plastic containers include books, toys, toiletries, small clothing items, office supplies, and other miscellaneous stuff.

## Palletized and Stackable Cargo – Essentials of Cargo Packaging

The palletized cargo needs to be properly ready for transportation so they can be consolidated with other shipments, without causing any damage. The following section will highlight some of the main standards for palletized shipments to help you transport the cargo from supplier's facility to consignee's warehouse by minimizing the risk of loss and damage. The shipping companies recommend using the standard-sized pallets to avoid any kind of surcharges.

Note: A standard-pallet is one that has length and width measurement of less than 120 cm.

## How to Choose the Right Pallet?

The following section will discuss the recommended standards of the palletized shipments that can help you select the right pallet for your cargo.

## Pallet Weight Capacity

The standard weight capacity of wooden pallets is between 3,300 lbs./1500 kgs and 6,600 lbs./3000 kgs. Whereas plastic pallets can hold shipments weighing more than 3000 kgs. Confirm the weight capacity limitations with the manufacturer beforehand or you can determine it in a controlled environment during a pre-shipping testing.

## Pallet Size

Picking the right pallet size for the shipment is the most important step to mitigate the risk of loss and damage. Under no circumstances, the cargo should overhang from the edge, as it can be prone to dents or scraps by the other coloaded cargo.

The most common pallet size is the standard size pallet referred to in the pallets industry as a GMA 48x40-inch pallet. The standard size pallet that most companies use is a 48-inch by 40-inch 4-way pallet. There are also several other common sizes that different industries use. Here is a list of some common size pallets.



48x40-inch Block Pallets



48x96-inch Pallets



48x40-inch CHEP Pallets



48x40-inch Stringer Pallets



48x48-inch Wood Pallets



800x1200mm EUR Pallets



48x42-inch Stringer Pallets



36x36-inch Pallets



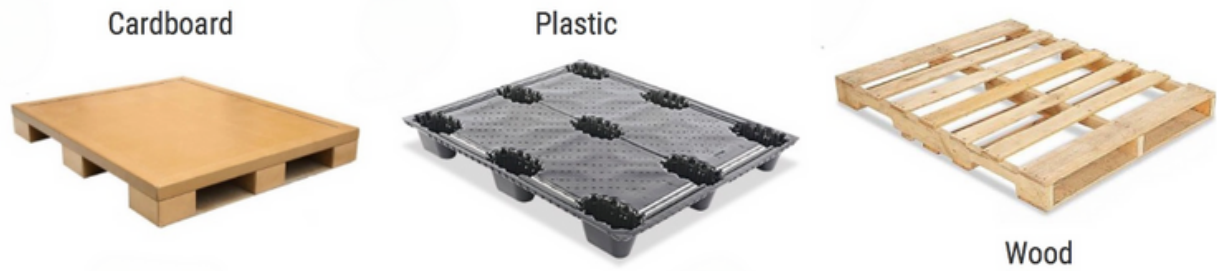
45x45-inch Pallets



## Pallet Material

Here's a quick view of the common pallet materials and their strengths to help you make a decision:

Wooden	Plastic	Cardboard
Suitable for heavy items	High-loading capacity and anti-slip surface	Lightweight and Easy to Handle
Reusable & Sustainable Material	Low weight	100% recyclable
Easily available & less expensive than plastic	Resistant against humidity and corrosion	Customizable and Versatile
Compatible with most equipment	Expensive than wooden pallets	Cost-effective
Can be easily repaired	Hygienic and Easy to Clean	Easy to Assemble and Disassemble



## How To Stack Cargo on Pallets?

These are some of the important tips to stack the cargo on pallets:

- Use a standard sized pallet with length and width below 1.2 mts.
- The cargo should not be stacked higher than 2.0 mts to avoid collapse.
- Pallets should be durable to carry all kinds of loads. Also, inspect the pallet carefully for any damage before you start stacking.
- Do not keep stacked pallets in high-traffic areas.
- The load on the pallet should be evenly distributed and not on only one side.
- The heaviest load should always be placed at the bottom of the pallet and the rest of the cargo should be stacked above it.
- 

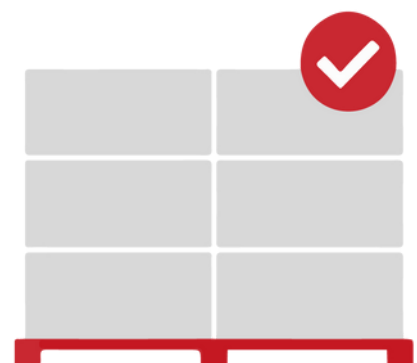
Make sure to use straps or bands to secure the entire shipment on the pallet and stretch wrap (minimum of 60 gauge recommended) to prevent the content from getting lost or separated from the load.

## Pallet Stacking Patterns

There are a ton of pallet stacking patterns you can use to secure the freight in place. The right pattern for your shipment depends on the weight and size of the boxes, so here's an overview of different patterns when stacking the pallets to help you choose:

### Column Stacking

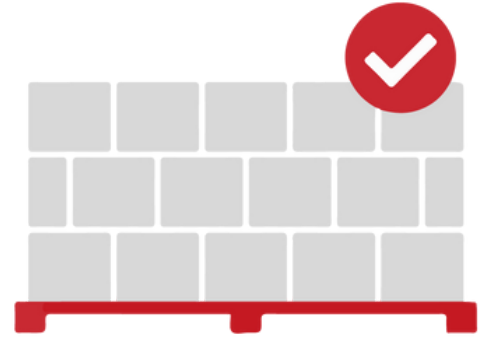
A column stacking is when each box is placed directly over the box below it, making their edges lined up perfectly. This method is a good option for boxes of lighter density, carrying fragile and soft products. This is a most common stacking pattern; however, it has its own benefits and drawbacks.



<ul style="list-style-type: none"> <li>✓ Improves box security and strength by 30-50%.</li> </ul>	<ul style="list-style-type: none"> <li>✗ More susceptible to fall if the stacking height is too tall.</li> </ul>
<ul style="list-style-type: none"> <li>✓ Resistant to compressions from shrink-wrap.</li> </ul>	

## Interlock Stacking

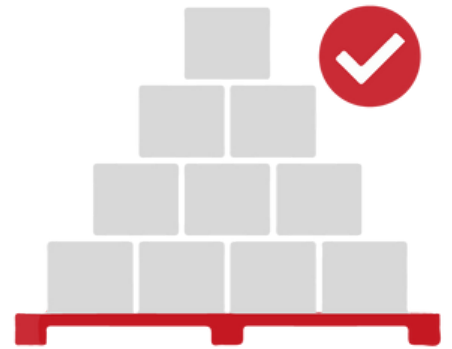
The interlock stacking pattern is a one where rotating method is used while placing the boxes; so, it gets support from multiple boxes underneath it. This is a good option for higher-density loads, like canned goods. Like the column stacking, this pattern also has advantages and disadvantages, which are as follows:



<ul style="list-style-type: none"> <li>✓ Provides more stability</li> </ul>	<ul style="list-style-type: none"> <li>✗ Fewer goods per pallet</li> </ul>
<ul style="list-style-type: none"> <li>✓ Best option for diverse box shapes and weights</li> </ul>	<ul style="list-style-type: none"> <li>✗ May add more pressure on individual boxes from uneven weight distribution</li> </ul>

## Pyramid Stacking

Pyramid stacking is a technique where products are placed in a pyramid shape, the top tier narrower than the one below it. This pattern can be used with the boxes but is more suitable for cylindrical objects that are otherwise difficult to stack. Below are some of the benefits and drawbacks of using this stacking pattern:



<ul style="list-style-type: none"> <li>✓ Allows you to stack more products</li> </ul>	<ul style="list-style-type: none"> <li>✗ The products can fall off easily</li> </ul>
<ul style="list-style-type: none"> <li>✓ Easy to load and unload</li> </ul>	<ul style="list-style-type: none"> <li>✗ The space isn't used properly</li> </ul>
	<ul style="list-style-type: none"> <li>✗ They products can easily disrupt during shipping</li> </ul>

## Brick Stacking

This type of stacking pattern offers a lot of flexibility when it comes to the number of packages you can pack on a pallet, which creates a classic brick-wall look with a stable base.



✓ Stable & less likely to fall over	✗ Can ruin smaller boxes below due to uneven distribution
✓ Reduce wasted space	
✓ Reduce product shifting during transit	

## Pinwheel Stacking

This stacking pattern gets its name from the configuration of packages in the circular-looking pattern. There are small gaps between the items, reducing the chances of product shifting during transportation.



✓ Provides a stable base	✗ Items underneath maybe hard to access
✓ Maximize the available space on pallet	
✓ Makes handling easy	





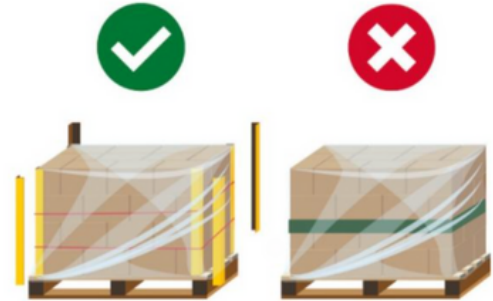
# Stacking of Different Materials for Damage Prevention

The following section will cover some of the tips for stacking different types of material packaging:

## Boxes and Cartons

In order to ship stack of boxes and cartons, they need to have:

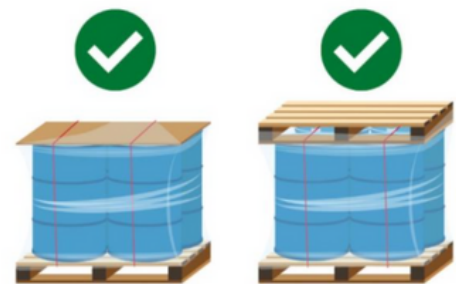
- Pallet on the bottom
- Edge protectors on all sides to increase stability
- Shrink wrap and bracing



## Drums

If you want to ship drums as stackable, follow these guidelines.

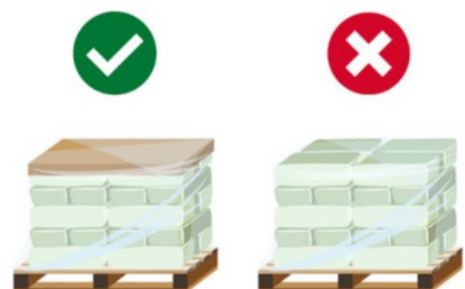
- There should be a pallet on top and bottom as well. Or add a pallet on the bottom and wooden protection on the top of the products.
- Shrink wrap the package for more stability.
- The drums should not overhang to avoid any sort of denting. Based on the dimensions, you might also have to reduce the amount of the package on the pallet.



## Bags

In order to ship bags as stackable, they should have:

- A pallet on bottom
- A carton cupboard protection at the top
- Shrink wrapping on the package



## Jerrycan

In order to ship them as stackable, the jerrycans should have:

- A pallet on the bottom
- Carton cupboard on top
- Shrink wrapping

The jerrycans can also be packed in secondary packaging; for instance, fiberboard cartons.



# Protecting the Palletized Goods

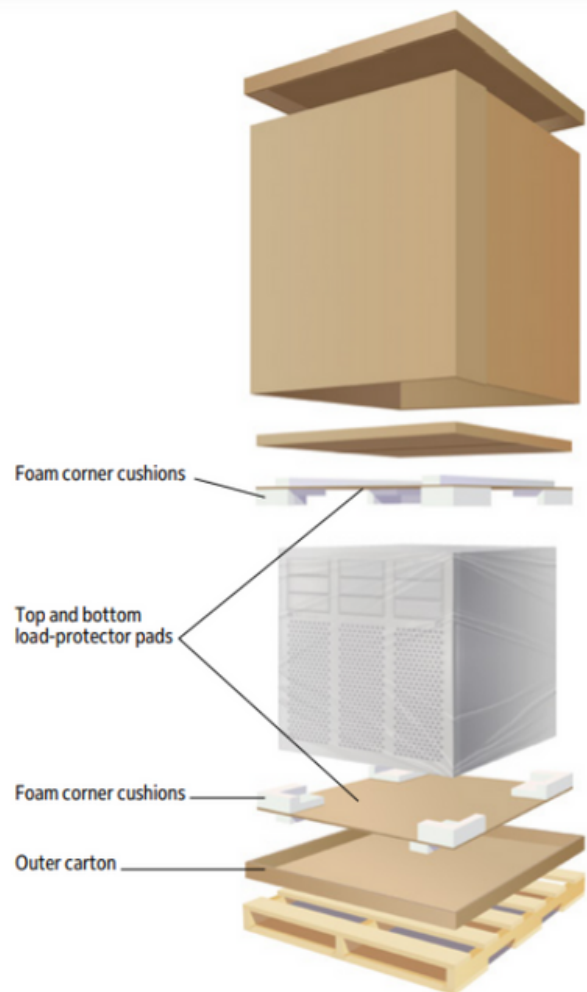
You can add extra protection to the packaging by adding the following:

## Cushioning, Bracing and Blocking

During cargo transits, shocks and vibrations are common; therefore, you need to add some sort of cushioning in the packaging to ensure that contents inside are protected from damage. For the larger products that cannot be boxed, blocking and bracing are essential. To properly stabilize the shipment, make sure to choose the correct size and type that is suitable for the weight of the shipment.

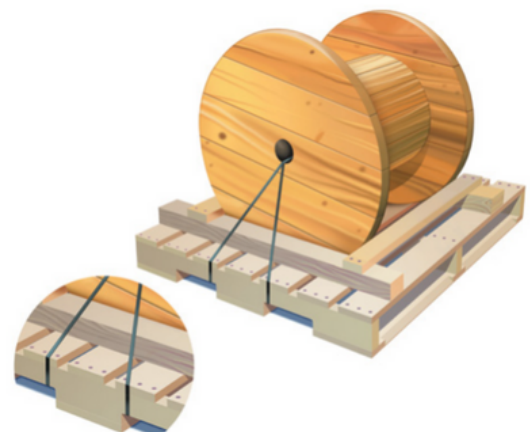
### Foam Cushioning

When preparing the shipment for palletizing, foam is a common choice for cushioning. The cushioning should be designed with the density that is needed to protect the fragility of the contents inside the box. This durability should be tested beforehand in a place that simulates the shipping environment.



### Wood Blocks

The blocking materials like wood prevents any movement during shipment, especially in case of single heavy goods. For the products that are heavier than 1,500 lbs., hardwood pallet and blocking materials are recommended by the shippers. Any wood blocking you use should be placed properly against the object, so it stays in a fixed position during transportation. According to a general rule, blocking should have two fasteners at each end to prevent pivoting and keep the required strength.



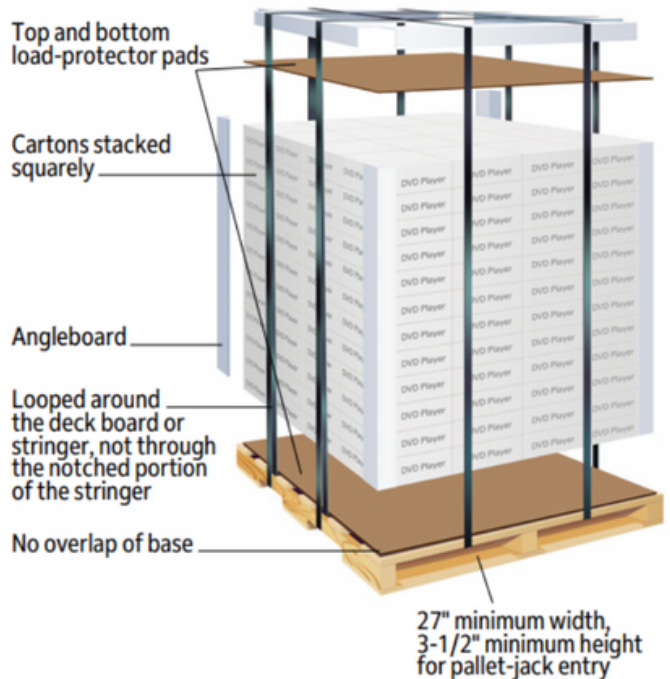
Bracing

## Bracing

All the items that can roll during transit due to their shape or size should be braced on a forklift pallet base. The selection of lumber should depend on the product's characteristics. The thickness of the lumber should be increased as the weight of the shipping increases.

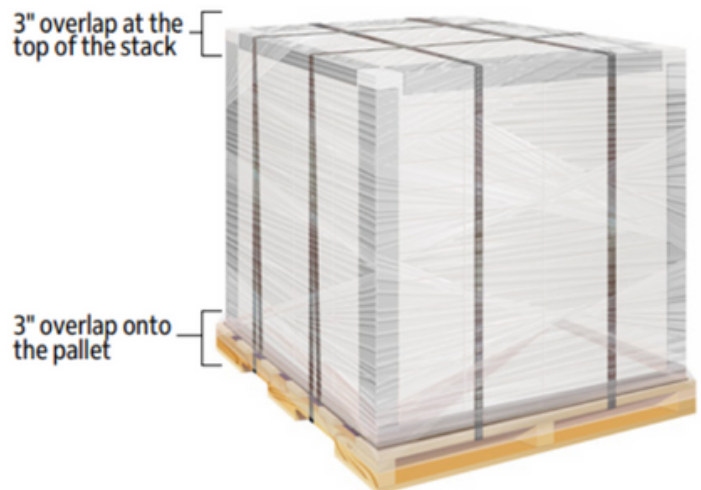
## Stretch wrapping or Banding

Protecting palletized goods during transportation or storage is crucial to ensure that the items arrive at their destination in good condition. To prevent damage caused by rough handling, shifting, or stacking, various methods can be used. These include stretch wrapping or banding, load protectors, edge boards, and bands. In the below section, we will discuss each of these methods in detail and their effectiveness in protecting palletized goods.



## Stretch Wrapping

Stretch wrapping is a popular method of protecting palletized goods during transportation or storage. It involves using a stretchable plastic film to wrap around the entire pallet, holding the items in place and preventing them from shifting. The stretch wrap creates a secure and tight hold on the goods, making it an effective way to prevent damage caused by rough handling.

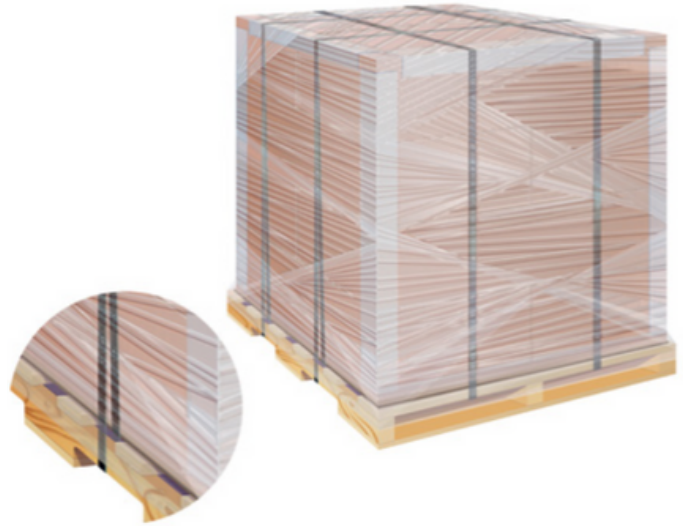


## Load Protectors and Edge Boards

Load protectors and edge boards are used to protect the corners and edges of the palletized goods. They are typically made of cardboard or plastic and are placed between the goods and the edges of the pallet to prevent damage caused by rough handling or stacking. These protectors can also be used in combination with stretch wrapping or banding for added protection.

## Bands

Bands are used to secure the palletized goods to the pallet and prevent them from shifting during transportation or storage. They can be made of plastic, steel, or other materials and are typically wrapped around the pallet and goods to provide extra stability. Bands can be used in combination with other methods, such as stretch wrapping or load protectors, to ensure that the items arrive at their destination without damage.



## How many pallets can you fit inside a container?

### Overview

CONTAINER	DIMENSIONS	PALLET FIT
10ft container	L: 9ft 2ins. W: 7ft 7ins. H: 7ft 9ins	4 Standard Pallets or 5 Euro Pallets
20ft container	L: 19ft 3ins. W: 7ft 7ins. H: 7ft 9ins	10 Standard Pallets or 11 Euro Pallets
30ft container	L: 29ft 5ins. W: 7ft 8ins. H: 7ft 10ins	14 Standard Pallets or 18 Euro Pallets
40ft container	L: 39ft 4ins. W: 7ft 7ins. H: 7ft 9ins.	20 Standard Pallets or 24 Euro Pallets
45ft container	L: 44ft 5ins. W: 7ft 8ins. H: 7ft 10ins.	26 Standard Pallets or 33 Euro pallets

## Understanding Container Sizes

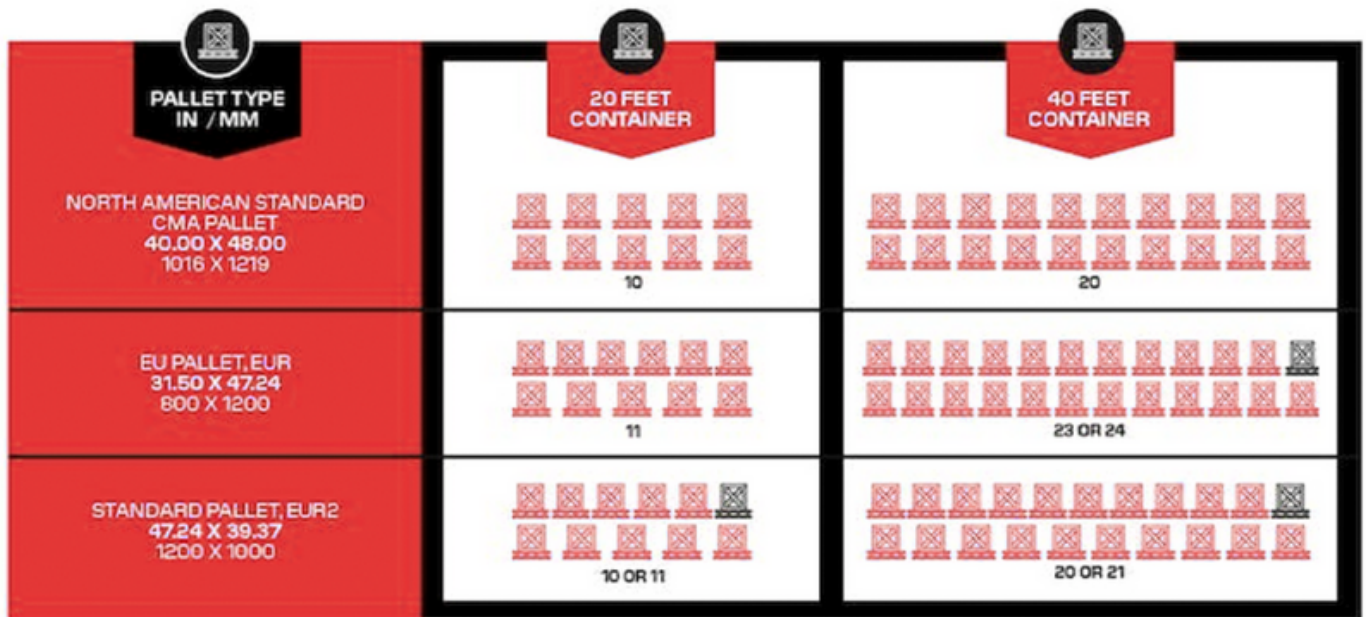
Before diving into how many pallets can fit in a container, it's crucial to understand the container sizes commonly used in shipping.

- 20-Foot Container: A 20-foot container, also known as a TEU (Twenty-Foot Equivalent Unit), is 19' 3" long, 7'7" wide, and 7' 8" high.
- 40-Foot Container: A 40-foot container, also known as a FEU (Forty-Foot Equivalent Unit), is 39'4" long, 7'7" wide, and 7' 9" high.

# How many pallets fit in a 20-foot and 40-foot container?

Before diving into how many pallets can fit in a container, it's crucial to understand the container sizes commonly used in shipping.

- 20-Foot Container: A 20-foot container, also known as a TEU (Twenty-Foot Equivalent Unit), is 19' 3" long, 7'7" wide, and 7' 8" high.
- 40-Foot Container: A 40-foot container, also known as a FEU (Forty-Foot Equivalent Unit), is 39'4" long, 7'7" wide, and 7' 9" high.



## How Many Pallets Fit in a 20-Foot Container?

The number of pallets that fit in a 20-foot container depends on the pallet size and how they are arranged.

- Standard Pallet Size: If using standard pallets with a size of 48" x 40" (1.219m x 1.016m), up to 10 pallets can fit in a 20-foot container.
- Euro Pallet Size: If using Euro pallets with a size of 47.24" x 31.50" (1.2m x 0.8m), up to 14 pallets can fit in a 20-foot container.
- Other Pallet Sizes: If using other pallet sizes, it's essential to measure the container's internal dimensions to determine the number of pallets that can fit.

## Pallet Configuration in a 20-foot Container

In a 20-foot container, the standard pallet size is 1,000 mm x 1,200 mm. The container has a total capacity of 33 cubic meters, with internal dimensions of 5.89 meters long, 2.35 meters wide, and 2.39 meters high. The number of pallets that can fit inside a 20-foot container depends on how they are arranged and the height of the load.

Here are some pallet configuration options:

- **Single-stack configuration:** In this configuration, the pallets are stacked one on top of the other, up to the maximum height of the container. You can fit up to 11 standard pallets (1,000 mm x 1,200 mm) in a 20-foot container with this configuration.
- **Double-stack configuration:** In this configuration, the pallets are arranged in two layers, with a total height of 2.4 meters. With this configuration, you can fit up to 22 standard pallets (1,000 mm x 1,200 mm) in a 20-foot container.
- **Mixed configuration:** This configuration involves stacking the pallets in a way that optimizes space utilization. For example, you could stack two layers of pallets in one area and three layers in another area. The number of pallets that can fit in a 20-foot container using this configuration will vary depending on the size and weight of the products on the pallets.

## How Many Pallets Fit in a 40-Foot Container?

Similarly, the number of pallets that fit in a 40-foot container depends on the pallet size and arrangement.

- **Standard Pallet Size:** If using standard pallets with a size of 48" x 40" (1.219m x 1.016m), up to 20 pallets can fit in a 40-foot container.
- **Euro Pallet Size:** If using Euro pallets with a size of 47.24" x 31.50" (1.2m x 0.8m), up to 28 pallets can fit in a 40-foot container.
- **Other Pallet Sizes:** If using other pallet sizes, it's essential to measure the container's internal dimensions to determine the number of pallets that can fit.

## Pallet Configuration in a 40-foot Container

A 40-foot container, also known as a FEU (Forty-foot Equivalent Unit), has a maximum capacity of 67.7 cubic meters (2,387 cubic feet). The number of pallets that can fit in a 40-foot container depends on the pallet size and how they are arranged.

Assuming the standard North American pallet size of 48 inches by 40 inches (121.92 cm by 101.6 cm), a 40-foot container can fit between 20-24 pallets on the floor, depending on the arrangement. If the pallets are stacked, a 40-foot container can fit up to 40 pallets. However, stacking pallets can be risky and is not recommended unless the goods being shipped can handle the weight.

Pallets can be arranged in various configurations, including:

- **Standard Configuration:** The most common configuration is to arrange the pallets in a row, with each pallet touching the one beside it. This arrangement can fit up to 20 pallets on the floor.
- **Pinwheel Configuration:** The pinwheel configuration involves placing four pallets in a square, with the next layer placed in the gaps between the first layer. This arrangement can fit up to 24 pallets on the floor.
- **Staggered Configuration:** In the staggered configuration, the pallets are placed in a staggered pattern, with the second row of pallets resting on the gaps between the first row. This arrangement can fit up to 21 pallets on the floor.
- **Corner-to-Corner Configuration:** The corner-to-corner configuration involves placing the pallets diagonally across the container, with the corners of each pallet touching. This arrangement can fit up to 18 pallets on the floor.

Knowing how to properly configure pallets in a 40-foot container can help you maximize space and reduce shipping costs. Always consider the size and weight of the goods being shipped and choose a configuration that will ensure the safe transport of your items.

Knowing how to properly configure pallets in a 40-foot container can help you maximize space and reduce shipping costs. Always consider the size and weight of the goods being shipped and choose a configuration that will ensure the safe transport of your items.

## Other Considerations

Aside from the pallet size and arrangement, other factors can affect how many pallets can fit in a container.

- **Load Capacity:** It's crucial to consider the container's load capacity to avoid exceeding the weight limit and ensure safe transportation.
- **Stackability:** Some pallets are stackable, which means they can be placed on top of each other without damaging the cargo. Stackable pallets can help maximize space and fit more pallets in a container.
- **Unloading Method:** The unloading method should also be considered when loading pallets into a container. If unloading is done manually, it's best to stack the pallets in a single layer to make it easier to unload. If using a forklift, pallets can be stacked higher.

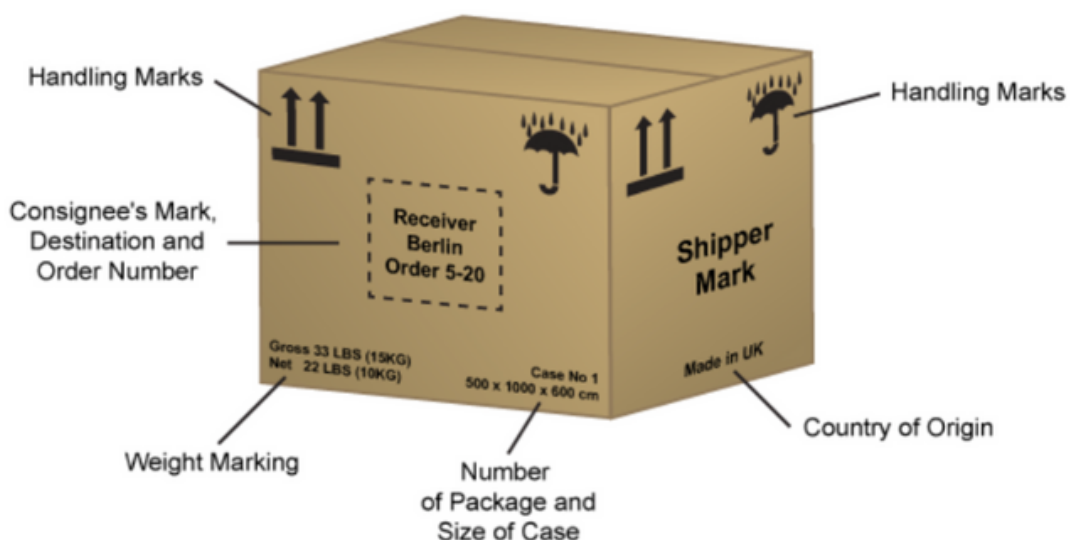
## Special Handling Labels

When shipping goods, it's essential to ensure that the packages are labeled with the correct shipping marks. These markings help to identify the contents of the package, provide handling instructions, and ensure that the package is delivered to the correct destination. In the below section, we'll discuss the different types of shipping marks and how to use them effectively.

## Shipping Mark Guidelines

These are some of the standard shipping guidelines:

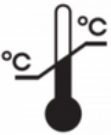











- Include the name and address of the consignee and the consignor.
- Mark the package with the weight and volume of the contents.
- Use a unique package identification number.
- Indicate the mode of transport (e.g., air, sea, road, or rail).
- Label the package with any handling instructions (e.g., "Fragile" or "This End Up").
- Include any necessary customs information (e.g., country of origin or destination).



# Pictorial Markings

Pictorial markings are symbols used to convey information about the contents of the package, the mode of transport, and any handling instructions. Here are some common pictorial markings:

- Arrows: Indicate the correct orientation of the package (e.g., "This End Up").
- Hazardous Materials Diamond: Indicates that the package contains hazardous materials and the hazard class.
- UN Number: Indicates the type of hazardous material contained in the package.
- International Air Transport Association (IATA) Symbol: Indicates that the package contains goods that are regulated by IATA.
- International Maritime Dangerous Goods (IMDG) Code: Indicates that the package contains goods that are regulated by IMDG.

					
Temperature Sensitive	Keep Dry	Fragile	Do Not Stack	Photographic Materials	Lift Box Here
					
This Way Up	Centre Of Gravity	Use No Hooks	Handle With Care	Protect From Heat	Food

# Hazard Classes

Hazard classes are used to identify and categorize hazardous materials. When shipping hazardous materials, it's essential to label the package with the correct hazard class to ensure safe handling and transportation. Here are the nine hazard classes:

- Explosives
- Gases
- Flammable Liquids
- Flammable Solids
- Oxidizing Substances
- Toxic and Infectious Substances
- Radioactive Materials
- Corrosives
- Miscellaneous Dangerous Goods

In conclusion, shipping marks are crucial when transporting goods to ensure that they arrive safely and in good condition. By following these guidelines and using the appropriate pictorial markings and hazard classes, you can ensure that your packages are labeled correctly and meet all the necessary regulations.



# Importance of Labels and Labeling Regulations in the UAE

Labels play a crucial role in the sales and branding of a product. The external aesthetics of a product such as color, package, labeling, and shape of the package can influence a consumer's buying decision. Labels provide important information about the product's ingredients, chemical compositions, durability, and distinguish one brand from countless others. Customers get familiarized with a product through its external appearance like logo, label color, image, etc. Therefore, it's important to design labels that reflect the brand's identity and make it stand out in the market.

## Design Elements of Labels

Design elements such as metallic printing elements, biodegradable signs, custom foil, embossed design, and premium embellishments can make a brand stand out. However, it all depends on the product category and the customer type. Products that have to face harsh environments must be capable of withstanding those environments. Industrial labels have to be in contact with fire, chemicals, etc. Therefore, they should be capable of withstanding such environments. Similarly, food labels must be capable of withstanding wet and cold environments, and health and beauty products must survive in heat, moisture, and humidity situations.

## Regulatory Requirements

Federal and state agencies have the authority to regulate labeling laws. By following the law, brands can introduce their brand features through labels. In the UAE, certain information must be mentioned on product labels such as product and brand names, lot identification/lot number, production and expiry dates, country of origin, manufacturer name, instruction for storage and use, manufacturer address, net content weight in metric units, list of ingredients and additives, product barcode, and warning statements.

## Pictorial Markings

Federal and state agencies have the authority to regulate labeling laws. By following the law, brands can introduce their brand features through labels. In the UAE, certain information must be mentioned on product labels such as product and brand names, lot identification/lot number, production and expiry dates, country of origin, manufacturer name, instruction for storage and use, manufacturer address, net content weight in metric units, list of ingredients and additives, product barcode, and warning statements.

## Hazard Classes

Products that are hazardous to health and the environment have to be labeled according to the hazard classes. These classes include

- Explosives
- Flammable Gases
- Flammable Liquids
- Toxic Gases
- Infectious Substances

By providing hazard class labels, the consumers will know how to handle and store the products safely.

In conclusion, labeling is an essential component of a product's branding and sales. The labeling laws in the UAE are strict, and brands need to comply with them. By providing comprehensive information on the product label and complying with the labeling regulations, brands can ensure customer safety and increase their sales.

## Conclusion

A well-executed shipping and labeling strategy is critical to the success of any business that sells and ships products. Accurate and efficient labeling helps ensure that the right product is delivered to the right customer at the right time, while also minimizing the risk of damage or loss during transit. Additionally, adhering to shipping regulations and using proper packaging materials can help reduce costs and increase customer satisfaction. By following the guidelines outlined in this shipping and labeling guide, businesses can streamline their shipping processes, improve their bottom line, and enhance the overall customer experience.

alsharqi 