

Packaging Guidelines

To help ensure your shipments are adequately and securely wrapped, packed, and cushioned for transportation, we offer these general packaging guidelines. From preparing small package shipments to palletizing your freight, we cover the basics on how to pack your shipments properly and securely. You may also visit the UPS Packaging Advisor to create a customized list of packaging guidelines specific to you at [ups.com/packaging](https://www.ups.com/packaging).

The following information are only general guidelines to help UPS customers reduce loss or damage to shipments due to improper packaging, and do not represent the full extent of the UPS packaging guidelines. For more information and additional guidelines, please refer to [ups.com/packaging](https://www.ups.com/packaging), the [UPS Rate and Service Guide](#) and the [UPS Tariff/Terms and Conditions of Service](#).

**Please note: UPS does not make any warranties, express or implied, regarding this information. It is the responsibility of the Shipper to ensure that proper packaging is used and that contents are adequately and securely packed in a container, wrapped, and cushioned for transportation. Please refer to the [UPS Rate and Service Guide](#) and [UPS Tariff/Terms and Conditions of Service](#) for applicable terms, conditions, and limitations.*

Shipping Checklist

- Use a rigid box with flaps attached.
- Avoid re-using boxes.
- Use the Box Strength Guidelines chart to determine the proper strength of your shipping container.
- Use adequate cushioning material.
- Use strong tape designed for shipping.
- Never use string or paper over-wrap.
- Wrap all items separately.
- Remove or conceal any labels, hazardous materials indicators and other previous shipment markings on the box that are no longer applicable.
- Securely affix to each package a UPS-issued paper shipping document or label generated through an approved UPS automated shipping system that contains clear, complete delivery and return information, including, among other things, the UPS tracking number, shipper name and address, and consignee name and address.
- Place a duplicate address label inside the box.

General Packaging Guidelines

- To prepare packages for UPS shipment, you can use your own packaging, if boxes are new or almost new, or one of a variety of containers provided free of charge that can be used with certain, selected UPS services. Customers with a UPS account can request supplies at [Packaging and Shipping Supplies | UPS - United States](#) or by calling 1-800-PICK-UPS®.
- Goods that are susceptible to damage from normal handling or to exposure to dirt, water, scratches or marks, should be placed in a protective outer box.

Types of Packing Material

Air-Encapsulated Plastic (cell bubble sheeting)

- Designed to protect and cushion lightweight items.
- Used in multiple wraps and layers to ensure that the item is completely protected, especially on corners and edges.
- When wrapping product, use flat surface of bubble wrap (bubbles facing away from product).

Inflatable Packaging (air bags)

- Used primarily as void-fill material for lightweight items.
- Not recommended for items with sharp corners or edges.
- Extreme hot or cold temperatures may affect the ability of air bags to provide adequate product protection.

Expanded Polystyrene “Peanuts” (loose fill)

- Used primarily as void-fill material for lightweight items.
- Do not use with flat or narrow products that may move to the edge or bottom of the box in transit.
- Due to the shifting and settling properties of peanuts, use a minimum of two inches of cushioning around the contents of the box.
- Flat pieces of corrugated fiberboard may also be used between contents and peanuts to help prevent migration.
- Peanuts cause static electricity and may damage electronic items. Use anti-static peanuts for electronic items, along with bubble sheeting around the item.

Engineered Foam Closures

- Materials may include polystyrene, polyethylene, polypropylene, or copolymers.
- Enclosures should be pre-engineered for specific products.

Corrugate Liners and Inserts

- May be added to the package to increase box strength.

Crumpled Kraft Paper

- Used primarily as void-fill material for lightweight, non-fragile items. Must be tightly crumpled.
- Place at least two inches of paper between contents and outer box.

Small Package Shipments

General Packing Methods

Method 1: One-Box

When to Use:	Pre-packaged goods	Soft, durable goods	Easily soiled goods	Tiny, granular goods
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- ❖ Step 1: Choose your box.
- ❖ Step 2: Fill empty spaces within the box with any of the following filler materials to limit movement during shipping: cell bubble sheeting, loose-fill peanuts, kraft paper, and other similar material.
- ❖ Step 3: Tape closures and seams to seal your package.

Method 2: Two-Box

When to Use:	Sharp, fragile goods	Bags and accessories	Travel goods	Luxury goods
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- ❖ Step 1: Choose your box.
- ❖ Step 2: Fill empty spaces within the box with any of the following filler materials to limit movement during shipping: cell bubble sheeting, loose-fill peanuts, kraft paper, and other similar material.
- ❖ Step 3: For the outer box, use a box that has a depth, width, and length 6” greater than the inner box.
- ❖ Step 4: Secure your box with an additional 3” of cushioning material around the inner box to fill the spaces between the inner box and outer box.
- ❖ Step 5: Fill the box with more filler material of your choice to cover any remaining empty spaces.
- ❖ Step 6: Tape closures and seams to seal your package.

Helpful Hints

- Always add an extra label with the addresses/phone numbers of the shipper and recipient to the box.
- Position individual items towards the center of the box.
- Seal and place bottles/containers in plastic or spill-proof bags.
- Wrap items with cushioning material.

Step-by-Step Guide – Small Package Shipments

The following steps cover the key considerations in packing most articles to help allow for safe transport through the distribution environment.

1. Ship freight in corrugated boxes (avoid reusing boxes), crates or shipping containers.
2. Use a container strong enough to support the weight of contents. *See Box Strength Guidelines.* Never exceed the maximum gross weight limit for the box, which is printed on the Box Maker's Certificate on the bottom flap of most boxes.
3. Use at least two inches of appropriate cushioning material to protect internal items from each other and the corners, sides, top and bottom of containers. Appropriate cushioning material would include corrugated fiberboard, multiple layers of folded newspaper, Styrofoam sheets, packing blankets, etc.
4. Reinforce edges to protect from bending.
5. Securely seal closures and seams with reinforced tape. Do not use masking, cellophane, duct or water-activated paper tapes. Also, do not use string or paper over-wrap.
 - Can use pressure sensitive plastic or nylon reinforced filament tape.
 - For regular slotted containers, where the flaps meet in the center, apply three strips of tape to the top and bottom of the box.
 - For corrugated containers where the flaps overlap, apply three strips of tape to the top and bottom.
6. Label each piece with telephone numbers and complete address information, including postal code of the shipper and consignee.
 - Do not place the label on a seam, edge, closure or on top of sealing tape.

- To avoid scanning issues, do not apply tape over the shipping label.

- Indicate on freight labels if any pieces require C.O.D. service.

Box		Strength	Guidelines	
A Maximum Weight of Box and Contents (lbs)	B Size Limit of Box (inches)* L + W + H	C Bursting Test (lbs per sq. in.)	D Edge Crush Test (ECT) (lbs per in. width)	
Single		Wall	Corrugated	Containers
30	75	200	32	
40	75	200	40	
50	85	250	44	
65	95	275	55	
80	105	350	N/A	
Double		Wall	Corrugated	Containers
60	85	200	48	
80	95	275	51	
100	105	350	61	
120	110	400	71	
140	115	500	82	
150	120	600	N/A	

The above box strengths are only guidelines to help assure the containment and protection of products transported through single-package distribution environments. They are not to be considered packaging specifications, and all packaged products should be tested in accordance with the International Safe Transit Association (ISTA) Test Procedure 3A to ensure the most appropriate level of product protection is achieved.

** The size limits on the above chart refer to the maximum size of a box that can be manufactured based on the strength of the corrugated material. The size limits specified in this chart and on the Box Maker's Certificate are unrelated to length and girth measurements used by UPS for dimensional measurements.*

Freight/Palletized Shipments

What Are Pallets?

Pallets are portable rigid platforms used to consolidate shipments and allow for ease of freight movement. Quality pallets are commonly made of either wood or plastic and can weigh between 20 and 70 pounds. Pallets should be large enough to accommodate the shipment without overhang. Anything overhanging the pallet edges may be damaged from punctures, abrasions and compression.

UPS Worldwide Express Freight Midday and UPS Worldwide Express Freight shipments must be palletized, stackable, able to be lifted by forklift and shrink-wrapped or banded to the pallet. For Air Freight or UPS Worldwide Expedited Ground Freight shipments, if your non-palletized shipment does not meet the minimum billable weight per piece, consider palletizing prior to UPS pickup.

Palletized vs. Non-Palletized Freight

Palletizing freight helps multiple-piece shipments remain together and provides increased protection from damage. Each pallet, including its contents, is considered one piece.

In contrast, loose items, such as boxes or containers that have not been secured to a pallet, are considered non-palletized freight. Each loose item is considered one piece and can be shipped via Air Freight or UPS Worldwide Expedited Ground Freight services.

UPS Worldwide Express Freight Services

UPS Worldwide Express Freight Services are for palletized shipments. Pre-authorization is required for all pallets exceeding maximum size or weight restrictions (which vary by origin and destination) as set forth at [ups.com/assets/resources/media/wwef_max_dim.pdf](https://www.ups.com/assets/resources/media/wwef_max_dim.pdf). For UPS Worldwide Express Freight Services, scheduling a pickup or drop-off is required on all shipments through WorldShip,[®] ups.com shipping and UPS CampusShip[®] systems, a UPS Ready[®] solution, UPS[®] Developer Kit, [ups.com](https://www.ups.com) or by calling 1-800-PICK-UPS.

Air Freight and UPS Worldwide Expedited Ground Freight

Air Freight and UPS Worldwide Expedited Ground Freight shipments can include combinations of palletized items or boxes that are too large to ship using other UPS services. They can also include multiple non-palletized pieces. UPS will accept freight shipments of any weight. However, minimum weight charges apply. Pre-authorization is required for Air Freight and UPS Worldwide Expedited Ground Freight shipments that exceed 120 inches in length, 84 inches in width, 76 inches in height or 5,000 pounds in weight.

Step-by-Step Guide – Freight/Palletized Shipments

The following are basic step-by-step instructions for palletizing your freight shipments.

1. Select Pallets

2. Stack Boxes on Pallet.

3. Secure Shipment to Pallet.

– For Air Freight and UPS Worldwide Expedited Ground Freight, label all handling units with shipper/consignee information and PRO (progressive rotating order) Numbers (at minimum all four vertical sides, interior and exterior of the stretch wrapping); use markers if having adhesion issues

4. Label Shipment.

-For UPS Worldwide Express Freight Midday and UPS Worldwide Express Freight shipments, apply labels to each side of the pallet and on top of the pallet – each label should have telephone numbers and complete address information, including postal code of the shipper and the consignee

- For Air Freight and UPS Worldwide Expedited Ground Freight, label each pallet with telephone numbers and complete address information, including postal code of the shipper and consignee

Preparing for Pickup

Your freight pickup request is initiated when you Create a Shipment for freight using [ups.com](https://www.ups.com), WorldShip® or UPS® Forwarding Hub shipping tools.

Some Air Freight and UPS Worldwide Expedited Ground Freight shipment pickup requests require pre-authorization.

Do's and Don'ts

Do:

- ✓ Choose pallets large enough to prevent overhang of shipment pieces
- ✓ Select pallets with closely spaced pallet deck boards
- ✓ Choose pallets with four-way forklift entry are preferred as they help to improve handling and reduce damage to the shipment
- ✓ Use a minimum of 60-gauge stretch wrap, five revolutions recommended; tie to pallet and across top to prevent shifting
- ✓ Use corner boards and banding to ensure stability
- ✓ Use three-way locking – nailed corners (not staples) on crates; angle board must extend from the deck board to the top of the pallet load
- ✓ Insert layers of cardboard between layers of freight to absorb vibration; distribute the weight evenly
- ✓ Ensure information on the Bill of Lading (BOL) matches the shipment
- ✓ Indicate in proper location on the BOL and check contract/tariff for liability limits if excess declared value is needed

Don't:

- ✗ Do not pyramid, ship or accept prohibited items or freight that overhangs the pallet
- ✗ Never exceed the rated capacity of your pallet
- ✗ Do not select pallets with broken boards or protruding nail heads

Protecting Your Freight Shipment

Solution	Description
Corner/Edge Boards	<ul style="list-style-type: none">– Increases vertical stacking strength, helps to prevent damage to corner edges and stabilize the load– Should extend to the full height and length of the load and should be used on all corners
Strapping or Banding	<ul style="list-style-type: none">– Helps to prevent pieces from getting lost or separated from the load– Should be drawn tightly to the load, possibly requiring running it underneath the top deck boards of the pallet
Stretch Wrapping	<ul style="list-style-type: none">– Use as an effective way to keep all pieces of a shipment together– Should first be applied around the pallet and continued upward around the load– Must be tight to prevent load shifting– Capture the pallet when wrapping bottom layer– Designed to stabilize the load, not to secure it to the pallet– Strapping or banding should be used in conjunction with stretch wrap to secure the load to the pallet
Top/Bottom Load Protector	<ul style="list-style-type: none">– Layers of corrugated fiberboard or heavy paperboard– Use to help evenly distribute the weight of shipments that can be stacked upon one another

Special Packaging Needs

Irregularly Shaped Items and Bare Metals

Tape the address label on a flat surface of the item being shipped. Cover the label with clear tape. Do not use “flying tags” attached by string or metal. Blunt all sharp or protruding edges with taped-on, corrugated cardboard pieces. Protect the surface of the item as needed. An Additional Handling charge will apply.

Bundled or Strapped Boxes

Only same-sized boxes may be strapped together. Use a minimum of four crisscrossed bands, two in each direction. An address label must be placed on each box. When strapping boxes together, each box must be strong enough to hold the total weight of the strapped bundle. For example, if two 15-pound boxes are banded together into a 30-pound package, both components should be in boxes with at least a 30-pound weight capacity. An Additional Handling charge may apply.

Large and/or Heavy Packages

Packaging materials need to be evaluated carefully for packages weighing more than 50 pounds. A UPS Heavy Package sticker is required whenever you ship packages weighing more than 50 pounds. Place the sticker to the right of the address label and write the package’s weight in the white box. It also helps to highlight every side of your package with Heavy Package highlight tape. This sends a warning to those who will lift your package, both your employees and ours. Customers with a UPS account can request supplies at [Packaging and Shipping Supplies | UPS - United States](#) or by calling 1-800-PICK-UPS®. An Additional Handling charge will apply.

Tires

Apply a wide band of pressure-sensitive tape through the center and completely around the body of the tire so that the tape is attached to itself. Attach your address label to the tape band where it covers the tread. Cover the entire label with clear tape. An Additional Handling charge will apply.

Batteries

A variety of batteries are regulated as hazardous materials by the U.S. Department of Transportation (DOT). For assistance in determining whether or not your battery shipment is regulated, please call the DOT’s Hazardous Materials Info-line at 1-800-467-4922. Batteries requiring shipping papers may only be tendered by shippers authorized by a hazardous materials shipping contract with UPS to tender such shipments. Any device with batteries installed must have their on/off switch protected from being activated, or have the batteries removed with the terminals protected. Simple devices like flashlights or rechargeable drills can generate a dangerous amount of heat if accidentally activated. Electronic items sent for repair, such as computers and cell phones, should be sent without batteries. For additional information regarding the shipment of batteries, please go to [ups.com](#)® and enter “Batteries” in the search field.

Electronic Media

To ship electronic media that contain sensitive personal information (such as personal financial or health information), we recommend that you *do not* use an envelope, letter packaging, UPS Express® Envelope, UPS Express Envelope – Reusable, UPS Express® Pak or UPS Express® Pad Pak. UPS provides special packaging, the UPS Express® Hard Pak, which is designed to help you ship sensitive electronic media. Call 1-800-PICK-UPS® or your sales representative for more information. You can also ship electronic media containing sensitive personal information by packaging it with a duplicate shipping label in an inner container that can be securely sealed. Place the inner container in a new outer corrugated box. Seal all flaps securely. Prior to packaging, mark the electronic media with identifiable information such as your company name, reference number or your UPS shipping number. Additionally, the shipper should retain a copy of the data and secure the data on the electronic media through encryption or other technological means.

Fabric and Wallpaper

Rolled goods travel best when shipped in corrugated boxes. If a fabric or wallpaper roll is shipped in a bag, UPS recommends a bag with a minimum thickness of six mils. Make sure the bag is tightly wrapped and taped against the roll to reduce the risk of tearing. A tail on an item shipped in a bag must be compressed to the body of the item using tape. Place the address label on a flat surface of the

item being shipped. Place duplicate address labels inside cores or between top layers of material. An Additional Handling charge may apply.

Hazardous Materials and Dangerous Goods

For additional information on this contract-only service, refer to [ups.com/hazmat](https://www.ups.com/hazmat).