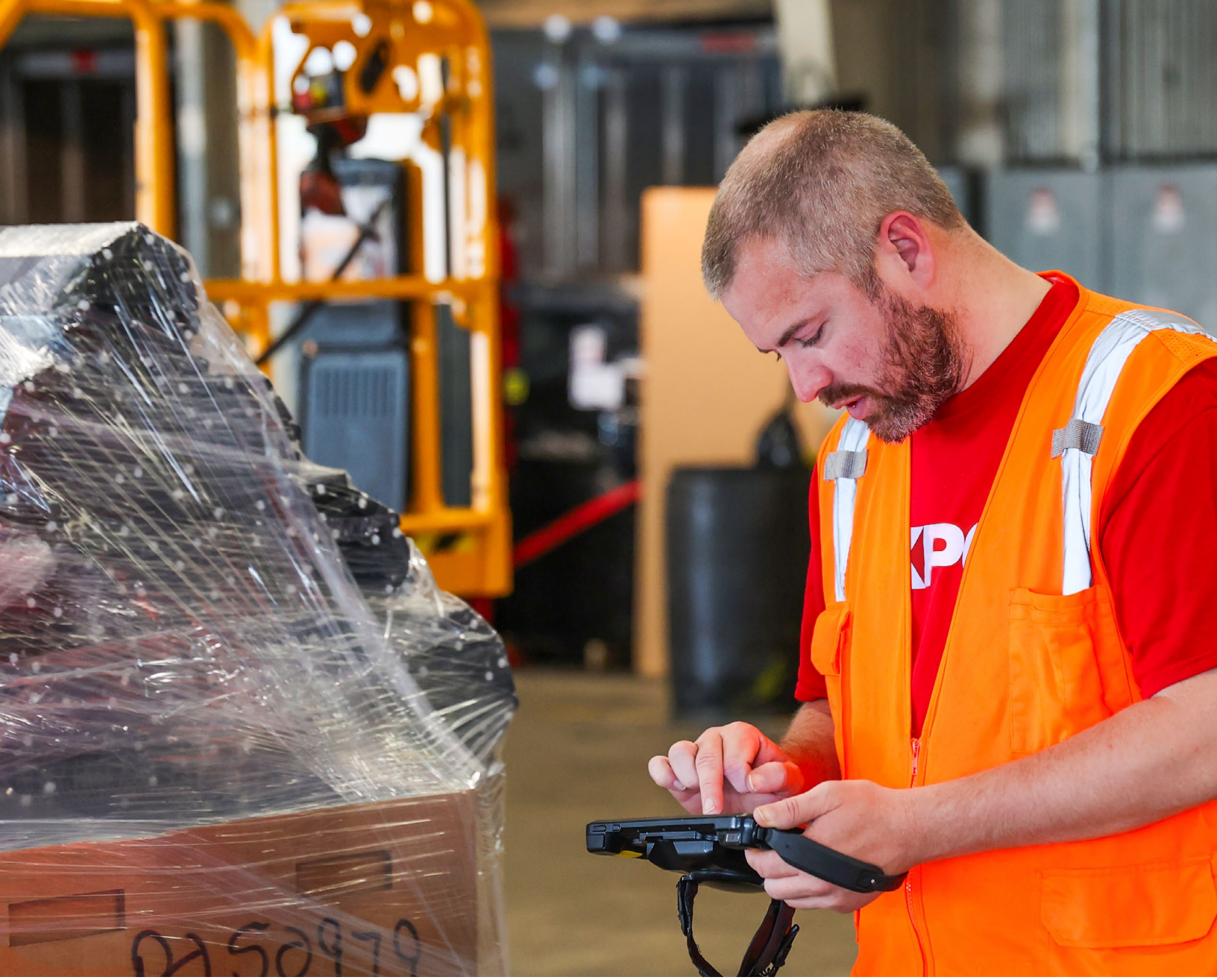


Freight Packaging Guide

Protecting Freight in an LTL Environment

XPO

Our Commitment to Protecting Your Freight

Our team is dedicated to providing world-class service with every shipment. We've invested over $70 million in our SafeStack™ system, onboard safety technology, dunnage airbags and professional freight handling training to protect our customers' freight and ensure the safety of the motoring public.

SafeStack™
Our best-in-class SafeStack™ system reduces damages and gets shipments to their destination faster and with less handling.

- No double stacking
- Braces each shipment
- Prevents in transit shifting
- Less freight handling
- Greater efficiency & more direct shipments
- More damage-free, on-time deliveries

Airbags
Prevent the movement and shifting of freight by filling gaps between pallets.

Onboard Technology
Our modern fleet is equipped with advanced alert systems, resulting in improved safety and better freight handling:

- Forward collision warning
- Lane departure warning
- Roll stability control

Freight Handling Training
Ongoing coaching and training for our dockworkers and drivers on best practices for freight handling result in fewer exceptions and damages.

Aerodynamic Trailer Side Skirts
Provide additional stability and safety by reducing sway.

Protecting Freight in an LTL Environment

Did You Know?

A recent survey of LTL shippers revealed that damaged shipments cost companies:

Time

Up to 5 hours of time spent to deal with a damaged shipment

Money

At least 25% of a shipment's value is never recouped when damage occurs

Customers

Over 50% of companies have lost a customer or some business due to damages

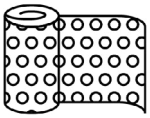
Proper freight packaging is critical to ensuring your shipment arrives damage-free.

Internal Packaging

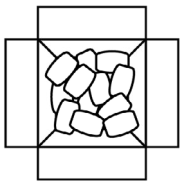
Some freight will benefit from the use of internal packaging between the product and container to gain adequate protection in an LTL environment.

Use Internal Packaging to:

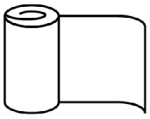
1. **Protect**
   Protect products from dynamic shock and vibration
2. **Prevent**
   Prevent shifting of interior materials by occupying empty space
3. **Shield**
   Shield items from external factors such as weather or changes in temperature



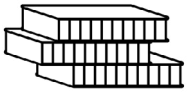
Bubble Cushioning
With its ability to be flexible and wrap around any object, use this lightweight, shock absorbing cushioning to package sensitive or unusually shaped items.



Loose Fill
Loose filling helps stabilize products. Use these materials to fill empty space in your packaging while providing a flexible, protective environment.



Paper Filling
Use paper to fill, brace and wrap your product to prevent shifting and provide more stabilization than loose fill.



Paper Honeycomb
Paper honeycomb is lightweight, but highly structured, enforced paper formed into hexagonal shapes. Use paper honeycomb to provide additional protection when stacking, layering, blocking, bracing or filling space around products.

Foam Cushioning
Lightweight, dense and often customizable to form fit products, foam cushioning protects against dynamic shock and vibrations, and can brace, stabilize or immobilize freight to reduce damage.

External Packaging

Most commodities require durable external packaging for adequate protection when shipping.

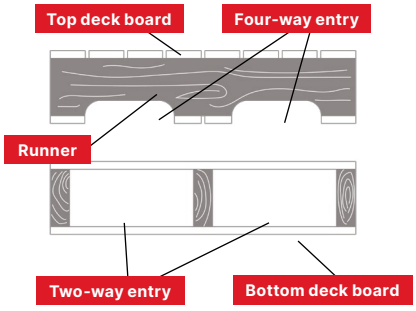
Use External Packaging to:

1. **Protect**
   Protect freight from external elements such as weather or drastic changes in temperature while in transit
2. **Prevent**
   Prevent shifting and help brace freight by tightly loading and securing your commodity on a pallet
3. **Promote**
   Promote safe and efficient handling of freight to prevent damage

Palletize Freight
Affix freight to a pallet. Pallets help keep loose freight together to prevent shifting on the dock or in transit and allow for the safest and most effective handling of freight.

Freight Handling Equipment
Forklifts and pallet jacks are the most commonly used equipment to load and unload freight in an LTL environment. Shipments built on pallets facilitate safe, efficient and damage-free handling.

Recommended Pallet Structure Includes:

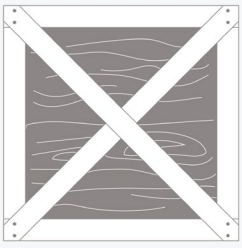


- Standard size 40-42” W x 48”L, with four-way entry so it’s compatible with common freight handling equipment.
- Use of top/bottom deck boards at the front and back of the pallet; add runner boards to provide extra support.
- Do not use pallets which have been damaged or have deteriorated in quality.

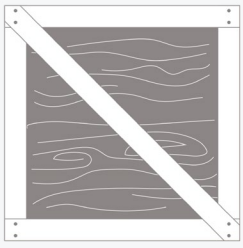
Construct Strong Crates

Not all crates are built the same. Construct crates with quality lumber and with attention to strength. It’s not the amount of material used, but how it’s used.

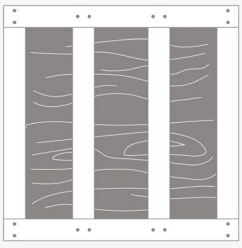
Strongest ..... **Weakest**



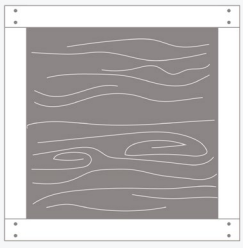
12X Original Strength
Building a crate with two diagonal boards on each side increases original strength by nearly 12 times.



6X Original Strength
A single diagonal board on each side of a crate increases original strength by more than six times.



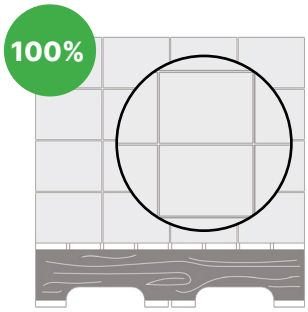
1.5X Original Strength
Adding multiple vertical supports increases a crate’s strength by about 1.2 times.



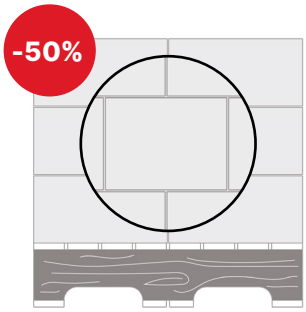
Original Strength
A simple box with supports at all corners qualifies as a crate, but offers little added strength in its construction.

Build Strong Shipments

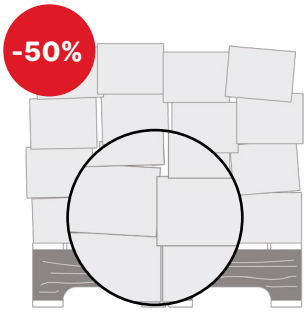
Compression strength is the resistance of a material to breaking under stress. Not every shipment's freight configuration is prepared the same. Use the following recommended best practices to palletize freight to gain maximum compression strength, securement and protection.



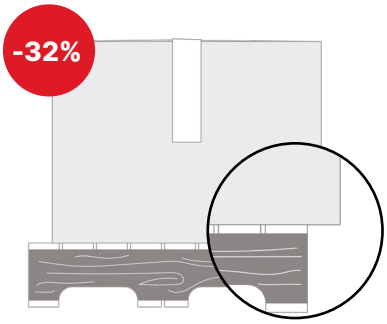
Perfect Pattern
Cartons are of high quality and stacked precisely one on top of another in a column pattern to retain greatest strength.



Interlocked Pattern
Unless the contents of your packages are solid or stiff, interlocking freight can reduce the strength of carton materials up to 50%.



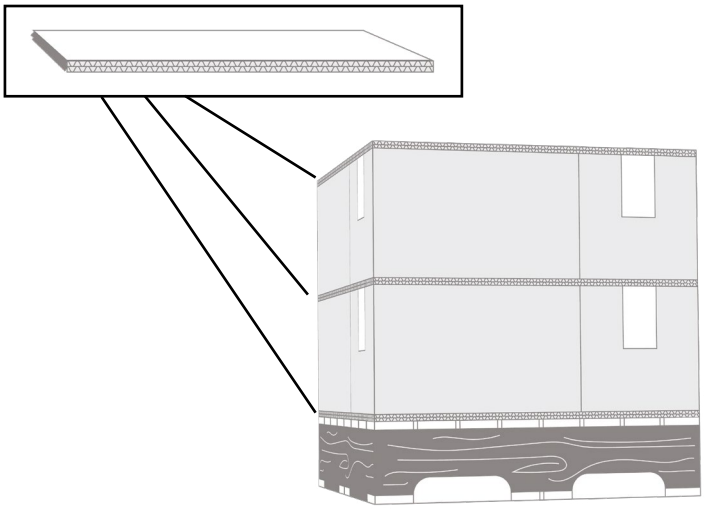
Long-Term Storage
Storage of some materials in varying conditions can weaken packaging strength. Carton materials sitting for six months or longer can lose 50% of strength.



Pallet Overhang
The bottom and edges of the shipment can be vulnerable when being transported. Pallet overhang makes handling difficult by restricting the use of handling equipment.

Protect Materials with Cardboard
Corrugated cardboard is a durable material essential for LTL shipping freight protection due to its construction of high quality, air-dried paper in a flute or arched pattern layered between smooth sheets. Cardboard is highly customizable, cost-effective and comes in many different shapes and strengths.

Layer cardboard at the bottom of a shipment between freight and the pallet, and between loose shipments or cartons, to provide additional strength within its column stack. Place cardboard on top of a shipment to protect against the external elements.

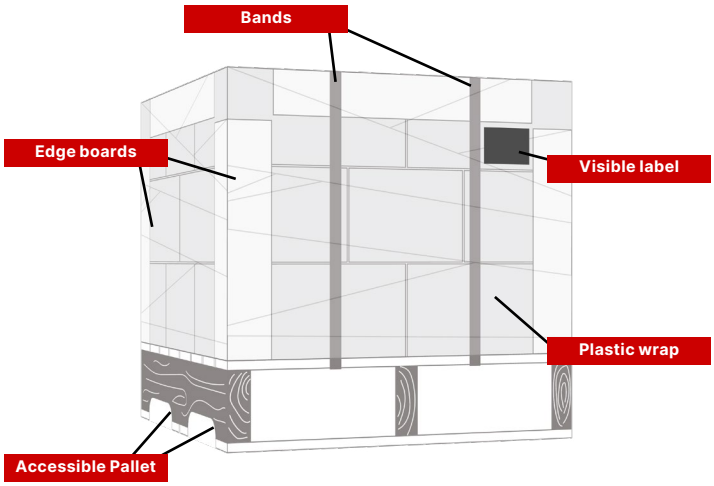


Corrugated Cardboard

- Helps stabilize vertically stacked freight or cartons.
- Protects the top, bottom and middle layers of a shipment.
- Stabilizes palletized freight and eliminates shifting that can damage freight in transit.
- Absorbs the impact of vibrations, protects against moisture, provides structural support and prevents compression and bending.

Use Edge Boards, Band and Wrap Freight For Securement

Edge boards, bands and plastic wrap are durable freight protection materials which can help enable shipments to be affixed securely to a pallet to stabilize freight, increase compression strength and protect against external elements in the LTL shipping environment.



Use These Freight Protection Materials to:

- Prevent freight from shifting when being transported on the dock or in transit in the trailer
- Secure aligned, column stacked packages and corners precisely to retain full strength
- Protect all surfaces – top, bottom, middle and edges – of freight

Edge Boards Increase Strength

Apply edge boards, also referred to as corner boards, to palletized freight. These angled pieces of materials which fit over the edges of boxes, crates, bundles and other shipments prevent pressure from bands or other external impacts that can cause damage.

- Help balance and tighten a shipment's column stack structure
- Reduce damages by protecting corners
- Increase overall compression strength of palletized freight

Bands Secure Freight to Pallet

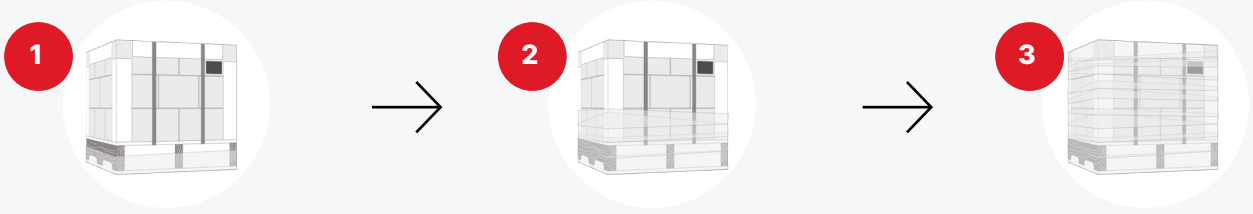
Use quality bands to secure freight tightly to a pallet to help stabilize your shipment. Fasten the bands tightly around the edge boards and thread the band beneath the top deck boards of the pallet to help anchor the shipment to its pallet.

- Protect from shortages or losses by keeping loose shipments contained together
- Stabilize cartons and materials on a pallet to prevent damage from shifting
- Protect from shortages or losses by keeping loose shipments contained

Shrink Wrap Keeps Freight Together

Shrink wrap your freight for additional protection from external elements to ensure safe delivery in the same condition it was sent.

- Protects against weather damage and shields freight from fluctuating changes in temperatures
- Secures loose packages and helps anchor freight to its pallet
- Can be used along with bands to tightly affix freight to a pallet to prevent the pallet from disconnecting from freight while being handled or transported



Shrink wrap helps adhere freight to a pallet. Tie shrink wrap to the pallet and begin wrapping your freight starting at the bottom of the pallet. ① Tightly wrap completely around the pallet at the bottom, ② then middle, ③ then finish at the top.

For the ultimate shrink wrap protection, double wrap freight in the opposite direction, also beginning at the bottom with shrink wrap tied to the pallet.

Labeling

To be accepted for transportation, LTL freight must be marked clearly with shipping labels. Ensure labels are properly affixed to freight.

Clearly Label or Tag Freight

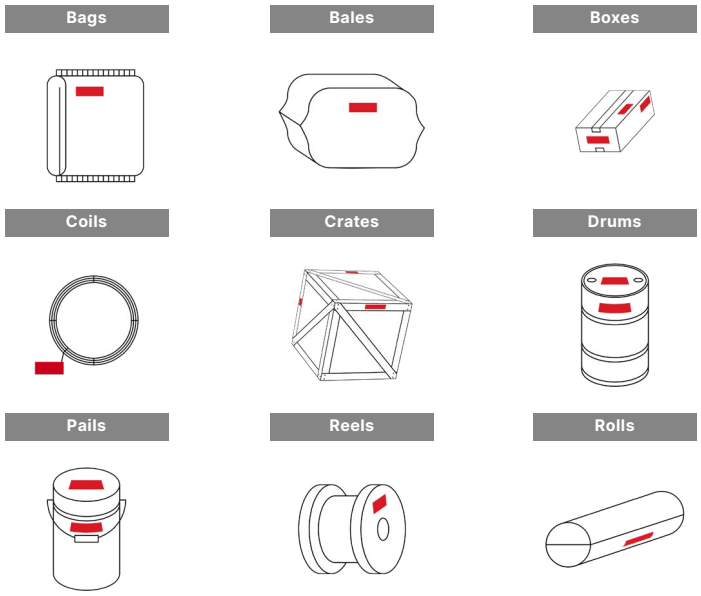
- Affix labels at the top, side or end of freight. Labels should be secured to freight with adhesive or metal staples.
- Each package or loose piece of freight should be marked clearly and indicate the following:
  - Shipper and consignee name, phone numberand address

NOTE: Even the most heavy-duty tapes can lose adhesiveness in fluctuating temperatures. Attach a layer of shrink wrap over labels to ensure label does not disconnect.

Metal Freight

Fluctuating temperatures can cause labels to peel off metal freight. Tags may fall off metal freight during loading and unloading. Use a metal or paint marker to identify and label steel or other metal freight. Use the metal or paint marker to label the pro number, purchasing order (PO) number or other identifying information to enable all shipment handlers to identify the shipper or consignee information.

Examples of Proper Labeling Locations for Freight:



Use Tags

Tags should be used to label freight which may not allow labels to adhere. Tags can be made of cloth, leather, metal or wooden tagboard with dull edges.

Use Precautionary Labeling When Necessary

Use precautionary labels when freight requires special handling or storage requirements. Review the labels below for use, when applicable.


Fragile


Keep Dry


Magnetically Sensitive


Up Arrows


Protect from Heat


Do Not Stack


Center of Balance


Protect from Freezing

Caution Top Heavy

Hand Truck

Forklift

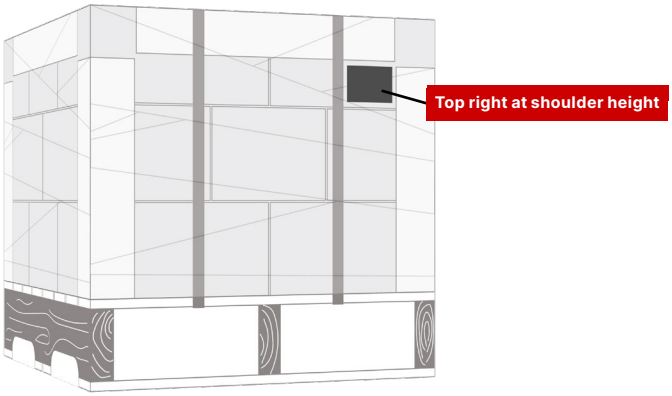
PRO Labeling
Place XPO PRO label on the front top right corner of the skid/piece.

This is to standardize where to find the label and is very important for two reasons.

1. Safety
Positioning the label at the top right corner means our employees do not need to reach through the center of the forklift mass or need to get off their forklift to locate the PRO labels for scanning.

2. Improved Tracking
Proper label placement will increase our ability to scan all labels for a shipment, reducing the possibility for a piece to be separated and becoming a shortage.

Example of Proper PRO Label Placement:



E-PRO Labeling
Visit our website https://www.xpo.com/help-center/pro-number/ to review PRO number formatting.

Ensure your printed bar codes can be scanned from 6’ away.

Preparing for Pickup

Did You Know?

Over 50% of LTL bills of lading (BOLs) have weight or shipment description errors, often due to incorrect estimates. This is the primary cause of billing issues.

Bill of Lading Accuracy

NUMBER SHIPPING UNITS	HM	KIND OF PACKAGING, DESCRIPTION OF ARTICLES, SPECIAL MARKS AND EXCEPTIONS Hazardous material sequence (ISHP) must read: UN/NA ID#, proper Shipping name, Hazard class and Packing group (SUBJECT TO INSPECTION AND CORRECTION)	NMFC NO.	CLASS OR DENSITY OF ARTICLES	WEIGHT (Subject to Correction) * lb kg
2		Two pallets of boxed disc brakes (48L x 42W x 48H)	18387	60	1000 lbs

1. Enter the number of units being shipped: pallets, drums, loose pieces. Loose pieces may be palletized to facilitate safe freight handling. List all hazardous materials on your BOL first.
2. Enter the description of shipment unit along with unit's dimensions.
3. Provide the National Motor Freight Classification (NMFC) number. Contact a local service center if NMFC class is unknown.

NOTE: BOLs missing the NMFC class are automatically billed at class 100 unless an inspection is performed.

4. Provide the class or density of articles.

NOTE: Pallets and packaging may change a shipment's class and density. Determine class and density AFTER packaging and palletizing.

5. Provide the shipment weight after packaging and palletizing.

NOTE: Pallets and packaging will impact shipment weight. Weigh your shipment AFTER palletizing and packaging your freight.

Preparing for Pickup

Schedule Your Pickup Request

Most XPO customers use LTL.xpo.com to schedule pickup requests. When completing your pickup request, have the following information available:

Pickup Location: Shipper name, address, city, state/province, zip code and shipper phone number

Requester Information: Company name, contact name, phone number, email address and role (shipper, consignee, third party)

Pickup Date/Time: Requested pickup date, pickup ready time, dock close time, special equipment and inside pickup information

Contact Information for Any Concerns About the Shipment: Company name, contact name and phone number

Destination and Commodity Information: Destination zip code, number of pallets and pieces, Saturday or holiday delivery, HazMat, Freezable, or G!, total weight (lbs) and remarks (packaging, special size or handling, etc.)

NOTE: Multiple shipments can be included on a pickup request for the same location.