















The comprehensive guide to all things transportation. TLI's Transportation E-Book aims to give the basic knowledge of the transportation industry to any individual looking to learn more.

**INCLUDED IN THIS GUIDE:**

- |  |                              |   |
|--|------------------------------|---|
|  <b>101</b>                       | <b>TRANSPORTATION BASICS</b> |  <b>INTERMODAL</b>           |
|  <b>LESS-THAN-TRUCKLOAD (LTL)</b> |                              |  <b>GROUND EXPEDITES</b>     |
|  <b>VOLUME LTL / PARTIAL TL</b>   |                              |  <b>AIR EXPEDITES</b>        |
|  <b>TRUCKLOAD</b>                 |                              |  <b>INTERNATIONAL</b>        |
|  <b>DRY VAN EQUIPMENT</b>        |                              |  <b>OCEAN TRANSPORT</b>     |
|  <b>FLATBED / SPECIALIZED</b>   |                              |  <b>HAZARDOUS MATERIAL</b> |
|  <b>TEMPERATURE CONTROLLED</b>  |                              |  <b>INSURANCE COVERAGE</b> |

<b>SECTION</b>	<b>PAGE #</b>
TRANSPORTATION BASICS	2
LESS-THAN-TRUCKLOAD (LTL)	3
VOLUME LTL / PARTIAL TRUCKLOAD	6
TRUCKLOAD	7
DRY VAN	8
FLATBED / SPECIALIZED	9
TEMPERATURE CONTROLLED / OTHER	10
INTERMODAL	11
EXPEDITES - GROUND	12
EXPEDITES - AIR	13
INTERNATIONAL	14
OCEAN TRANSPORT	15
HAZARDOUS MATERIAL	17
INSURANCE COVERAGE	19
EQUIPMENT GUIDE	20

## GENERAL SHIPPING TERMS:

**SHIPPER:** Party where the shipment originates from

**CONSIGNEE:** Party receiving a shipment

**OUTBOUND:** A shipment that is leaving a party's facility to a customer

**INBOUND:** A shipment that is incoming to a party's facility from a vendor

**DROP SHIPPING:** A shipment that goes from vendor to a customer without going to main company's facility

**SHUTTLE:** An intra-company shipment from one company's facility to another facility.

**LINE HAUL:** Charge associated with shipping within a specific lane

**FUEL SURCHARGE:** The charge associated with fluctuating diesel prices; set by the national DOE average

**ACCESSORIAL:** A charge assessed for a service outside the standard line haul and fuel surcharge operation

## MODES OF TRANSPORTATION

**SMALL PARCEL**

**LESS-THAN-TRUCKLOAD (LTL)**

**VOLUME LTL / PARTIAL TRUCKLOAD**

**TRUCKLOAD**

**INTERMODAL**

**EXPEDITING**

**INTERNATIONAL**

## PALLETS

A pallet is the standard method of transporting product in the transportation industry. Generally, a pallet is made of wood, but may be constructed of metal, fiberboard, metal, or heavy duty cardboard.

International freight generally require wooden pallets to be heat treated or dipped in a solution to render them resistant to insect infestation.

A standard pallet is generally 48" long and 40" wide. However, there are many variations of sizes.

Figure 1.1 shows an empty pallet and figure 1.2 shows a standard pallet with product.

## GENERAL INFORMATION FOR A QUOTE

<b>SHIPPER / ORIGIN</b>	City, State, Zip Code - Where is it shipping from?
<b>CONSIGNEE / DESTINATION</b>	City, State, Zip Code - Where is it shipping from?
<b>DATES / TIMES</b>	When is the shipment ready / window it can be picked up?
<b># OF PIECES SHIPPING</b>	How many pallets, bundles, cartons, or pieces are shipping?
<b>COMMODITY BEING SHIPPED</b>	What product(s) does the shipment consist of?
<b>TOTAL WEIGHT</b>	How much does the total shipment weigh?
<b>NMFC / FREIGHT CLASS</b>	Specific Freight Class / NMFC Code for the product shipping
<b>REFERENCE #</b>	These reference numbers help identify shipments at pickup or orders internally at a company.
<b>VALUE OF SHIPMENT</b>	Is the product high-value? Is additional cargo insurance required?



FIGURE 1.1



FIGURE 1.2

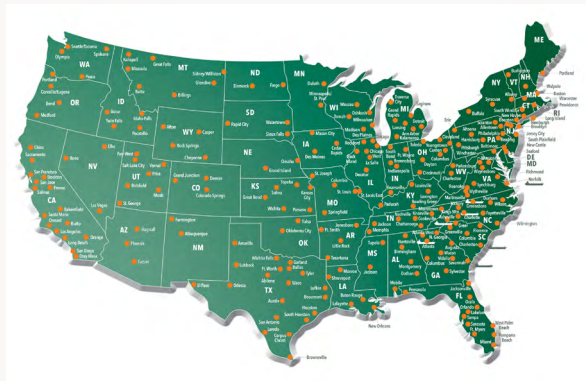


# LESS-THAN-TRUCKLOAD (LTL)

Less-than-Truckload is abbreviated as LTL, which is most commonly known in the transportation industry. LTL means that a shipment does not take up the full available capacity of a truck's trailer. These shipments generally weigh no more than 20,000 pounds.

LTL companies will make pick-ups at various shippers who all have shipments that do not take up the full capacity of a truck trailer. These pick-ups are performed by Pick-up and Delivery (P&D) drivers. Shipments will be transported back to origin terminals, consolidated onto full trailers and moved to destination terminal, or, to one or series of hub / distribution facilities for redistribution. These trailers are moved by line haul drivers.

Line haul shipments can be moved on single 48'-53' trailers or on double or triple 28' trailers (Also called pup trailers). Destination terminals will deliver the LTL shipments to individual consignees, via Pick-up and Deliver (P&D) drivers. An example of pup trailers can be found in figure 2.2 below.



**Figure 2.1:** LTL Coverage Map: This map indicates Old Dominion Freight Line's terminal network in the United States as an example. Some carriers may have national or only regional terminals. (Source: [odfl.com/Content/completecoverage.faces](http://odfl.com/Content/completecoverage.faces))



**Figure 2.2:** Pup Trailers: As mentioned above, pup-trailers can come in two or three 28' trailers used in line haul movements for LTL networks.

## GENERAL INFORMATION NEEDED FOR AN LTL QUOTE

<b>SHIPPER / ORIGIN</b>	City, State, Zip Code - Where is it shipping from?
<b>CONSIGNEE / DESTINATION</b>	City, State, Zip Code - Where is it shipping from?
<b>DATES / TIMES</b>	When is the shipment ready / window it can be picked up?
<b># OF PIECES SHIPPING</b>	How many pallets, bundles, cartons, or pieces are shipping?
<b>COMMODITY BEING SHIPPED</b>	What product(s) does the shipment consist of?
<b>TOTAL WEIGHT</b>	How much does the total shipment weigh?
<b>STACKABILITY</b>	Due to the nature of some product, the shipper may not want pallets to be stacked on top of each other.
<b>NMFC / FREIGHT CLASS</b>	Specific Freight Class / NMFC Code for the product shipping.
<b>REFERENCE #</b>	These reference numbers help identify shipments at pickup or orders internally at a company.
<b>VALUE OF SHIPMENT</b>	Is the product high-value? Is additional cargo insurance required?
<b>ANY SPECIAL SERVICES</b>	Some customers require special services such as lift gates, residential deliveries, or appointments. These service can be found under "LTL Language" and require additional steps / pricing from the carrier.



# LESS-THAN-TRUCKLOAD (LTL)

## HOW LESS-THAN-TRUCKLOAD (LTL) IS PRICED

LTL Carriers determine how much a shipment will cost based on the lane (Origin Zip Code to Destination Zip Code), the weight of the shipment, and the portion of the capacity of a trailer that a shipment will take up.

### LANE PRICING

LTL Companies determine a rate per 100 pounds, which is called hundredweight (CWT) for every zip to zip combination in their operating area based on operating costs and carrier's needs.

### WEIGHT

Within every lane, the carrier will determine the hundredweight (CWT) rate for the shipment's weight rises - this allows them to provide lower rates as weight rises - the CWT rate become lower at each "weight-breaks".

### FREIGHT CLASS (VOLUME OF TRAILER USED)

Carriers can not base pricing strictly on weight alone. For example, 1,000 pounds of feathers takes up a lot more space than 1,000 pounds of iron ingots. Carriers compensate by charging higher rates per hundredweight (CWT) for items that are less dense.

### WEIGHT BREAKS CARRIERS USE

500 lbs.	2,000 lbs.	10,000 lbs.
1,000 lbs.	5,000 lbs.	20,000 lbs.

### LTL FREIGHT CLASSES

50	55	60	65	70	75	85	92.5	100
110	125	150	175	200	250	300	400	500

## CALCULATING HUNDREDWEIGHT (CWT) PRICING

Generally speaking, but not necessarily always the case, the hundredweight (CWT) rate for a particular freight class is in a percentage proportionate to another freight class. For example, the CWT of a class 200 shipment would be twice as the CWT of a class 100 shipment. In this case, the class 200 shipment going from specific zip code to another zip code would be \$100 per CWT, while a class 100 shipment going from the same specific zip codes would be \$50 per CWT. Conversely, a class 50 shipment would have a CWT rate of one half of the class 100 at \$25 per CWT.

Freight class for every product that can possibly ship is identified in the National Motor Freight Classification (NMFC) book, which is located online at <https://nmfta.org/> under Classit.

Some products are identified at specific freight classes regardless of its density (pounds per cubic foot - PCF). For example, a barbell plate is identified as class 50 while plastic articles are classed based on density.

Density is determined by "Pounds per Cubic Foot" (PCF) and the class is then subjected to the density of the product. For example, Plastic Articles with a density of 4 PCF but less than 6 PCF is a class 150, while 10 PCF but less than 12 PCF is a class 92.5.

## CALCULATING DENSITY - POUNDS PER CUBIC FOOT (PCF)

A shipment's volume can be determined by the below formula. For an example, assume the pallet is 48 x 40 x 77.

**Length (Inches) x Width (Inches) x Height (Inches) / 1728**

***A pallet that is 48" L x 40" W x 77" H = 147,840 cubic inches  
147,840 / 1728 = 85.56 cubic feet***

Once you have a shipment's volume, you divide the weight by the volume to get the density or PCF. To continue our example, let's assume our weight for our shipment is 487 Pounds. Our example continues:

***487 pounds / 85.56 cubic feet = 5.69 Pounds***

If this was a pallet of Plastic Articles, it would have fallen under the above example of more than 4 PCF but less than 6 PCF at class 125.

This calculation is important in LTL shipping. TLI offers an online density calculator on [our website](#) and built-in to our Shipper Portal.



# LESS-THAN-TRUCKLOAD (LTL)

## LTL LANGUAGE

<b>CZAR-LITE TARIFF</b>	A Standard tariff base used in the transportation industry. This tariff helps avoid misleading discounts being provided. For example, Carrier A offers a 80% discount on a base rate of \$400 for a rate of \$80. However, Carrier B is offering a 85% discount on a base rate of \$550 to a rate of \$82.50. This Tariff allows base rates to match to avoid misleading confusion on the discounts.
<b>DEFICIT WEIGHT</b>	Carriers utilize deficit weight pricing by rating a shipment at a higher weight with a lower hundred weight (CWT). If it is beneficial to the shipper - generally when a weight is over 80% of the next weight break. <i>Example: A shipment weighing 1800 Pounds with a CWT of \$10 for a total cost of \$180. The carrier will declare the shipment at 2,000 Pounds to get to a CWT of \$8 for total cost of \$160.</i>
<b>DISCOUNT LEVEL</b>	The carrier will negotiate discounts with all of their customers based on various factors. Typically, between 70% and 90% off the base rate tariffs.
<b>FREIGHT OF ALL KINDS (FAK)</b>	A negotiation tactic to group freight classes under a lower freight class. The FAK lowers the Probability a shipment will be re-classed out of a negotiated rate level. <i>Example: A FAK 100 for classes 110 - 150. A shipment with a freight class of 125 will move at the 100 CWT class rate for a specific zip to zip lane.</i>
<b>TARIFF</b>	Each individual LTL carrier has their own schedule of rates (AKA Tariff) that provides a CWT rate for every possible combination of zip code to destination zip code with freight class and weight break.
<b>TRANSIT TIME</b>	Then number of business days that a carrier advertises it will take to deliver a shipment from origin to destination. Note: Transit Days are NOT guaranteed by LTL Carriers. Guaranteed service may be requested at an additional charge. (See Below)

## COMMON LTL ACCESSORIAL CHARGES

<b>BLIND SHIPMENT</b>	A charge assessed by a carrier for processing a shipment where either party (shipper or consignee) is not allowed to know where the product originated or shipped to. Generally a flat fee.
<b>FUEL SURCHARGE</b>	A charge assessed to help th carrier recoup excess costs for high fuel costs. The charge is generally assessed as a percentage of the freight bill based on the weekly DOE average of Diesel.
<b>GUARANTEED DELIVERY</b>	A charge assessed when the carrier is instructed to guarantee delivery on a certain day or time. This is generally assessed as a percentage of the freight bill.
<b>HAZARDOUS MATERIAL</b>	A charge assessed when the carrier is requested to handle Hazardous Materials. This charge is generally assessed as a flat charge.
<b>HIGH-COST PICKUP/DELIVERY</b>	A charge assessed when a carrier is requested to make a delivery or a pick-up in an area that is costly for the carrier to reach such as areas with high tolls or heavy traffic congestion. (Florida Keys, New York City, Washington D.C., etc.) This charge is generally assessed as either a flat rate or as a rate per hundredweight (CWT) with minimum charges.
<b>INSIDE DELIVERY</b>	A charge assessed when the carrier is requested to make a delivery or pick-up or delivery past the "first door". This charge is generally assessed as a flat rate.
<b>LIFT GATE</b>	A charge assessed when a carrier is request to supply a hydraulic lift at pickup or delivery. This is charged generally as a flat rate and may be assessed on any residential pickups/deliveries of over 100lbs.
<b>LIMITED ACCESS</b>	A charge assessed for requesting a carrier to execute a pick up or delivery at a location that has restricted access such as farms, prisons, military bases, schools, etc. Generally assessed as a flat fee.
<b>OVER DIMENSIONAL/ OVER LENGTH</b>	A charge assessed when a single piece of a shipment is over a certain length or dimension. Each carrier has a specific guideline on what is considered over length. This is generally charged a flat fee.
<b>RE-CONSIGNMENT CHARGE</b>	A charge assessed when a carrier is requested to deliver a shipment to a location different from the consignee on the original Bill of Lading (BOL). This charge is assessed as a flat fee plus additional costs from making the change including a reroute.
<b>REDELIVERY CHARGE</b>	A charge assessed when a carrier attempts to make a delivery, but it unable to deliver due to no fault of the carrier. This charge is generally assessed as a rate per hundredweight (CWT) with a minimum charge.
<b>RESIDENTIAL CHARGE</b>	A charge assessed when a carrier is requested to make a pick up or delivery to a residential area. This charge helps cover costs associated with scheduling and equipment needed to deliver. The charge is generally assessed as either a flat rate or a rate per hundredweight (CWT) with a minimum charge.
<b>REWEIGH / INSPECTION</b>	A charge assessed when a carrier needs to reweigh or inspect a shipment. The fee is generally a flat fee for the inspection and then additional charges if the weight does not match the shipment paperwork.

These are common charges found in LTL Shipping and not a master list. This list is for guidance and informational purposes only. For a more in-depth version of an Accessorial Guide, please ask us for our Accessorial Master List Guide.



# VOLUME LTL / PARTIAL TRUCKLOAD

When your shipment is too large for Less-than-Truckload (LTL) shipping but too small for a full truckload, Volume LTL and Partial truckload may be a great solution. Generally, any freight shipment over 6 pallets or 5,000 pounds and less than 32 linear feet may fall into this category.

## VOLUME LESS-THAN-TRUCKLOAD (LTL)

Volume LTL shares the same characteristics as standard LTL shipments since the service is performed through the same carriers. The difference between standard LTL and Volume LTL is that Volume LTL are a generated quotes for the specific shipment that is typically outside your standard LTL rates based on the Carrier's current capacity.

Standard LTL contracts generally have a cubic capacity rule that may invalidate the rate if the shipment is under 6 PCF Density and occupying over 750 cubic feet of a trailer. LTL Carriers vary on this "Cubic Capacity Rule" depending on their operations. Volume Rates may also be used to receive a better today rate for larger shipments.

As a shipper, it's important to know the difference between a standard and volume quote. Volume quotes are specific to the time of rating and the quote # MUST be present on BOL given to the carrier for the rate to be valid. When using volume quotes, it's of the most up-most priority to utilize a TLI generated Bill of Lading to ensure that the rate will remain valid.

### CUBIC CAPACITY RULE

A penalty assessed when the total cubic capacity of a shipment occupies more than the allotted amount.

As mentioned, LTL Rate contracts have a cubic capacity rules for shipments. Volume rates can help ensure you do not hit cubic capacity and receive a penalty.

### STANDARD VS VOLUME

If a shipment is more than 5 standard pallets (48" x 40"), weighs more than 5,000 lbs, or takes up more than 12 linear feet of a trailer - then the shipper should check to see if a volume rate is available.

Volume rates are available through TLI's Shipping Portal or if you have any questions feel free to reach out to our CS Team.

### CARGO LIABILITY

Volume LTL has a much lower cargo liability coverage than standard LTL. While the Cargo Liability Coverage depends on the carrier, an industry standard is \$1.25 per pound for volume rates.

Additional liability coverage may be purchased. It's important to provide the full-value of your shipment at quotation.

### IMPORTANT:

Volume Rate Quotes must be present on the Bill of Lading presented to the carrier. Make sure to utilize a TLI generated Bill of Lading to ensure that the Quote and Bill-to Party is correct for the volume quote to be valid.

## PARTIAL TRUCKLOAD (TL)

Partial Truckloads shares the space of a dedicated truckload carrier (learn more about Truckload Carriers in the next section). This helps shippers save money by only paying for the space that is utilized on the truck while giving dedicated services to the shipment.

While this is a dedicated service, Partial Truckloads require flexibility on pickup and delivery dates. Carriers will share the space with other shippers and may need to build the load before performing the pick up. Once picked up, freight may be delivered before yours.

Flatbed trailers commonly utilized in Partial Truckloads, but Dry Van trailers can also be utilized in this service. When asking for a Partial Quote, it's important to provide the linear feet that you will be utilizing and providing the exact dimensions and weight of your freight.



# TRUCKLOAD

Unlike LTL freight, the shipper purchases exclusive use of the truck and has access to the entire capacity of the trailer to load freight. Once the freight is loaded on the trailer at the origin, it is expected that the driver will drive directly to the destination and make the delivery - the freight will not be offloaded at the terminal. Some shippers, will place a trailer seal on the door to ensure that the trailers are not opened while in transit.

Larger trucking companies with hundred or thousands of trucks on the road will, occasionally, have drivers switch trailers with other drivers to keep the trailers moving towards the destination.

Another difference from LTL Carriers is how many carriers the Truckload Market has. With a lower barrier to entry, there are thousands of Truckload carriers from one-truck carriers to carriers with large fleets.

## GENERAL TRUCKLOAD PRICING

Truckload rates are based on amount of loads in a certain lane versus available capacity of trucks on that lane. Rates are lower when moving out of an area with more loads than available trucks. For example, many trucks move into the densely populated Northeast US to deliver merchandise to this population - once they arrive, there are usually less loads moving out of the Northeast than there available trucks making pricing competitive, and in turn driving down the rate.

As with LTL, all truckload shipments are assessed a Fuel Surcharge (FSC). Generally for truckload shipments, FSC is paid by a specific "per mile" basis on a negotiated matrix. The amount of FSC paid is in direct correlation to the National Average Price of Diesel Fuel for the previous week.

## TRUCKLOAD LANGUAGE

<b>DETENTION CHARGES</b>	A charge assessed when a shipper or consignee takes too much time to load and/or unload a truckload carrier's trailer. Generally, 2 hours free time is given to load and 2 hours free time to unload.
<b>TRUCK ORDER NOT USED (TONU)</b>	A charge assessed when a shipper orders a truckload for pick-up but does not use the truck. Trucking companies will give out lanes 1 - 2 days in advance to remain profitable. The company must find another load for the driver if the pickup is canceled that day. The charge is to offset the cost of this situation.
<b>LAYOVER CHARGES</b>	A charge assessed when a driver needs to stay overnight at an origin or destination due to no fault of his own. This charge can also occur when a driver is asked to deliver a day or more after expected delivery day based on mileage of the trip.
<b>PARTIAL TRUCKLOAD</b>	Using only a portion of a truckload carrier's trailer. Similar to a LTL Volume quote except using a primarily truckload carrier. Shipper is charged for portion of trailer that is used.
<b>STOP OFF CHARGE</b>	A charge assessed when a truckload carrier makes a stop off en route to the final destination.

## TRUCKLOAD STANDARD EQUIPMENT

<b>STRAIGHT TRUCK</b>	Straight trucks, whether dock high or non-dock high, are ideal for handling smaller shipments. They have weight limitations and often come equipped with lift gate technology.
<b>DRY VAN</b>	Dry vans are the most widely used equipment in both less-than-truckload (LTL) and truckload shipping. They typically come in lengths of 48' or more commonly 53'. While some dry vans may be equipped with a lift gate, it is less common for truckload carriers
<b>REFRIGERATED "REEFER"</b>	Specifically designed for transporting temp-controlled shipments. Sometimes used as an alternative to dry vans, some shippers prefer not to use reefers due to concerns about moisture and the space occupied by the refrigeration unit. Dual-temp trailers, allow for variable temp control by blocking off sections, however are relatively uncommon equipment in the industry.
<b>FLATBED</b>	Flatbed trailers are versatile for transporting unique or heavy materials, with the ability to side offload. It's crucial to adhere to legal height limits without permits. Flatbeds are commonly found at 48' Length, but can be 53' length. Tarping options include 4', 6', and 8' tarps to ensure cargo protection during transit.
<b>STEP-DECK</b>	Designed for transporting unique or heavy materials, offering the advantage of side offloading. They are utilized to accommodate extra height requirements. Step-decks typically consist of two decks, with the main deck being the lowest, and the lengths of the decks may vary. Tarping options are available in sizes of 4', 6', and 8' tarps, providing adequate protection for the cargo being transported.
<b>DOUBLE-DROP</b>	Designed for transporting unique or heavy materials, offering the advantage of side offloading. They are utilized to accommodate extra height requirements. Double-Drops typically consist of three decks, with the main deck being the lowest, and the lengths of the decks may vary. Tarping options are available in sizes of 4', 6', and 8' tarps, providing adequate protection for the cargo being transported.
<b>HOT SHOT</b>	A smaller flatbed trailer, typically attached to a pickup truck, is used when a load requires side loading/unloading but doesn't require a full-sized flatbed. The most common length for these trailers is 40 feet, but variations like 24', 30', and 35' are also available to suit specific needs.
<b>CONESTOGA</b>	Equipped with retractable curtains that span the entire length of the trailer. They provide both the protection of a dry van and the convenience of side-loading and unloading freight. These trailers offer a versatile solution for cargo transportation, combining the security of enclosed trailers with the accessibility of side-load capabilities
<b>CURTAIN SIDE</b>	Similar to Conestoga trailers, Curtain-Side have permanent tops and curtains on the sides for easy side-loading/unloading of freight, combining accessibility with weather protection.



# DRY VAN

Dry van shipments are the most common method of full truckload transportation. These are the standard box trailers that are seen on the road every day - generally at 48' or 53' long, 102" wide and 13'6" high.

Interior dimensions of a 53' dry van are approximately 54'6" long, 100" wide and 110" high if the trailer has swing doors - roll up doors can reduce the available height of the door.

A loaded tractor trailer is allowed to weigh up to 80,000 pounds - depending on the empty weight of the truck, the maximum weight that may be loaded on a dry van trailer is usually between 43,000 and 45,000 pounds.

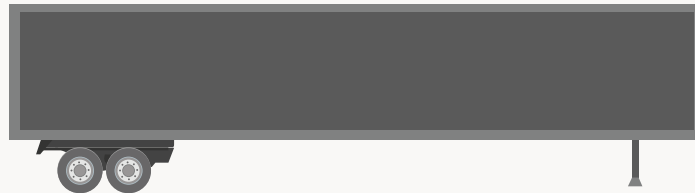
A standard 48' trailer can hold 22-26 pallets and a 53' trailer can hold between 26-30 pallets.

## DRY VAN PRICING

Dry Vans are priced either on the spot market or through contracted rates with carriers. Just like LTL freight, carriers will charge a flat rate, or line haul, for a specific zip code to zip code lane. A carrier may also charge a "rate per mile". As an example, a load from Birdsboro PA 19508 to El Paso TX 79901 may be rated for \$2,100 flat rate or may be rated as \$1.20 per mile.

The spot market utilizes real-time data of specific zip code to zip code data for to determine rates for a specific lane. Factors including the general freight market, equipment required, loads per truck, historical pricing, and other factors help to determine the going or spot rate of the market. Typically, a load board, such as DAT, helps carriers, shippers, and brokers to determine the spot rate and connect with each other to negotiate rates for a specific lane.

Contracted Rates are utilized when a shipper has a consistent need for a specific lane. Similar to LTL, a contracted rate is predetermined between the carrier and shipper/broker to move freight on that specific lane. This type of move requires a high volume of freight in a specific lane. The benefits of contracted rates are consistent and available capacity regardless of how the markets are. Rate are generally negotiated as line haul plus fluctuating fuel surcharge (FSC) utilizing a FSC table.



## GENERAL INFORMATION NEEDED FOR A DRY VAN QUOTE

<b>SHIPPER / ORIGIN</b>	City, State, Zip Code - Where is it shipping from?
<b>CONSIGNEE / DESTINATION</b>	City, State, Zip Code - Where is it shipping from?
<b>DATES / TIMES</b>	When is the shipment ready / window it can be picked up? Truckload shipments generally need 2 days notice to be picked up - some lanes are more difficult to cover than others. Availability of trucks decreases and cost can increase as times move closer to ship date Generally, a driver can drive 500 miles per day so a 1,500 mile lane will be considered to take 3 days
<b>APPOINTMENT REQUIRED?</b>	Specific appointment times are often required when dealing with full truckload shipments due to the size of the shipments
<b># OF PIECES SHIPPING</b>	How many pallets, bundles, cartons, or pieces are shipping?
<b>COMMODITY BEING SHIPPED</b>	What product(s) does the shipment consist of?
<b>PALLETIZED?</b>	Is the product being floor loaded or is it palletized? Floor loaded freight takes considerably longer loading / unloading times and has more risk to damages.
<b>TOTAL WEIGHT</b>	How much does the total shipment weigh?
<b>REFERENCE #</b>	These reference numbers help identify shipments at pickup or orders internally at a company.
<b>VALUE OF SHIPMENT</b>	Is the product high-value? Is additional cargo insurance required?



# FLATBED / SPECIALIZED

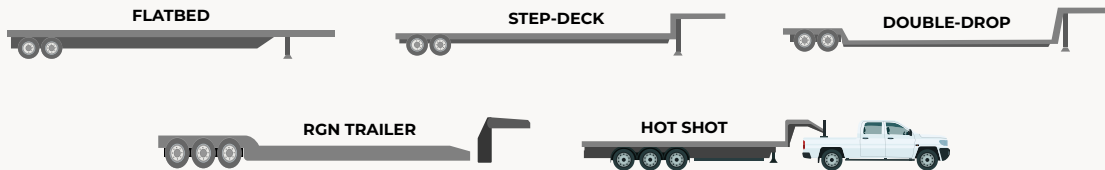
Flatbed and specialized trailers are included in the full truckload sector of the transportation industry. The noticeable difference is that these trailers do not have side walls, roofs, or doors.

These trailers are subject to the same size constraints as standard Dry Van truckload shipments - 53' long, 102" wide and the freight loaded on the trailer can not extend more than 13'6" off of the ground. They are also subject to the 80,000 pound maximum weight.

There are several different kinds of flatbeds / specialized trailers that will be reviewed below. The trailer type needed is based on the size (primarily height) and weight of the shipment.

## TYPES OF FLATBEDS

<b>FLATBED</b>	Flatbed trailers are versatile for transporting unique or heavy materials, with the ability to side offload. It's crucial to adhere to legal height limits without permits. Flatbeds are commonly found at 48' Length, but can be 53' length. Tarping options include 4', 6', and 8' tarps to ensure cargo protection during transit.
<b>STEP-DECK</b>	Designed for transporting unique or heavy materials, offering the advantage of side offloading. They are utilized to accommodate extra height requirements. Step-decks typically consist of two decks, with the main deck being the lowest, and the lengths of the decks may vary. Tarping options are available in sizes of 4', 6', and 8' tarps, providing adequate protection for the cargo being transported.
<b>DOUBLE-DROP</b>	Designed for transporting unique or heavy materials, offering the advantage of side offloading. They are utilized to accommodate extra height requirements. Double-Drops typically consist of three decks, with the main deck being the lowest, and the lengths of the decks may vary. Tarping options are available in sizes of 4', 6', and 8' tarps, providing adequate protection for the cargo being transported.
<b>HOT SHOT</b>	A smaller flatbed trailer, typically attached to a pickup truck, is used when a load requires side loading/unloading but doesn't require a full-sized flatbed. The most common length for these trailers is 40 feet, but variations like 24', 30', and 35' are also available to suit specific needs.
<b>REMOVABLE GOOSE NECK (RGN TRAILER)</b>	Specialized trailers with detachable front sections for easy loading and unloading of heavy and oversized cargo. They are commonly used for transporting construction machinery and large loads, offering efficient and safe transportation solutions.



## GENERAL INFORMATION NEEDED FOR A FLATBED QUOTE

<b>SHIPPER / ORIGIN</b>	City, State, Zip Code - Where is it shipping from?
<b>CONSIGNEE / DESTINATION</b>	City, State, Zip Code - Where is it shipping from?
<b>DATES / TIMES</b>	When is the shipment ready / window it can be picked up? Truckload shipments generally need 2 days notice to be picked up - some lanes are more difficult to cover than others. Availability of trucks decreases and cost can increase as times move closer to ship date Generally, a driver can drive 500 miles per day so a 1,500 mile lane will be considered to take 3 days
<b>APPOINTMENT REQUIRED?</b>	Specific appointment times are often required when dealing with full truckload shipments due to the size of the shipments
<b>ABILITY TO LOAD / UNLOAD?</b>	Due to the nature of product on flatbed, it's important to confirm that equipment is available on site to load / unload the equipment.
<b># OF PIECES SHIPPING</b>	How many pallets, bundles, cartons, or pieces are shipping?
<b>COMMODITY BEING SHIPPED</b>	What product(s) does the shipment consist of?
<b>TARPING</b>	Does this product require tarping? If so, what size tarps? 4', 6', 8' tarps?
<b>TOTAL WEIGHT</b>	How much does the total shipment weigh?
<b>REFERENCE #</b>	These reference numbers help identify shipments at pickup or orders internally at a company.
<b>VALUE OF SHIPMENT</b>	Is the product high-value? Is additional cargo insurance required?
<b>PERMITS</b>	Are permits required to move the freight? Any shipment over the legal dimensions of the trailer is required to have permits - in any state. These type of moves also have restrictions on when it can move.

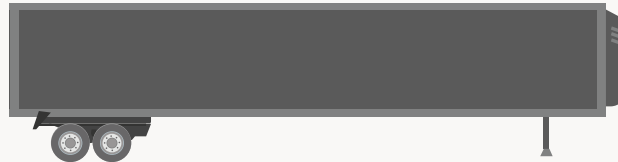


## TEMPERATURE CONTROLLED / OTHER

Temperature Controlled equipment, also known as refrigerated or reefer equipment, are used to sustain product at a specific temperature during transit. The equipment is used to keep items from excessive heat or from freezing. Generally, these are used to transport food products, pharmaceuticals, and other perishable items.

The trailer is much like a dry van, except there is a refrigeration unit on top at the head of the trailer and a fuel tank beneath. A specialized type of reefer is a dual-temp trailer. These trailers allow for various temperatures to be utilized by blocking off specific areas with different temperatures.

Sometimes a shipper may use the trailer with the refrigeration unit turned off to help with capacity issues. However, this is not always possible as the humidity of the trailer may affect product or there may not be enough space as the refrigeration unit takes up usable space. It's important to clarify with a shipper if a reefer can be used.



### GENERAL INFORMATION NEEDED FOR A REFRIGERATED QUOTE

<b>SHIPPER / ORIGIN</b>	City, State, Zip Code - Where is it shipping from?
<b>CONSIGNEE / DESTINATION</b>	City, State, Zip Code - Where is it shipping to?
<b>DATES / TIMES</b>	When is the shipment ready / window it can be picked up? Truckload shipments generally need 2 days notice to be picked up - some lanes are more difficult to cover than others. Availability of trucks decreases and cost can increase as times move closer to ship date. Generally, a driver can drive 500 miles per day so a 1,500 mile lane will be considered to take 3 days.
<b>APPOINTMENT REQUIRED?</b>	Specific appointment times are often required when dealing with full truckload shipments due to the size of the shipments.
<b># OF PIECES SHIPPING</b>	How many pallets, bundles, cartons, or pieces are shipping?
<b>COMMODITY BEING SHIPPED</b>	What product(s) does the shipment consist of?
<b>TOTAL WEIGHT</b>	How much does the total shipment weigh?
<b>REFERENCE #</b>	These reference numbers help identify shipments at pickup or orders internally at a company.
<b>VALUE OF SHIPMENT</b>	Is the product high-value? Is additional cargo insurance required?
<b>TEMPERATURE</b>	What are the temperature requirements for the shipment?

### OTHER TYPE OF EQUIPMENT/SERVICES:

<b>CONESTOGA</b>	Equipped with retractable curtains that span the entire length of the trailer. They provide both the protection of a dry van and the convenience of side-loading and unloading freight. These trailers offer a versatile solution for cargo transportation, combining the security of enclosed trailers with the accessibility of side-load capabilities.
<b>CURTAIN SIDE</b>	Similar to Conestoga trailers, Curtain-Side have permanent tops and curtains on the sides for easy side-loading / unloading of freight, combining accessibility with weather protection.
<b>BULK</b>	Shown in figure 4.1, these type of trailers are used to transport loose, unpackaged material that is shipped in bulk quantity. These are two types - dry bulk and liquid bulk. These trailers are unloaded using gravity or vacuum.
<b>BLANKET WRAPPED</b>	This is a specific service used to ship products that require blankets to be wrapped around it. These trailers usually have load bars and straps to secure the product. The inside of these trailers are shown in Figure 4.2.



CONESTOGA



CURTAIN-SIDE



FIGURE 4.1



FIGURE 4.2



# INTERMODAL

Intermodal Transportation is the use of multiple “modes” of transportation to transport product from an origin to a destination. In most cases, and for the topic of this guide, the modes are truck and rail.

## INTERMODAL TRANSPORTATION PROCESS

Material is picked up in a standard truck trailer or intermodal container at the shipper’s origin by a drayage carrier. A drayage carrier is a trucking company that is primarily responsible for picking up an empty container from the rail yard and taking it to the shipping point for loading. Once loaded, the drayage carrier will transport the container to the rail yard for loading onto the rail - this is the first “truck portion of the intermodal move.

Once the container arrives in the rail yard, it is removed from the chassis by crane, loaded, and secured to a rail car. This begins the “rail” portion of the intermodal move. From this point, the container will move through the nation’s rail network to the closet rail yard to the consignee’s location.

After the container is “grounded”, the “truck” portion of the intermodal move performed at the origin will be made in reverse with the drayage carrier making the delivery to the consignee and then returning the empty container back to the rail yard.

## ADVANTAGES AND DISADVANTAGES OF INTERMODAL TRANSPORTATION

Intermodal transportation is almost always less expensive than shipping via standard “over the road” truck transportation. The fuel surcharge is also 1/2 of the amount of the fuel surcharge for truck transportation, which can relate to significant savings for the customer.

The trade off for the reduced pricing is that the transit times can be slower than that of truck transportation. An additional drawback of shipping via intermodal transportation is that the shipper is responsible for loading the container in such a way that the product will ride safely from the shipper’s door to the consignee’s door - this is done through “blocking and bracing”. Most of our intermodal providers will offer complimentary site visits to assist our customers in properly blocking and bracing their particular product.

## GENERAL INFORMATION NEEDED FOR AN INTERMODAL QUOTE

<b>SHIPPER / ORIGIN</b>	City, State, Zip Code - Where is it shipping from?
<b>CONSIGNEE / DESTINATION</b>	City, State, Zip Code - Where is it shipping from?
<b>DATES / TIMES</b>	When is the shipment ready / window it can be picked up? Intermodal requires 2 days notice to be picked up Generally, Intermodal requires a longer transit than Over-the-Road trucking
<b>APPOINTMENT REQUIRED?</b>	Specific appointment times are often required when dealing with full truckload shipments due to the size of the shipments
<b># OF PIECES SHIPPING</b>	How many pallets, bundles, cartons, or pieces are shipping?
<b>COMMODITY BEING SHIPPED</b>	What product(s) does the shipment consist of?
<b>TOTAL WEIGHT</b>	How much does the total shipment weigh?
<b>REFERENCE #</b>	These reference numbers help identify shipments at pickup or orders internally at a company.
<b>VALUE OF SHIPMENT</b>	Is the product high-value? Is additional cargo insurance required?

**IMPORTANT NOTE:** The shipper is responsible for the blocking and bracing of product to ensure a safe transit to the consignee.



# EXPEDITES - GROUND

Ground Expedite is a service that is utilized when standard LTL or truckload service is not fast enough to meet the customer's required delivery date or time. Ground Expedite is also an alternative when no other capacity can be found for truckload shipments that must ship on a specified date - this option should be used as a last resort as it's expensive. Ground Expedite transportation is almost always more expensive than standard truckload services, sometimes considerably.

The service is comprised of exclusive use vehicles of varying sizes that are dispatched to drive directly from the shipper's dock to the consignee's dock without making other stops or deliveries along the way - the vehicles can normally be scheduled to arrive at the shipper's dock within hours after a phone call is placed.

These vehicles are generally driven by a team of drivers so that delivery can be made as soon as possible after pick-up. Vehicles may be selected to fit the size of the shipment - there are generally three sizes of vehicles to choose from.

## GROUND EXPEDITE EQUIPMENT



CARGO / SPRINTER VAN



STRAIGHT TRUCK



TRACTOR TRAILER

## GENERAL INFORMATION NEEDED FOR A GROUND EXPEDITE QUOTE

<b>SHIPPER / ORIGIN</b>	City, State, Zip Code - Where is it shipping from?
<b>CONSIGNEE / DESTINATION</b>	City, State, Zip Code - Where is it shipping from?
<b>DATES / TIMES</b>	When is the shipment ready / window it can be picked up? When does it need to deliver by or when will someone be on site to receive? Are weekend / after hour deliveries accepted?
<b># OF PIECES SHIPPING</b>	How many pallets, bundles, cartons, or pieces are shipping?
<b>COMMODITY BEING SHIPPED</b>	What product(s) does the shipment consist of?
<b>TOTAL WEIGHT</b>	How much does the total shipment weigh?
<b>REFERENCE #</b>	These reference numbers help identify shipments at pickup or orders internally at a company.
<b>VALUE OF SHIPMENT</b>	Is the product high-value? Is additional cargo insurance required?
<b>LOADING / UNLOADING</b>	Does the equipment need to be dock height? Can the shipper / receiver handle a non-dock high vehicle?



## EXPEDITES - AIR

Sometimes a ground expedite or guaranteed LTL is not even fast enough to meet the customer's need for their product - at this point, an air expedite is an alternative to be explored.

From an operational standpoint, a truck which is usually contracted by an air freight company to make pick-ups and deliveries between shippers, consignees, and the airports, will make a pick-up at the shipper's dock and take it to the airport to fly to an airport in another city with another truck awaiting to take the product to the ultimate delivery location. In some cases, the product will make transfers at other airports, much like a passenger would.

### TYPES OF AIR SERVICES

<b>ECONOMY SERVICE</b>	Will deliver within 3-5 business days after pick-up. This service is rarely used due to LTL companies offering nationwide deliveries in this time frame at no additional cost.
<b>2ND DAY</b>	Will deliver 2 days after pick-up is made. Service is usually guaranteed to deliver by 5:00 PM
<b>2ND DAY AM</b>	Will deliver 2 days after pick-up is made. Service is usually guaranteed to deliver by noon.
<b>NEXT DAY</b>	Will deliver next day after pick-up is made. Service is usually guaranteed to deliver by 5:00 PM
<b>NEXT DAY AM</b>	Will deliver next day after pick-up is made. Service is usually guaranteed to deliver by noon.
<b>FIRST FLIGHT OUT</b>	Will deliver early the next morning or on the same day in some cases. These shipments go directly to the airport, get on the next available flight to the delivering airport, and then delivered to consignee as soon as possible.
<b>CHARTER AIRCRAFT</b>	This is the most expensive of all air expedite options. This service entails renting an entire exclusive use charter aircraft. Varying sizes of aircraft are available for contract depending on the size of the shipment.

### PRICING AIR EXPEDITES

Dimensional Weight is determined by multiplying the shipment length (in inches) by the shipment width (in inches) and the shipment height (in inches) and divided by a factor of 194 - the shipment will move as the resultant weight of this formula or the actual weight, whichever is higher.

$$\frac{\text{Length (inches)} \times \text{Width (Inches)} \times \text{Height (Inches)}}{194} = \text{Dimensional Weight}$$

It is important to remember that the higher of the two weights - dimensional and actual - is taken when calculating the price.

For international shipments, including shipping from and to Puerto Rico, the dimensional weight factor is adjusted to 166. This would mean you would use 166 instead of 194 in the formula above.

TLI provides an airfreight density calculator on our website at [www.translogisticsinc.com](http://www.translogisticsinc.com).

### GENERAL INFORMATION NEEDED FOR AN AIR QUOTE

<b>SHIPPER / ORIGIN</b>	City, State, Zip Code - Where is it shipping from?
<b>CONSIGNEE / DESTINATION</b>	City, State, Zip Code - Where is it shipping from?
<b>DATES / TIMES</b>	When is the shipment ready / window it can be picked up? When does it need to deliver by or when will someone be on site to receive? Are weekend / after hour deliveries accepted?
<b># OF PIECES SHIPPING</b>	How many pallets, bundles, cartons, or pieces are shipping?
<b>COMMODITY BEING SHIPPED</b>	What product(s) does the shipment consist of?
<b>TOTAL WEIGHT</b>	How much does the total shipment weigh?
<b>REFERENCE #</b>	These reference numbers help identify shipments at pickup or orders internally at a company.
<b>VALUE OF SHIPMENT</b>	Is the product high-value? Is additional cargo insurance required?
<b>LOADING / UNLOADING</b>	Does the equipment need to be dock height? Can the shipper / receiver handle a non-dock high vehicle?



# INTERNATIONAL

International Transportation is shipping from one country to another. International shipments are defined as either exports or imports depending on the direction.

As a shipper in the United States, an export is a shipment that is leaving the United States and is destined for another country. As a consignee in the United States, an import is a shipment that is shipping from another country and is destined for the United States.

International shipments are not limited to overseas countries - they also include shipments moving between the United States and Canada, Mexico or Puerto Rico and other U.S. Territory islands.

International shipments can be transported by ground, air, or ocean transportation. The shipments can move as LTL, Volume LTL, Truckload, Air, and Ocean and are priced the same as discussed above under the related transportation method.

## INTERNATIONAL LANGUAGE

<b>COMMERCIAL INVOICE</b>	A fundamental document for an international transaction with details including what goods are being shipped, who is the shipper and who is the ultimate consignee. Serves as the basis for all other documents related to the shipment.
<b>EXPORT</b>	A shipment of goods out of a country - opposite of an import.
<b>IMPORT</b>	A shipment of goods into a country - opposite of an export.
<b>INCOTERMS</b>	The Incoterms or International Commercial Terms are a series of pre-defined commercial terms published by the International Chamber of Commerce relating to international commercial law. They describe how responsibility is allocated between the seller and the buyer for different parts of the transaction
<b>CUSTOMS CLEARANCE</b>	The process in which a customs authority assesses a shipment being imported in their country in order to ensure compliance with their country's import regulations.

## GENERAL INFORMATION NEEDED FOR AN INTERNATIONAL QUOTE

<b>SHIPPER / ORIGIN</b>	City, State, Zip Code - Where is it shipping from?
<b>CONSIGNEE / DESTINATION</b>	City, State, Zip Code - Where is it shipping from?
<b>DATES / TIMES</b>	When is the shipment ready / window it can be picked up? When does it need to deliver by or when will some one be on site to receive? Are weekend / after hour deliveries accepted?
<b># OF PIECES SHIPPING</b>	How many pallets, bundles, cartons, or pieces are shipping?
<b>COMMODITY BEING SHIPPED</b>	What product(s) does the shipment consist of?
<b>TOTAL WEIGHT</b>	How much does the total shipment weigh?
<b>REFERENCE #</b>	These reference numbers help identify shipments at pickup or orders internally at a company.
<b>VALUE OF SHIPMENT</b>	Is the product high-value? Is additional cargo insurance required?
<b>INCOTERM</b>	A commercial term describing the responsibility of each party in the shipment and when risk is transferred. This term is selected by the importer and exporter during the sale.
<b>CUSTOMS CLEARANCE</b>	Every shipment must be cleared by customs - the party receiving the goods is responsible for selecting a customs broker. Note: International shipments require specific documentation for imports - varying on the country it's being imported to.



# OCEAN TRANSPORT

Shipments that move to other countries or to U.S. islands, such as Puerto Rico, can move via ocean transport. These shipments are loaded into ocean containers, which come in standard sizes of 20' and 40' for global shipping. Some containers moving to Puerto Rico can also come in 45', 48', and 53'. These containers can be dry containers or temperature (refrigerated) containers.

Just as with rail intermodal containers, these containers are picked up and delivered by truckers known as drayage carriers. Their primary purpose is to transport containers between ocean docks and shippers / consignees. After these containers are loaded and transported by truck to the docks, they are loaded by crane onto ships.

Once all of the containers are loaded on the ship, the ship sails to ports all over the world. Some of these ships are so large that they can hold a few thousand containers in their bellies as well as on their decks.

Ocean shipments will require a considerable amount of time from order placement to delivery - 3 days or more notice to schedule a container to arrive at a shipper's dock is generally needed. Depending on the shipping lane, ships generally depart a dock twice per week to once every two weeks or month. After departure, ships will be on the ocean for up to several weeks.

Ocean shipments can move via two methods - Full Container load (FCL) or Less Than Container Load (LCL).

## OCEAN FREIGHT ACCESSORIAL

<b>BUNKER FUEL SURCHARGE</b>	This charge is a fuel surcharge for the ship's diesel
<b>DOCUMENTATION CHARGE</b>	The charges is for a shipping line to prepare necessary documentation and paperwork
<b>FORWARDER'S HANDLING FEE</b>	This charge is to pay the freight forwarder for their services
<b>SECURITY CHARGE</b>	Additional charges to help ports meet security standards put forth by the Department of Homeland Security
<b>TERMINAL HANDLING CHARGE</b>	The charge for ocean port to processes and handle the container. This includes the use of cranes to load / unload containers

## HOW ARE FCL OCEAN SHIPMENTS PRICED

FCL shipments are much like truckload shipments. The shipper purchases the right to utilize the entire container - they are priced like truckload as well.

There are 3 separate movements which comprise an intermodal FCL ocean shipment:

- 1. ORIGIN INLAND DRAYAGE**
- 2. OCEAN TRANSPORTATION FROM PORT-TO-PORT**
- 3. DESTINATION INLAND DRAYAGE**

These movements can be priced through 2 or 3 individual companies or through just the shipping line. (if it is set up through the shipping line, they will set-up and pay the drayage carriers - this method is the most commonly used.)

A shipper based in the United States will generally only pay for the inland U.S. portion, export, or import, and the ocean transportation to or from the foreign port. The foreign shipper or consignee will generally manage the inland drayage transportation within the foreign country. The U.S. based company can contract and manage all 3 segments of the transportation, but it is generally very cost prohibitive to do so.

As with a truckload shipment, an FCL shipment will be billed a flat rate from the origin to the dock or the dock to a destination. In addition to the flat charge, FCL ocean shipments are assessed with several standard accessorial found in the "FCL Accessorial Terms" section. Due to these extra charges, it's VERY IMPORTANT to request the TOTAL quote for an ocean container - ask the ship company to provide an itemized quote.



# OCEAN TRANSPORT

## HOW ARE LCL OCEAN SHIPMENTS PRICED

For smaller shipments that will not fill the capacity of even a 20' container, LCL service is available. This is priced much like an LTL shipment by weight and cubic volume.

As with FCL shipments, LCL shipments consist of 3 separate transportation charges:

- 1. LTL portion from origin to Port
- 2. LCL Ocean Transportation
- 3. LTL Portion from Port to Destination

The LTL portions are priced via standard LTL pricing. The ocean transportation portion is billed by the greater of the rate as determined by weight or the rate determined by cubic volume. The cubic volume rate is used for the reason that freight class is used in standard domestic LTL service - it helps avoid using too much of the container for the low weight of a low density product.

LCL transportation also requires substantial lead times. It is of vital importance to request delivery timelines from the ship company so the information can be relayed to the customer - specific itemized quotes are also needed.

Pricing example: Assume that we have a shipment that weighs 700 pounds on a 48" x 48" x 36" pallet and the steamship charges \$35 per hundredweight (CWT) or \$5.00 per cubic foot for their ocean charges.

The rate based on weight would be 7 (hundredweights) multiplied by \$35 or \$245.

To determine the rate per cubic volume, we would first need to determine the cubic footage (Volume) of the shipment. To accomplish this, we multiply the inches (48 x 48 x 36) to arrive at 82,944 cubic inches. We divide this number by the factor of 1,728 to determine cubic footage.

This would come to 48 cubic. The rate based on cubic volume would be 48 multiplied by \$5 or \$240.

Since the company takes the highest - the company would do the rate of \$245.

## GENERAL INFORMATION NEEDED FOR AN OCEAN QUOTE

<b>SHIPPER / ORIGIN</b>	City, State, Zip Code - Where is it shipping from?
<b>CONSIGNEE / DESTINATION</b>	City, State, Zip Code - Where is it shipping from?
<b>DATES / TIMES</b>	When is the shipment ready / window it can be picked up? When does it need to deliver by or when will someone be on site to receive? Are weekend / after hour deliveries accepted?
<b># OF PIECES SHIPPING</b>	How many pallets, bundles, cartons, or pieces are shipping?
<b>COMMODITY BEING SHIPPED</b>	What product(s) does the shipment consist of?
<b>TOTAL WEIGHT</b>	How much does the total shipment weigh?
<b>REFERENCE #</b>	These reference numbers help identify shipments at pickup or orders internally at a company.
<b>VALUE OF SHIPMENT</b>	Is the product high-value? Is additional cargo insurance required?
<b>INCOTERM</b>	A commercial term describing the responsibility of each party in the shipment and when risk is transferred. This term is selected by the importer and exporter during the sale.
<b>CUSTOMS CLEARANCE</b>	Every shipment must be cleared by customs - the party receiving the goods is responsible for selecting a customs broker. Note: International shipments require specific documentation for imports - varying on the country it's being imported to.



# HAZARDOUS MATERIAL

The department of Transportation defines Hazardous Material as any substance or material that could adversely affect the safety of the public, handlers or carriers during transportation.

## UN NUMBERS / HAZARD IDENTIFIER

As these products can be very dangerous to handle, there are strict regulations as to how these products are handled by shippers and trucking companies. Each product that is considered hazardous is identified by a UN number, which is a number from UN0001 to UN3500.

While some hazardous products possess unique qualities and are classified under their own UN number, other products that are similar in qualities may be classified under the same UN number. For example, Flammable Liquids, not other specified, share the UN1993 number.

Each UN number also has a Hazard Identifier associated with it. A Hazard Identifier is a collection of Hazardous classes and subdivisions that identify why a product is hazardous and what regulations are associated with handling the product. Some are much more dangerous than others, such as Class 7 Radioactive materials, and are very regulated. There are 9 General Hazardous classes, shown in figure 8.1 on page 25.

Shippers of Hazardous Material must follow strict guidelines when handling and preparing shipments for transportation. They must also complete a Shipper's Declaration for Hazardous Good.

## HAZMAT CERTIFIED DRIVERS

Drivers who handle Hazardous Material MUST be Hazmat Certified to transport the material. They must pass a very thorough background check by the Transportation Security Administration (TSA) in addition to passing a difficult test from the Department of Transportation to become a HazMat Certified driver.

All trailers that contain Hazardous Materials must have a placard on the side of the trailer indicating what Class of Hazardous Material is being transported - A placard is a diamond shaped metal plate that is affixed to the side of the trailer. Examples can be found in figure 8.2 on page 18.

There are more rules and regulations in place when a shipment is considered Hazardous Waste. Although it sounds much more frightening, Hazardous Waste is nothing more than Hazardous Material that has been used or went through some sort of Manufacturing Process. An example of this is Motor Oil - when it is shipped motor oil is Hazardous Material - when it was used in an engine and drained during an oil change, it becomes Hazardous Waste.

## EXTRA INFORMATION NEEDED TO BOOK HAZARDOUS MATERIAL

<b>UN NUMBER</b>	Specific number to identify product (UNXXXX)
<b>HAZARDOUS CLASS AND SUBDIVISION</b>	Identifies why a product is hazardous and what regulations are associated with handling the product
<b>PROPER SHIPPING NAME OF PRODUCT</b>	Specific Name of Product - Must be very Specific
<b>PACKING GROUP</b>	Group that the Hazardous Material falls under
<b>CONTACT INFORMATION IN CASE OF SPILL OR ACCIDENT</b>	Generally a company called ChemTrec, a 800 number. Customers may have another contact to use

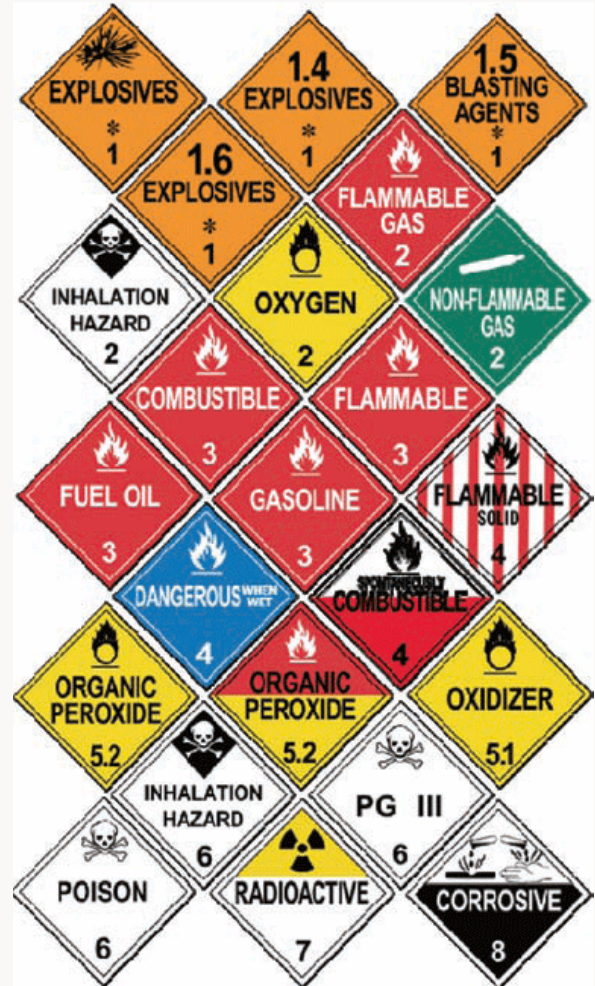


# HAZARDOUS MATERIAL

**Figure 8.1:** The different Hazardous Identifier Classes and Subdivisions

Hazard Class 1: Explosives	1.1 mass explosion hazard 1.2 projectile hazard 1.3 minor blast/projectile/fire 1.4 minor blast 1.5 insensitive explosives 1.6 very insensitive explosives
Hazard Class 2: Compressed Gases	2.1 flammable gases 2.2 non flammable compressed 2.3 poisonous
Hazard Class 3: Flammable Liquids	Flammable (flash point below 141°) Combustible (flash point 141°-200°)
Hazard Class 4: Flammable Solids	4.1 flammable solids 4.2 spontaneously combustible 4.3 dangerous when wet
Hazard Class 5: Oxidizers and Organic Peroxides	5.1 Oxidizer 5.2 Organic Peroxide
Hazard Class 6: Toxic Materials	6.1 Material that is poisonous 6.2 Infectious Agents
Hazard Class 7: Radioactive Material	Radioactive I Radioactive II Radioactive III
Hazard Class 8: Corrosive Material	Destruction of the human skin Corrode steel at a rate of 0.25 inches per year
Hazard Class 9: Miscellaneous	A material that presents a hazard during shipment but does not meet the definition of the other classes

**Figure 8.2:** Examples of Placards used to identify Hazardous Material's class





# INSURANCE COVERAGE

## BASICS OF CARGO LIABILITY

Although everybody tries to be perfect - freight damage is an every day problem in the logistics world. While in some cases extra coverage may not be needed, it is important to understand how much is covered in a shipment for when things go wrong.

Truckload shipments can see damage, but typically will not since there are less touches in the process. The truck is dedicated to go from point A to point B with at times being secured with a seal at pickup. With this being the case, truckloads are always covered at a maximum \$100,000 cargo liability.

The LTL network is a different scenario. With the shipment going from terminal to terminal, there is more room for damages to occur. There is bound to be more damages to be found with constant freight loading/unloading, terminal exchanges, and terminal storages. Even in the scenario of products being stacked when they have been marked to not be stacked.

## STANDARD CARRIER COVERAGE

Carriers are not always liable when it comes to claims - there is a lot of resistance to pay out for loss. In order to be liable for damage, there are three conditions:

### LOSS IS A DIRECT LOSS OF CARRIER NEGLIGENCE

A carrier must be fully responsible of the loss. If a shipper doesn't package the product right, that is not carrier negligence. If a carrier stacks the product when the BOL says not to stack it, then that is carrier negligence.

### THERE IS PROOF OF CARRIER NEGLIGENCE

Not only does it have to be on the carrier, but you must prove it! Ensure that proper documentation is taken upon product being received. When in doubt - make sure pictures are taken.

### ONLY UP TO A CERTAIN DOLLAR AMOUNT

As mentioned above, carriers will only pay out a certain amount on standard coverage. Below are the industry standard for coverage based on mode of transportation:

STANDARD INDUSTRY COVERAGE	
LESS-THAN-TRUCKLOAD (LTL)	PER LB (\$5.00 PER LB)
VOLUME	PER LB (\$0.50 PER LB)
FULL TRUCKLOAD (FTL)	MAXIMUM \$100,000
DOMESTIC AIR	PER LB (\$0.50 PER LB)
OCEAN CARRIERS	\$500 PER CONTAINER
**ACTUAL COVERAGE VARIES DEPENDING ON CARRIER**	

## EXTRA COVERAGE












Customers should be asked if additional coverage is needed. Red flags to consider extra coverage can be found in high value, low weight products as in most cases coverage is based on cents per lb.

TLI partners with Falvey Insurance to get extra coverage outside of the standard carrier coverage. The cost to cover is based on a case-by-case basis. The advantages of this is that Falvey Insurance covers door-to-door, payment regardless of carrier negligence proof, and the full value of the shipment.



# EQUIPMENT GUIDE

The following is for informational purposes and general guidance only. Equipment, sizes, and capabilities varies based on carrier's equipment availability.

NAME	DESCRIPTION	STANDARD EQUIPMENT		
		MAX WEIGHT	TRAILER DIMENSIONS	LEGAL HEIGHT
<b>Cargo Van Sprinter Van</b>	 Cargo vans are non-dock high vehicles specifically designed for expedited transit of 1-2 pallets. They offer swift transportation capabilities.	3,200 lbs	120" L 52" W 75" H	61"W x 69"H (Door Dimensions)
<b>Straight Truck Box Truck</b>	 Straight trucks, whether dock high or non-dock high, are ideal for handling smaller shipments. They have weight limitations and often come equipped with liftgate technology.	12,000lbs	12' - 26' L 100" W 102" H	
<b>Dry Van</b>	 Dry vans are the most widely used equipment in both less-than-truckload (LTL) and truckload shipping. They typically come in lengths of 48' or more commonly 53'. While some dry vans may be equipped with a liftgate, it is less common for truckload carriers. However, LTL carriers often have the convenience of liftgate and pallet jack capabilities.	44,000 lbs	53' L 100" W 110" H	
<b>Refrigerated Reefer Temp-Controlled Dual-Temp</b>	 Specifically designed for transporting temp-controlled shipments. Sometimes used as an alternative to dry vans, some shippers prefer not to use reefers due to concerns about moisture and the space occupied by the refrigeration unit. Dual-temp trailers, allow for variable temp control by blocking off sections, however are relatively uncommon equipment in the industry.	42,500lbs	53' L 100" W 103" H	
<b>Flatbed</b>	 Flatbed trailers are versatile for transporting unique or heavy materials, with the ability to side offload. It's crucial to adhere to legal height limits without permits. Flatbeds are commonly found at 48' length, but can be 53' length. Tarping options include 4', 6', and 8' tarps to ensure cargo protection during transit.	48,000lbs	48' L 102" W	8'6" H
<b>Single Drop Step Deck</b>	 Designed for transporting unique or heavy materials, offering the advantage of side offloading. They are utilized to accommodate extra height requirements. Step-decks typically consist of two decks, with the main deck being the lowest, and the lengths of the decks may vary. Tarping options are available in sizes of 4', 6', and 8' tarps, providing adequate protection for the cargo being transported.	45,000lbs	48' L 102" W	10'6" H
<b>Double Drop Step Deck</b>	 Designed for transporting unique or heavy materials, offering the advantage of side offloading. They are utilized to accommodate extra height requirements. Double-Drops typically consist of three decks, with the main deck being the lowest, and the lengths of the decks may vary. Tarping options are available in sizes of 4', 6', and 8' tarps, providing adequate protection for the cargo being transported.	40,000lbs	48' L 102" W	12' H
<b>RGN (Removable Goose Neck)</b>	 Specialized trailers with detachable front sections for easy loading and unloading of heavy and oversized cargo. They are commonly used for transporting construction machinery and large loads, offering efficient and safe transportation solutions.	42,000lbs	48' L 96" W	11' 6" H
<b>Hotshot</b>	 A smaller flatbed trailer, typically attached to a pickup truck, is used when a load requires side loading/unloading but doesn't require a full-sized flatbed. The most common length for these trailers is 40 feet, but variations like 24', 30', and 35' are also available to suit specific needs.	16,000lbs	40' L 102" W	10' H
<b>Conestoga</b>	 Equipped with retractable curtains that span the entire length of the trailer. They provide both the protection of a dry van and the convenience of side-loading and unloading freight. These trailers offer a versatile solution for cargo transportation, combining the security of enclosed trailers with the accessibility of side-load capabilities.	44,000lbs	48' L 102" W 110" H	
<b>Curtain-Side</b>	 Similar to Conestoga trailers, Curtain-Side have permanent tops and curtains on the sides for easy side-loading/unloading of freight, combining accessibility with weather protection.	40,000lbs	48' L 102" W 110" H	