amazon freight

# Freight classes for LTL shipments


Freight class is an industry-standard rating of LTL shipments that defines what is in those shipments. It is a function of freight density, handling, stowability, and liability. There are 18 classes, ranging from class 50 to class 500 as defined by the National Motor Freight Classification® (NMFC) system.

The following freight class chart from the NMFC provides a list of freight classes and examples of commodities and typical densities for each of them. Note that the densities are ranges for general understanding only and do not dictate the final freight class.

| FREIGHT CLASS | COMMODITY EXAMPLE | WEIGHT RANGE PER CUBIC FT. |
|---|---|---|
| **50** | Bulk ingredients - Nuts, bolts, steel rods | 50+ lbs. |
| **55** | Hardwood flooring, bricks, cement | 35-50 lbs. |
| **60** | Ceramic tiles, car parts | 30-35 lbs. |
| **65** | Books, bottled beverages | 22.5-30 lbs. |
| **70** | Forklift batteries | 15-22.5 lbs. |
| **77.5** | Tires, bathroom fixtures | 13.5-15 lbs. |
| **85** | Crafted machinery, pharmaceuticals | 12-13.5 lbs. |
| **92.5** | Computers, monitors, refrigerators | 10.5-12 lbs. |
| **100** | Wooden furniture, cars, boat covers | 9-10.5 lbs. |
| **110** | Cosmetics, cabinets, framed artwork | 8-9 lbs. |
| **125** | Small household appliances | 7-8 lbs. |
| **150** | Auto sheet metal parts, bookcases | 6-7 lbs. |
| **175** | Clothing, couches, stuffed furniture | 5-6 lbs. |
| **200** | Light furniture, sheet metal, packaged mattresses | 4-5 lbs. |
| **250** | Flat screen TVs, bamboo furniture | 3-4 lbs. |
| **300** | Wood cabinets, tables | 2-3 lbs. |
| **400** | Deer antlers, light fixtures | 1-2 lbs. |
| **500** | Ping-pong balls | Less than 1 lb. |

Learn more about using density to provide freight class recommendations on the following page. →

# Determining freight class using density

The National Motor Freight Traffic Association (NMFTA) developed the NMFC system for determining freight class based on a shipment's density. Amazon Freight uses density as the key factor for determining freight class. Since not all similar types of commodities weight the same, using true density eliminates potential differences in interpretations of the commodity NMFC class codes and freight classes.

## Calculating density in order to provide a freight class recommendation

### 1 MEASURE

Measure the length, width, and height of the shipment. These measurements include pallets and other packaging around the actual shipment. For multiple-pallet shipments, repeat this step for each pallet.

### 2 CONVERT TO CUBIC FEET

Multiply the height, width, and length measurements to calculate the total cubic inches of the shipment. Then divide this number by 1,728 to convert cubic inches to cubic feet.
For shipments with several pallets:

a. Multiply the length, width, and height of each individual pallet

b. Add the cubic measurements of each piece together

c. Convert the total to cubic feet if necessary

### 3 CALCULATE DENSITY

Use the shipment weight provided in pounds. To calculate density (pounds per cubic foot):

a. Divide the total weight by the total cubic feet

b. For multiple pieces, add the total weight of all pieces before dividing by the total cubic feet

### 4 DETERMINE FREIGHT CLASS

Once the freight density is calculated, we use the NMFC freight class chart to determine the freight class.

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