



Understanding Freight Classification Outline

What is Freight Class?

Designed to get common standardized freight pricing for Less-Than-Truckload (LTL) freight shipments.

Defined by the National Motor Freight Traffic Association (NMFTA) & published in the National Motor Freight Classification (NMFC).

Each commodity or type of product is assigned an NMFC number & class for LTL freight shipments.

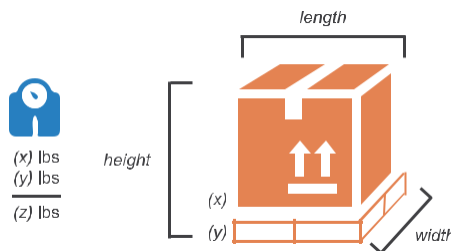
The NMFC system is a standardized method to give consumers uniform pricing when transporting freight.

18 classes that shipments may fall under from class 50 (least expensive) to 500 (most expensive).

The class assigned to a commodity determines the tariffs, and thus, the price charged on that shipment.

On 8/5/2017 the NMFTA offered a 2nd class table for true density based items absent any unusual or significant handling, stowability or liability characteristics. See Page 3.

Determining Factors



■ Density & Volume

The density is the space the item occupies in relation to its weight. **Density = weight of item (lbs) / volume (cubic feet). Volume (cubic feet) = Length (in) x Width (in) x Height (in) / 1,728.**



□ Handling

A classification that represents ease or difficulty of loading and carrying the freight is assigned to the items.



□ Stowability

A quantifiable stowability classification represents the difficulty in loading and carrying these items.



□ Liability

Liability is the probability of freight theft or damage, or damage to adjacent freight.

Freight Class

18 Different Types of Freight Class

Note: The higher the class number, the higher the cost.

CLASS	EXAMPLES	WEIGHT PER CUBIC FEET
Class 50	Fits on standard shrink-wrapped 4X4 pallet, very durable	Over 50 lbs.
Class 55	Bricks, cement, mortar, hardwood flooring	35-50 lbs.
Class 60	Car accessories & car parts	30-35 lbs.
Class 65	Car accessories & car parts, bottled beverages, books in boxes	22.5-30 lbs.
Class 70	Car accessories & car parts, food items, automobile engines	15 - 22.5 lbs.
Class 77.5	Tires, bathroom fixtures	13.5 - 15 lbs.
Class 85	Crated machinery, cast iron stoves	12 - 13.5 lbs.
Class 92.5	Computers, monitors, refrigerators	10.5 - 12 lbs.
Class 100	Boat covers, car covers, canvases, wine cases, caskets	9 - 10.5 lbs.
Class 110	Cabinets, framed artwork, table saw	8 - 9 lbs.
Class 125	Small household appliances	7 - 8 lbs.
Class 150	Auto sheet metal parts, bookcases	6 - 7 lbs.
Class 175	Clothing, couches, stuffed furniture	5 - 6 lbs.
Class 200	Auto sheet metal parts, aircraft parts, aluminum table, bamboo furniture, mattress & boxspring, plasma TV	4 - 5 lbs.
Class 250	Wood cabinets, tables, chairs, model boats	3 - 4 lbs.
Class 300	Deer antlers	2 - 3 lbs.
Class 400	Cans of food, cutlery	1 - 2 lbs.
Class 500	Bags of gold dust, ping pong balls	< 1 lbs.
Low Density		

EXAMPLE

Find the NMFC number of items based on the description in the NMFC book or by using a software program such as ClassIT or FastClass.

The NMFC for auto parts for interior is 18430. To properly freight class a shipment of 1 pallet of auto parts for interior, we need to know the pallet dimension and weight.

This product ships on a standard pallet. The dimensions are 48" x 40" x 45.5" and the weight including pallet is 243.2 lbs.

Calculate volume (Length x Width x Height): 48" x 40" x 45.5" = 87,360 cubic feet

Convert to cubic feet: 87,360" / 1,728 = 50.6 cubic feet

Calculate density (Weight/Volume): 243.2 lbs / 50.6 cubic feet = 4.8 lbs. PCF (per cubic foot)

So, using the chart above, we can conclude that the freight class would be 200.

Freight Class

Periodically, the NMFTA will update and rework these freight classes to keep up with industry changes when needed. One such change went into effect on August 5, 2017, and has adjusted the NMFC class breakdowns on several categories of freight shipments.

The most significant change is seen in the categories of LTL freight that are classed according to a shipment's density. Commodities such as Plastic Articles (15660), Wire Goods (198080), and Clothing (49880) are affected by this freight class update in addition to 138 other density-based freight classes.

The new 11-tier system will provide a lower freight class for LTL shipments that are VERY dense (over 22.5 lbs. per cubic foot).

The other change affects mid-ranged LTL freight shipments with a class of 4-6 pounds/cubic foot previously set at class 150. These shipments will be increasing to an updated class 175. Illustrated below is the adjusted 11-tier classification system that will be replacing the former 9-tier model. Bold-faced density descriptions (subs) are the revised breakdowns.

Density Table And Class Breakdown

Note: The higher the class number, the higher the cost.

Weight Per Cubic Feet	Class
SUB 1 - Less than 1lb per cubic foot	400
SUB 2 - 1 but less than 2	300
SUB 3 - 2 but less than 4	250
-> SUB 4 - 4 BUT LESS THAN 6	175
SUB 5 - 6 but less than 8	125
SUB 6 - 8 but less than 10	100
SUB 7 - 10 but less than 12	92.5
SUB 8 - 12 but less than 15	85
SUB 9 - 15 but less than 22.5	70
-> SUB 10 - 22.5 but less than 30	65
-> SUB 11- 30 lbs. per cubic foot or greater	60

EXAMPLE

The NMFC for plastic hose or tubing is 51140. To properly freight class a shipment of 1 pallet of plastic hose we need to know the pallet dimension and weight.

This product ships on a standard pallet. The dimensions are 48" x 40" x 45.5" and the weight including pallet is 243.2 lbs.

Calculate volume (Length x Width x Height): 48" x 40" x 45.5" = 87,360 cubic feet

Convert to cubic feet 87,360 cubic feet / 1,728 = 50.6 cubic feet

Calculate density (Weight/Volume): 243.2 lbs. / 50.6 cubic feet = 4.8 lbs. PCF (per cubic foot)

So, using the chart above, we can conclude that the freight class would be 175.