

SUBJECT 6

Re: Cabinets, Enclosures, Frames or Housings, electrical apparatus — Item 61110

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Proponent: Freight Classification Development Council

Present Classification Provisions

Item	Description	Class
	ELECTRICAL EQUIPMENT GROUP: subject to item 60500	
61110	Cabinets, Enclosures, Frames or Housings, electrical apparatus, steel, NOI, with or without side, top or bottom panels or doors, see Note, item 61111, in boxes, crates or Package 2520, subject to Item 170 and having a density in pounds per cubic foot of:	
Sub 1	Less than 8.....	150
Sub 2	8 or greater	100
61111	NOTE—Applies on industrial cabinets, enclosures, frames or housings designed to protect or house rack-mount, network or related equipment. Units may be stand-alone or configured into a modular system to form multi-bay assemblies.	

Proposed Classification Provisions

Item	Description	Class
	ELECTRICAL EQUIPMENT GROUP: subject to item 60500	
⇒61110	Cabinets, Enclosures, Frames, Housings or Racks, electrical apparatus, metal, NOI, with or without side, top or bottom panels or doors, see Note, item 61111, in boxes or crates, see Notes, items A-NEW and B-NEW:	
Sub 1	Having a height two times or greater than the shortest base dimension, see Note, item C-NEW, subject to Item 170 and having a density in pounds per cubic foot of:	
Sub 2	Less than 6	300
Sub 3	6 but less than 10	175
Sub 4	10 or greater.....	100
Sub 5	Other than as set forth in sub 1, subject to Item 170 and having a density in pounds per cubic foot of:	
Sub 6	Less than 6	200
Sub 7	6 but less than 10	125
Sub 8	10 or greater.....	85
61111	NOTE—Applies on industrial cabinets, enclosures, frames, housings or racks designed to protect or house rack-mount, network or related equipment. Units may be stand-alone or configured into a modular system to form multi-bay assemblies.	

SUBJECT 6**Proposed Classification Provisions — Concluded**

Item	Description	Class
⇒A-NEW	NOTE—Articles must be protected by packing forms or other packaging materials necessary to afford adequate protection against damage.	
⇒B-NEW	NOTE—Articles tendered for shipment on lift truck skids, pallets or platforms must be securely fastened to and must not overhang the edges of the lift truck skid, pallet or platform deck.	
⇒C-NEW	NOTE—When tendered for shipment on lift truck skids, pallets or platforms, the height and base dimensions will include the lift truck skid, pallet or platform.	

Analysis**Introduction**

This proposal is based on the information developed through Research Project 1493, which was initiated to review the transportation characteristics of electrical apparatus cabinets, enclosures, frames or housings, as named in item 61110.

As tendered to carriers, many of the involved products are considered “unstable”¹.

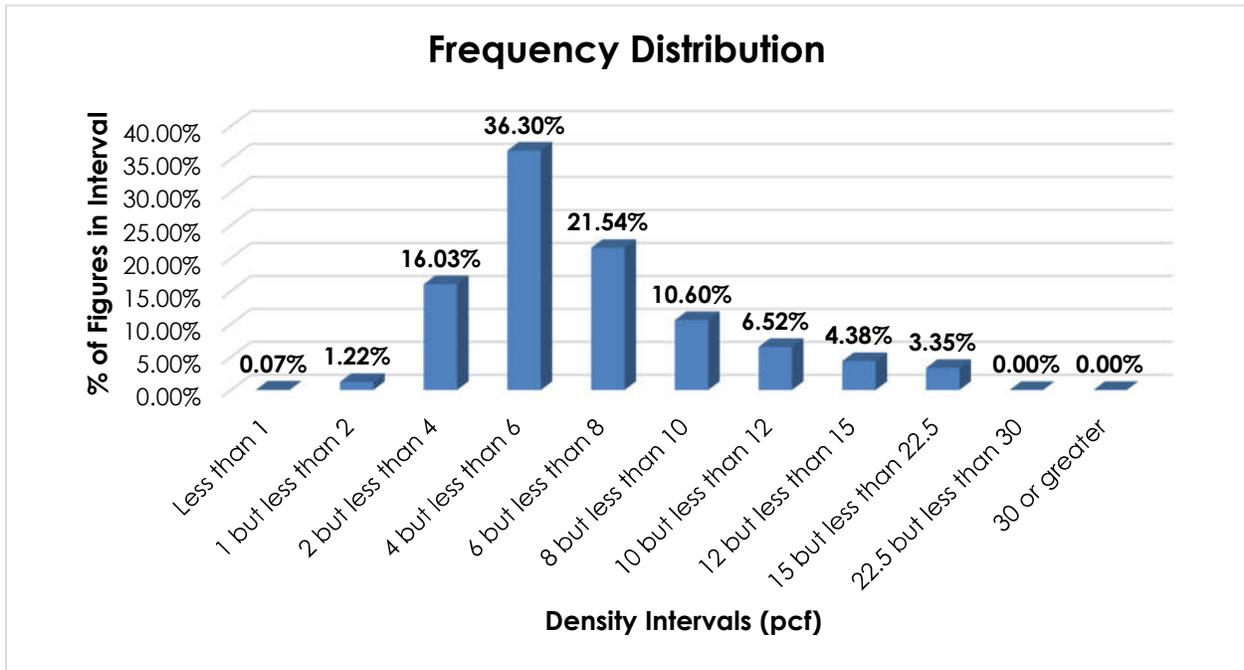
Transportation Characteristics

Density—The information of record includes 22,583 density observations submitted by carriers and obtained from the FCDC’s Density Study². The densities range from 0.54 to 19.93 pcf, with an overall average density of 6.64 pcf. While most of the figures are clustered between 2 and 8 pcf, the average density is not reflected in the predominant peak. Density breaks at 6 and 10 pcf more closely represent the modality and distribution of the data. The frequency distribution is shown on the following page.

¹ For the purposes of this analysis, the term “unstable” refers to articles having a height two times or greater than the shortest base dimension, as packaged for shipment, including, when present, the lift truck skid, pallet or platform.

² The Density Study is part of an ongoing effort by the FCDC to collect information on actual shipments across all product categories handled by the LTL industry. Carriers that choose to participate in the Study periodically submit shipment data captured through their respective freight auditing programs. The FCDC uses verifiable data points, identified by NMFC item, that include the weight and the dimensions and/or cube of the shipping unit.

SUBJECT 6



An analysis of the data with the proposed density breaks at 6 and 10 pcf, reflective of the density distribution of record, reveals the following ranges and averages.

Density Group (pcf)	Density Range (pcf)	Average Density (pcf)
Less than 6	0.54 – 5.99	4.39
6 but less than 10	6.00 – 9.99	7.54
10 or greater	10.00 – 19.93	13.08

Handling and Stowability—Stable handling units may be tendered in boxes, such as shown in the photo on the right, in crates, or in packages other than boxes or crates. When packaged fully enclosed in boxes or crates, handling and stowing will be comparable to that of other like-packaged freight and will generally not pose any negative handling or stowing considerations.



Unstable handling units, however, present significant handling and stowing concerns. As depicted in the photo on the left, these unstable articles are generally tendered secured on lift truck skids or pallets. Articles tendered in this manner may be partially covered in fiberboard and wrapped in plastic film, or simply wrapped in plastic film with little to no protective packaging³. They often include precautionary markings or shipper instructions alerting the carrier that the articles are “Top Heavy” or “Fragile.”

³ This manner of tender does not comply with the present nor proposed minimum packaging requirements.

SUBJECT 6

Unstable handling units may need to be physically secured to the forklift in a certain manner (e.g., against the forklift mast) to ensure that the freight does not tip over while loading, unloading or being moved on the dock, and certain equipment or additional personnel may be necessary to avoid damage to these products or other freight with which stowed. Additionally, extra care and attention should be taken to ensure unstable handling units do not come into contact with the ceiling of the vehicle due to their height.

Even if unstable handling units are secured on lift truck skids or pallets, care must be taken when stowing these articles. Due to their top-heavy nature and inherent propensity to tip, extra care should be taken to properly secure the articles inside the vehicle. The configuration and instability of these units also generally require that the articles be secured to lift truck skids or pallets that are wider than what may be necessary of other freight with the same dimensions of length and width. Occasionally, there may be external protrusions, which can further complicate the carriers' ability to properly stow these articles, as they do not provide support for adjacent freight.

Liability—The involved commodities are not perishable or hazardous in nature. Stable handling units are not unusually liable to damage when tendered in boxes or crates, with sufficient interior protective packaging, and they are not likely to damage other freight.

However, unstable handling units are more vulnerable to damage even when tendered in complying packaging. If an unstable handling unit tips over, not only can the product itself be damaged, but it may also significantly damage other freight or injure freight handlers.

Conclusion

Based on the foregoing analysis, this proposal would amend item 61110 by establishing one set of classes applying on stable handling units, predicated on density with breaks at 6 and 10 pcf⁴, as shown in the table below, reflective of the respective average densities for each grouping and consistent with FCDC density guidelines. It would assign another set of classes with the identical density groupings, but two classes higher than that associated with the density guidelines for unstable handling units due to the identified negative handling, stowability and liability characteristics, even when tendered in complying packaging.

Density Group (pcf)	Average Density (pcf)	FCDC Minimum Average Density Guideline (pcf)	Class Based on FCDC Density Guidelines	Class Adjustment Based on Handling, Stowability and Liability Considerations
Less than 6	4.39	4	200	300
6 but less than 10	7.54	7	125	175
10 or greater	13.08	12	85	100

A new Note would be established to clarify whether or not a handling unit is unstable.

⁴ The density provisions would include reference to Item (Rule) 170, the inadvertence clause.

SUBJECT 6

Additionally, in the interest of clarification, the description of item 61110 would be amended to read, "Cabinets, Enclosures, Frames, Housings or Racks, electrical apparatus, metal, NOI, with or without side, top or bottom panels or doors." Concurrently, Note, item 61111 would be amended to include the term "racks."

Furthermore, to ensure that the commodities are adequately protected so as to withstand the normal rigors of the less-than-truckload environment, and pursuant to the recommendation of the FCDC's Packaging Manager, the minimum packaging requirements maintain "in boxes or crates," and reference to Package 2520 would be removed. Two new Notes providing additional packaging requirements would also be established.