

**SUBJECT 12**

**Re:** Dough Working Machines — Item 114440

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**Proponent:** Freight Classification Development Council

**Present Classification Provisions**

Item	Description	Class
	<b>MACHINERY GROUP:</b> subject to item 114000	
	<b>Bakers':</b> subject to item 114300	
114440	<b>Dough Working Machines:</b>	
Sub 1	Loose or on skids .....	100
Sub 2	In boxes or crates.....	85

**Proposed Classification Provisions**

Item	Description	Class
	<b>MACHINERY GROUP:</b> subject to item 114000	
	<b>Bakers':</b> subject to item 114300	
⇒A-NEW	<b>Dough Deposit, Forming or Make-Up Machines,</b> see Note, item B-NEW:	
Sub 1	In boxes or crates, subject to item 170 and having a density in pounds per cubic foot of:	
Sub 2	Less than 10 .....	125
Sub 3	10 but less than 15.....	85
Sub 4	15 or greater.....	70
Sub 5	In packages other than boxes or crates, subject to Item 170 and having a density in pounds per cubic foot of:	
Sub 6	Less than 10 .....	150
Sub 7	10 but less than 15.....	92.5
Sub 8	15 or greater.....	77.5
⇒B-NEW	NOTE—Does not apply on machines that mix but do not otherwise work or prepare dough. For applicable provisions, see item 125750.	
114440	<b>Dough Working Machines,</b> etc .....	⇒Cancel; see item A-NEW

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### Analysis

#### Introduction

This proposal is based on the information developed through Research Project 1466, which was initiated to address interpretive issues and to review the transportation characteristics of dough working machines, as embraced by item 114440. Interpretation problems exist between items 114440 and 125750, the latter of which names "Mixing Machines, food, NOI, other than household." Food mixing machines may be used to create dough, whereas dough working machines manipulate already formed dough.

Based on information provided by the Bakery Equipment Manufacturers and Allieds (BEMA), the terminology "dough working machines" is outdated, and the machines used to handle dough today are collectively referred to as "dough deposit, forming or make-up machines." The capabilities of these machines include, but are not limited to, dividing, rounding, moulding or sheeting dough. An example of a combined dough divider and moulder is shown on the right.



#### Transportation Characteristics

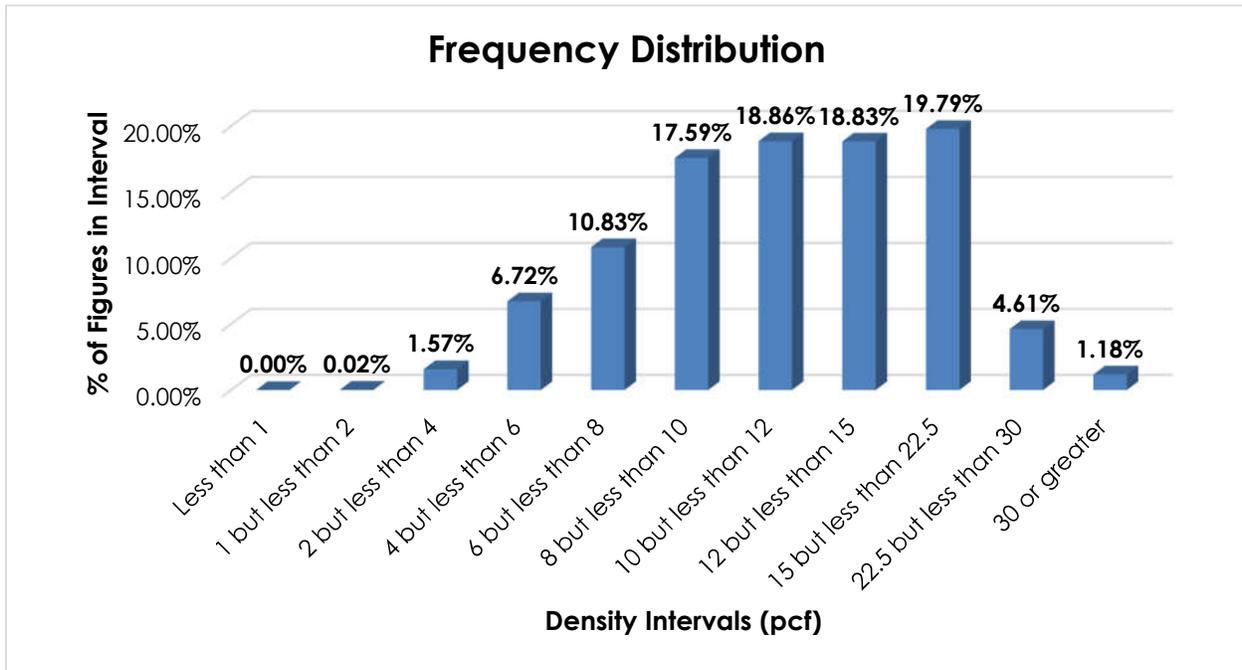
**Density**—The information of record includes 4,508 density observations submitted by carriers and obtained from the FCDC's Density Study<sup>1</sup>. The densities range from 1.98 to 35.07 pcf, with an overall average density of 12.48 pcf. The frequency distribution on the following page shows clustered, uniform peaks between 8 and 22.5 pcf. Density breaks at 10 and 15 pcf represent a roughly equal divide of the data. This addresses both the modality and spread of the distribution.

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<sup>1</sup> 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.

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When the data is evaluated on the basis of the three proposed density groupings to reflect the distribution of densities, the following ranges and averages are calculated.

Density Group (pcf)	Density Range (pcf)	Average Density (pcf)
Less than 10	1.98 – 9.98	7.50
10 but less than 15	10.00 – 14.99	12.14
15 or greater	15.00 – 35.07	20.13

**Handling**—The involved commodities may be shipped in boxes or crates, or in packages other than boxes or crates. Articles shipped in boxes or crates will generally not present unusual or significant handling considerations. However, when tendered in packages that provide minimal exterior protection, care must be taken when handling the freight so as to avoid damaging the products.

**Stowability**—When dough deposit, forming or make-up machines are tendered in boxes or crates, a flat load-bearing surface will generally be present, which would allow for other freight to be loaded on top of the handling unit. There will typically be lateral support for adjacent freight as well. When the articles are tendered in packages other than boxes or crates, they may not provide a regular load-bearing surface for top freight or lateral support for adjacent freight. Furthermore, when loading the handling unit inside the vehicle, the lack of protective packaging may limit the type of freight that may be stowed safely on top of or adjacent to the involved articles. This can result in increased time and effort on the part of the carrier to properly structure the vehicle load so as to mitigate the chance of damage to the products or to other freight with which stowed.

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**Liability**—As is the case with most general commodities, when tendered for shipment fully enclosed within boxes or crates, the involved products should not be unusually susceptible to damage nor likely to damage other freight. However, when tendered in packages other than boxes or crates, which may offer little or no protection, these products exhibit a greater susceptibility to damage and a greater propensity to damage other freight.

**Conclusion**

Based on the foregoing analysis, this proposal would cancel item 114440 and establish a new item, naming “Dough Deposit, Forming or Make-Up Machines.” The new item would assign classes predicated on packaging and density, with breaks at 10 and 15 pcf<sup>2</sup>. The table below relates the information of record to the proposed density groupings and FCDC guidelines for the proposed classes when tendered in boxes or crates, and a one-class adjustment from the density guidelines when the articles are tendered in packages other than boxes or crates to reflect the identified negative handling, stowability and liability characteristics.

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 10	7.50	7	125	150
10 but less than 15	12.14	12	85	92.5
15 or greater	20.13	15	70	77.5

Furthermore, an attendant Note would be established to clarify the application of the new item.

<sup>2</sup> The density provisions would include reference to Item (Rule) 170, the inadvertence clause.