

SUBJECT 18

Re: Item (Rule) 245 — Definition of or Specifications for Crates

Contact: Larissa A. Franklin Telephone — (703) 838-1824 franklin@nmfta.org

Proponent: Classification Resource Committee

Proposed Classification Provisions

It is proposed to amend Item 245, Definition of or Specifications for Crates, to read as follows:

ITEM 245***DEFINITION OF OR SPECIFICATIONS FOR CRATES**

Crates are six-sided containers constructed of wood or metal slats or structural members with apertures between, securely nailed, bolted, screwed, riveted or welded together, of sufficient design and strength to fully enclose and protect contents so as to withstand the normal rigors of the less-than-truckload environment. Article(s) must be secured within crates and no part shall protrude.

Standard wood crates must meet the following minimum specifications:

Base: Crates must have a lift truck skid, pallet or platform of sufficient design, size and strength to ensure article(s) cannot cause any failure of structural components. Deck boards must be sufficiently close to one another, or a wood structural panel (see Note 1) may be secured on top of deck boards to adequately protect article(s) from underside damage and to prevent article(s) from falling through the deck.

Note 1—Wood structural panels (plywood or oriented strand board) shall conform to DOC PS1, DOC PS2, ANSI/APA PRP 210, CSA O325 or CSA O437*.

Sides, Ends and Tops: Crates must be constructed with an outer framework consisting of upright and horizontal members and with additional diagonal, upright and horizontal members where necessary to provide proper strength and rigidity.

Crate sides, ends and tops must be constructed with slats or members sufficiently close to one another to adequately protect article(s) on the sides, ends, tops and bottoms, but openings on sides, ends and tops must not exceed 25 inches in their greatest dimension, which may be the length, width, height or diagonal measurement of the opening. See Note 2.

Crates must be framed to provide sufficient strength and stability to support top-loaded freight of even load and weight distribution during transport, utilizing the available space above the crate, up to 96 inches, and having a density of at least 20 pounds per cubic foot. Horizontal structural members must be placed no more than 24 inches apart.

Where present, wood structural panel(s) must be secured to frame with fasteners appropriate to prevent failure during transport.

Note 2—Lumber must be seasoned, reasonably sound, and free from cross grain and knots which would interfere with nails, bolts or screws, or knots which are greater than $\frac{1}{3}$ the width of the lumber.

Fasteners: Framework, corners and joints must be secured with nails, bolts or screws to ensure the fastened connections are stronger than the materials being joined.

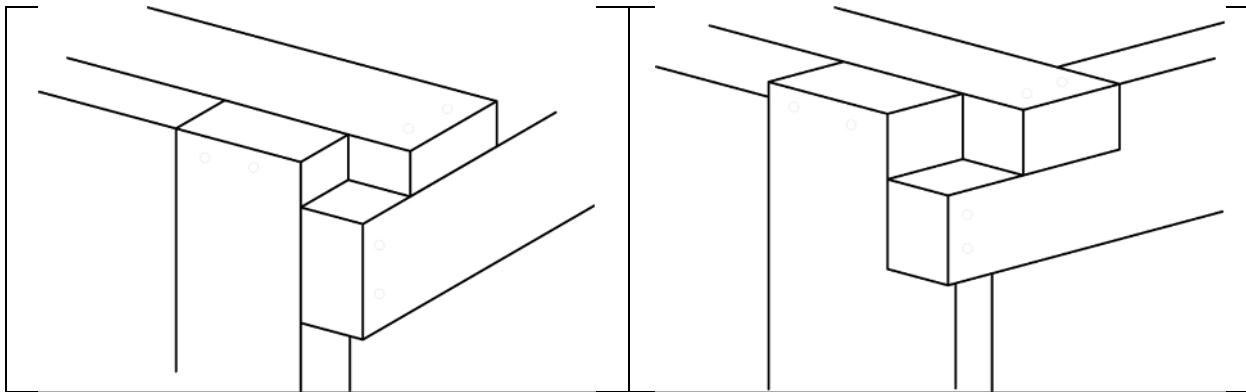
*Published in Supplement 1 to NMF 100-AW, effective April 8, 2023.

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Proposed Classification Provisions — Continued

Interior Requirements: Article(s) must be secured to prevent movement during transport. Protective packing forms or other packaging materials must be used where necessary to afford adequate protection against damage to the article(s). Article(s) with legs must be suspended away from all edges of the crate by at least one inch.

Three-Way Locking Corners: Crates must be constructed with three-way locking corners, where members will be joined with nails, bolts or screws driven into side grain of joining members. Examples are shown below:



***References:** U.S. Department of Commerce (DOC); American National Standards Institute (ANSI); APA - The Engineered Wood Association (APA); CSA Group (CSA).

Metal crates must meet the following minimum specifications:

Base: Article(s) must be adequately secured to a metal base that will adequately protect contents from underside damage.

Sides, Ends and Tops: Crate sides, ends and tops must be constructed with slats or members sufficiently close to one another to adequately protect article(s) on the sides, ends, tops and bottoms, but openings on sides, ends and tops must not exceed 25 inches in their greatest dimension, which may be the length, width, height or diagonal measurement of the opening.

Interior Requirements: Articles(s) must be secured to prevent movement during transport. Protective packing forms or other packaging materials must be used where necessary to afford adequate protection against damage to the article(s).

Wirebound crates must meet the following minimum specifications:

Base: Wirebound crates must have a lift truck skid, pallet or platform of sufficient design, size and strength to ensure article(s) cannot cause any failure of structural components.

Sides, Ends and Tops: The framework must be reasonably sound and securely fastened together. The face boards that form the container must be of sufficient strength, solid or slatted, to support the contents based on weight, size and distribution environment.

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Proposed Classification Provisions — Concluded

Binding Wires should be wrapped around all six sides of the container at frequent intervals in order to increase the strength and rigidity of the container. The wires should be securely attached to the crate by staples and securely fastened with one of the following closure methods:

(a) Style 1—Wires are twisted together.

(b) Style 2—Wires are turned back to form loops that are hooked into each other and bent back.

(c) Style 2A—Wires are turned back to form loops that are hooked into each other and bent back, then twisted on itself.

(d) Style 3—Wires are turned back to form loops that are hooked into each other and bent back with wires across the ends in place of battens.

Analysis and Conclusion

This proposal was docketed by the Classification Resource Committee (CRC) based on a recommendation from the CRC's Packaging Subcommittee.

Item 245 currently provides the definition of and construction requirements for crates. While there are construction specifications for wood crates and wirebound crates, there are no specifications for metal crates. In addition, the current provisions for wood crates and the lack of specification for metal crates has caused interpretation issues.

The FCDC is to establish and maintain packaging rules and specifications as necessary to ensure that freight is adequately protected and can be handled and stowed in a manner that is reasonably safe and practicable so as to withstand the normal rigors of the less-than-truckload environment. Therefore, as proposed, Item 245 would be updated to provide clearer construction requirements for standard wood crates, requirements for metal crates, and updated specifications for wirebound crates.