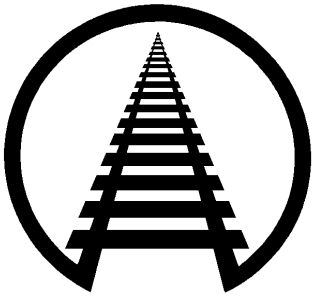
General Information Series No. 836

Wood Bin Containers for Shipping Liquid or Paste Products in Boxcars

(Closed Car Loading Guide, Part 7, Bulk Containers, Section 4.4 - New)

Approved by
DAMAGE PREVENTION & FREIGHT CLAIM COMMITTEE
Association of American Railroads



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GENERAL RULES

The General Rules relating to personal safety and the safe operation of trains, contained in AAR Circular Nos. 42-N and 43-G or supplements thereto, issued by the Association of American Railroads, **must be observed**.

These loading rules and/or practices apply to shipments transported in the USA, Canada and Mexico.

The loading methods in individual closed car loading publications issued by the Damage Prevention and Loading Services Section of the Association of American Railroads are minimum standards that have been evaluated and approved. These minimum standards offer practical guidelines on the subjects covered. Since these are minimum standards, it may be necessary to supplement these methods in some instances.

Securement standards in AAR closed car loading publications are intended for safe transit of the rail car from origin to destination and prevention of lading and equipment damage. These standards do not address unloading practices.

This approval may be withdrawn if the loads using these methods exhibit consistent load failure during actual shipments.

Loading and bracing methods not presently approved may receive consideration for approval and publication under Section II - Evaluation of New Loading and Bracing Methods and Materials for Closed Cars, Trailers or Containers of ***General Information Bulletin No. 2, "Rules and Procedures for Testing of New Loading and Bracing Methods or Materials"****. Submit requests to Closed Car Loading Rules Manager, dpls@aar.com.*

CAUTION: Car rocking motion caused by the lift equipment entering and/or exiting the rail car may cause unsupported packages or articles with a higher center of gravity to fall to the floor. Minimize access to the car. Exercise caution when inside a partially loaded car. Lift operators should stay on lift equipment, whenever possible, while inside a partially loaded car.

General

Cars must be inspected by shipper at loading point to verify that cars are in suitable condition. Car interiors must have, but are not limited to, sound roofs, sides, floors, and endwalls; and operable, snug-fitting doors. Any exception is cause for the car to be rejected.

It is important that boxcars are clean and free from protruding nails, brads, staples, temporary anchor plates, fragments of steel strap, old blocking etc. Some projections of lining or anchor devices may require covering with sheets of corrugated fiberboard taped in place

Referenced paragraphs may be found in the Closed Car Loading Guide (CCLG) Part 7, *Minimum Loading Standards for Intermediate Bulk Containers (Including Drums) In Closed Cars (*July 2014)

This publication provides basic information on wood bin containers as a guideline for wood bins as a packaging method. The wood bin container manufacturer should be contacted for detailed information on a specific wood bin. Wood bins of other construction specifications may be as effective of a packaging method as the wood bin information presented in this document.

4.4 Wood Bins

4.4.1 Wood bins can be used to ship bulk liquid or paste products, including but not limited to tomato liquid products or paste.

4.4.2 Wood bins are to be in good condition:

- Panels with cracked, broken, or chipped corners or split, separating or cracked sidewalls repaired or replaced.
- Bases with missing clips, broken, damaged, missing runners or deck boards repaired or replaced.
- Tops with loose cleats repaired or replaced.
- Bins with broken packaging bands and or bulging tops or sides repaired or replaced.

4.4.3 Bin Dimensions and Construction – see Figures 1 and 2.

4.4.3.1 Capacity: 300 gallons

4.4.3.2 Exterior Dimensions (assembled): 48 in. (L) x 44 in. (W) x 43 7/8 in. (H)

4.4.3.3 Bins are composed of a base, two long sides with metal corner irons (48 in.), two short sides (44 in.), and a top.

4.4.3.4 Plywood is CDX type, group 1 species, Douglas Fir or similar softwood. All wood must be of good quality and free of decay and strength impairing knots.

- CDX is an Exposure 1 Plywood - laminated grade C and D plywood sheets bonded together with exterior glue.

4.4.3.5 Base is constructed out of a base pad; 5- ply plywood panel ¾ in. thick, three stringers or runners, and four bottom deck boards. Screw and screw nails are used to secure base. The base has only a two-way entry for forklifts.

4.4.3.6 Top is constructed out of 4-ply or 5-ply plywood panel 5/8 in. or 3/4 in. thickness and may have two wooden cleats. Nails or staples are used to secure top.

4.4.4.7 Long sides are constructed out of 9-ply plywood panels 1-1/8 in. thick with 11-gauge or 12-gauge metal corner irons (2 ¼ in. x 2 ¾ in. x 36-38 in.) on both sides with five – ¼ in. holes used to secure the long side panels to the short side panels.

4.4.3.8 Short sides are constructed out of 9-ply plywood panels 1-1/8 in. thick.

4.4.3.9 Base and sides panels are connected by clips (11-gauge or 12-gauge) using the following application methods:

- Two - Z clips (long side)
- Two - Z clips/Two - L clips (long side/short side)

4.4.3.10 Bins are reinforced using AAR approved 5/8 in. x 0.035 in. Type IV polyester plastic strapping or AAR approved 5/8 in. x 0.020 in. steel straps sealed and tensioned per manufacturers' instructions. Reference CCLG Part 7 or applicable updates for detailed application information.

4.4.3.10.1 Apply four horizontal straps (belly straps) and four vertical straps (two on long side; two on short side) for a total of eight straps.

4.4.3.10.2 Use polyesters straps with a minimum breaking strength of 1,200 lbs. that are sealed with a friction weld or heat seal joint (seal-less) with a joint strength of 900 lbs. (75% minimum breaking strength). See approved strapping at www.aar.com/standards/OpenTop-approvals.html.

4.4.3.10.3 Use steel straps with a minimum breaking strength of 1,250 lbs. with a minimum joint strength of 938 lbs. (75% minimum breaking strength). See approved strapping at www.aar.com/standards/OpenTop-approvals.html.

4.4.3.11 Bins are marked with company identification and date of construction time stamps at initial construction.

4.4.3.12 Bins can also contain a fiber base tray, poly liner bag, and an aseptic liner bag to contain the product. Filler material may also be added between the top of the product and the lid to fill unused space.

4.4.4 Bins will be disassembled at destination; packaged by component type; and shipped to a packing facility. Bins components will be inspected, repaired as needed, and reassembled for filling. Bins are reassembled without regard to origin bin manufacturer or packing facility. Bins are reassembled with mixed components without regard to initial bin construction.

4.4.5 Load bins in either 50 ft. or 60 ft. boxcars following approved loading pattern and securement methods. See CCLG Part 7 paragraphs 6.3, 6.4, and 6.8.

4.4.6 Bins can also be constructed out of plastic or metal – see CCLG Part 7 paragraphs 6.1, 6.2, 6.10, and 6.11 and applicable updates for information on bin construction and loading methods.

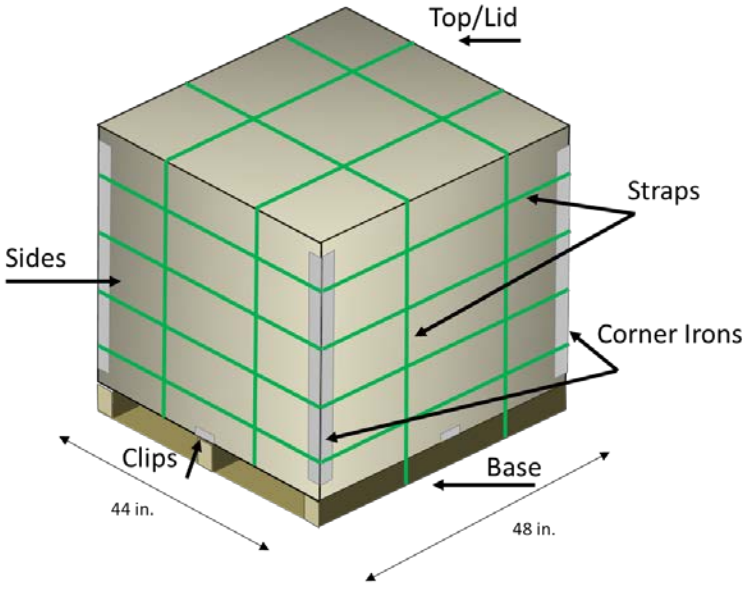

Figure 1
Wood bin construction

Wood Bin Containers for Shipping Liquid or Paste Products in Boxcars

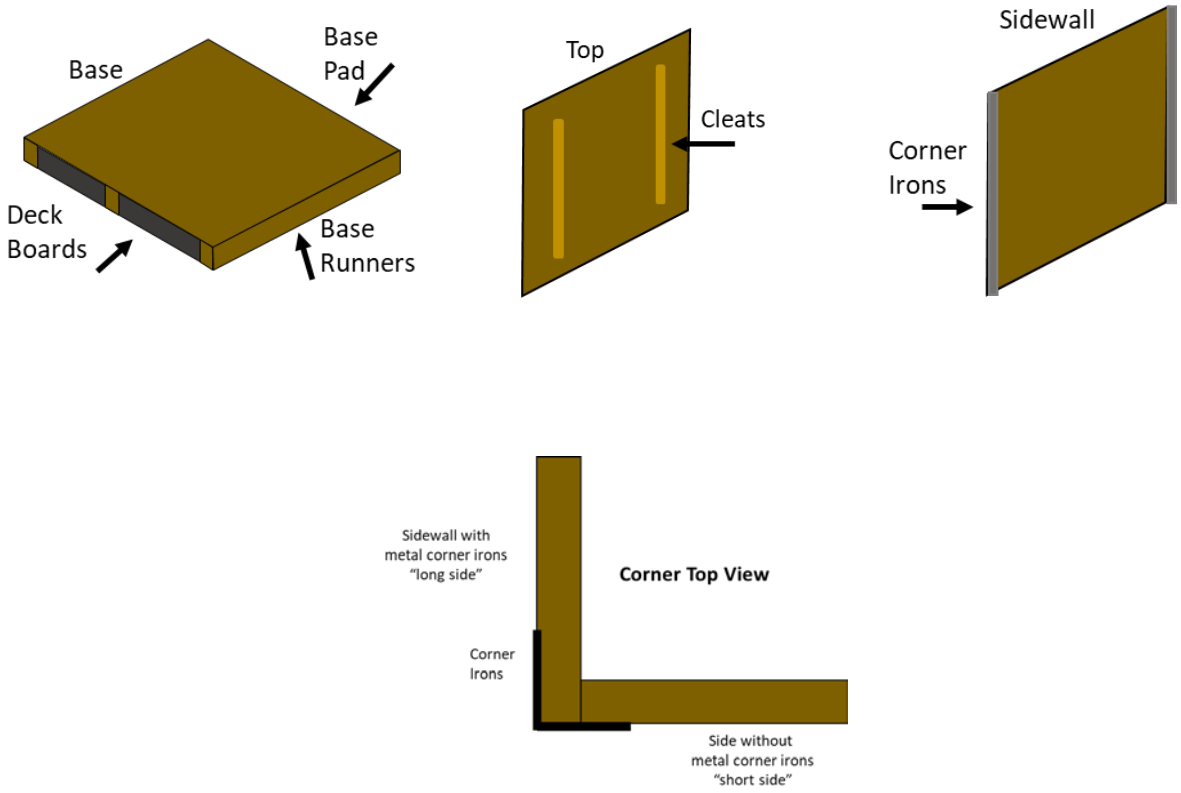

Figure 2
Wood bin construction

General Information Series No. 836

Wood Bin Containers for Shipping Liquid or Paste Products in Boxcars

General Information Series Publications

754 Wood Bins Braced by Disposable Inflatable Dunnage Bags and Lengthwise Fillers (CCLG Part 7, Section 6.3 Revised 10/16)
755 55-Gallon Steel Drums on Pallets Secured with Cordstrap® Barriers in 40-ft ISO Containers (Nonhazardous Materials only) (ILG Method I-6) (new 11/16)
759 Revision to Paragraph 2.5, Distribution of Weight Crosswise in Cars, CCLG Part 10, Primary Metals (2/17)
760 Incomplete Layers of Plywood Secured in Boxcars with Nonmetallic Straps, CCLG Part 3, Plywood (2/17)
765 Wood Bins Braced by Disposable Inflatable Dunnage Bags and Shock-Gard® Lengthwise Void Fillers (7/17)
768 Gearboxes Mounted on Sleds in 20 ft. Long ISO Containers (9/17)
778 Split Loads of 58 in. Diameter Roll Pulpboard on End Using Rubber Mats when Stowed in Trailers Having Large Metal Plates Approximately 9 ft. in Length at the Nose (ILG Method E-23) (3/18)
781 Wood Bins Braced by Disposable Inflatable Dunnage Bags and BIN-PAK or M-PAK Lengthwise Void Fillers (4/18)
782 Plastic Intermediate Bulk Containers with Disposable Inflatable Dunnage Bags and Lengthwise Void Fillers – Schoeller Allibert (CCLG Part 7, Section 6.2) (4/18)
783 Cased Goods Secured by Tuff Wrap™ D.I.D. Bags (ILG Method F-4 New) (4/18)
784 Cased Goods Secured by S.A.M. D.I.D. Bags (ILG Method F-4 New) (5/18)
786 Aluminum Coils on Platforms/Skids Loaded on Rubber Mats & Secured by Two Floor Anchored Web Straps & Supplemental Securement Straps (CCLG Part 9, Section 8.6) (6/18)
787 Universal Storage Containers Loaded in 53 ft. Intermodal Containers (ILG Method H-15 New) (6/18)
791 DRUM-PAK® Dunnage for Open Head Drums in Cushioned Boxcars (CCLG Part 7, Section 6.9) (6/18)
794 Peat Moss, Bagged or Baled, in Cushioned Boxcars (CCLG Part 8, Section 6.6, New) (8/18)
795 Coiled Metal on Platforms/Skids in Boxcars (CCLT Part 9, Section 3.2, New) (8/18)
797 Split Loads of 58 in. Diameter Roll Pulpboard on End Using Rubber Mats when Stowed in Trailers Having Large Metal Plates Approximately 9 ft in Length at the Nose (ILG Method E-19, Revised) (11/18)
798 Intermodal Loads Secured with TyGard DS™ (ILG Method B-9, Revised) (11/18)
799 46 in. to 57 in. Diameter Roll Paper on End Using Rubber Mats (ILG Method E-21, Revised) (12/18)
800 54 in. Diameter Paperboard on End Using Rubber Mats (ILG Method E-22) (12/18)
803 Stretch Film Roping of Steel Coils and Coil Loading Methods for Railroad Shipments (CCLG Part 9, Section 4.4. Revised; (12/18)
810 Reinforced Longitudinal Void Fillers for Plastic, Metal or Wood Intermediate Bulk Containers with Tomato Products (CCLG Part 7, 6.1.6, 6.2.10.6, 6.3.6, 6.10.6 (revised) (4/19)
811 Plastic Intermediate Bulk Containers with Disposable Inflatable Dunnage Bags - Horen (CCLG Part 7, Section 6.11-New) (6/19)
814 Bales of Wood Pulp in Boxcars (CCLG Part 8 Section 6.5.1 (revised) and Section 6.5.5 (new) (6/19) (Cancels GIS 805)
815 Doorway Protection for Baled Paper and Wood Pulp Products in Boxcars (cancels GIS 806; CCLG Part 8, Section 8.4 (revised) (6/19)
816 Pallet Grip® Stretch Wrap (CCLG Part 1 Section 5.4.3; CCLG Part 6 Section 4.6.3 – New) (6/19)
817 Case Goods Secured by Stopack Max Blocker D.I.D Bags (ILG Method F-5 - New) Revised (9/19)
822 Palletized or Crated Auto Parts Secured by Web Strap Assemblies in 53 ft. Containers (ILG Method H-16 – New) (9/19)
823 Plywood and Similar Panels Products – Loading Doorway Areas (CCLG Part 3 – Section 7.3.1; 7.3.2; 7.3.3; and 7.4.3 (revised)) (10/19)
824 Case Goods Secured by Stopak Blocker D.I.D Bags (ILG Method F-6 – New) (10/19)
825 Loading Bundled Ingots with Open Doorways (CCLG Part 10 – Section 3.2; 6.2; and 6.10 (revised)) (10/19)
826 Building Brick in Closed Cars – Incomplete Layer Securement – Woodpack Walls (Litco) (CCLG Part 5 – Section 7.1.1 & 7.1.2 (revised) and Section 7.7 (new)) (11/19)
827 Drum Layer Separators for Intermodal Shipments (Hazardous or Nonhazardous) (ILG Methods: B-3; B-8; B-9 (GIS 798); G-2; G-3; I-1; I-2; I-3; & I-4 (GIS 792)) (11/19)
828 44 in. Diameter Paper Roll in 50 ft. Cushioned Boxcars Using Horizontal Airbags (CCLG Part 2 (12/19) Pattern: 8-50-44-30-1 (New)) (12/19)
829 39 in. Diameter Paper Rolls in 50 ft. Cushioned Boxcars Using Vertical Airbags (CCLG Part 2 (12/19) 7.12.1 (revised); Pattern 8-50-39-44-1 (new)) (12/19)
830 72 in. Diameter Paper Rolls Loaded in 60 ft. Cushioned Boxcars with 16 ft. Double Plug Doors Secured with Double-S Straps (CCLG Part 2 (12/19; 6.3.7.5 (new); 7.9.4 (new); Pattern 8-60-72-12-3 (new)) (2/20)
831 Metal Intermediate Bulk Containers with Disposable Inflatable Dunnage Bags and Lengthwise Void Fillers – Goodpack USA (CCLG Part 7, Section 6.10 (revised); Cancels GIS 809) (3/20)
832 47 in. Diameter Roll Paper Loaded in 60 ft. Cushioned Boxcar with Plug Doors. (CCLG Part 2 (12/19); Table 7.1 (revised); Pattern 8-60-47-32-1 (new)) (4/20)
833 Double Layer Loads of Hazardous or Nonhazardous Materials Secured with Cordstrap® Barriers in a 20-ft Container (ILG Method I-4; revised) (Cancels GIS 792) (4/20)
834 Hazardous or Nonhazardous Loads Secured with Cordstrap® Barriers in 40-ft Containers (ILG Method I-5HM; revised) (Cancels GIS 793) (4/20)
835 Double Layer Loads of Nonhazardous Materials Secured with HLASH RHS Securement System in a 20-ft Container (ILG Method I-7, New) (4/20)
836 Wood Bin Containers for Shipping Liquid or Paste Products in Boxcars (CCLG Part 7 – Section 4.4 (new)) (5/20)