

**MIL-P-3B**

27 JULY 1956

SUPERSEDING

JAN-P-3A

23 JULY 1948

**MILITARY SPECIFICATION**

# PACKAGING AND PACKING FOR DELIVERY OF VALVES, FITTINGS, AND FLANGES (EXCEPT FOR OXYGEN SYSTEMS)

*This specification has been approved by the Department of Defense and is mandatory for use by the Departments of the Army, the Navy, and the Air Force.*

**1. SCOPE**

**1.1 Scope.** This specification covers the requirements for the cleaning, preservation, packaging, packing, and shipment marking of hardware valves such as globe valves, angle valves, check valves, cross valves, cylinder valves, gate valves, and associated fittings and flanges except for valves or fittings intended for use in oxygen systems.

PPP-B-585 —Boxes, Wood, Wire-bound.  
 PPP-B-601 —Boxes, Wood, Cleated Plywood.  
 PPP-B-676 —Boxes, Set-Up Paperboard.  
 PPP-T-76 —Tape, Paper, Water Resistant, Pressure Sensitive.

**2. APPLICABLE DOCUMENTS**

**2.1** The following specifications and standard, of the issue in effect on date of invitation for bids, form a part of this specification:

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JAN-P-103 —Packaging and Packing for Overseas Shipment — Boxes, Wood Cleated; Solid Fiberboard.  
 JAN-P-104 —Packaging and Packing for Overseas Shipment — Crates, Sheathed, Wood, Nailed.  
 JAN-P-106 —Packaging and Packing for Overseas Shipment — Boxes, Wood, Nailed.  
 JAN-P-108 —Packaging and Packing for Overseas Shipment — Boxes, Fiberboard (V-Board and W-Board), Exterior and Interior.  
 MIL-P-116 —Preservation, Methods of.  
 MIL-B-121 —Barrier-Materials, Greaseproof, Flexible (Waterproofed).

**SPECIFICATIONS****FEDERAL**

NN-B-591 —Boxes, Fiberboard, Wood-Cleated (for Domestic Shipment).  
 NN-B-621 —Boxes, Wood, Nailed and Lock Corner.  
 UU-T-116 —Tape; Paper, Gummed, Water-Resistant.  
 LLL-B-631 —Boxes, Fiber, Corrugated (for Domestic Shipment).  
 LLL-B-636 —Boxes, Fiber, Solid (for Domestic Shipment).  
 PPP-B-566 —Boxes, Folding, Paperboard.

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- JAN-P-127 —Packaging and Packing for Overseas Shipment — Tape, Adhesive, Pressure-Sensitive, Water-Resistant.
- MIL-C-132 —Crates, Open, Wood; Maximum Capacity 2,500 Pounds.
- JAN-C-149 —Compound, Protective, Strippable (Hot Dipping).
- MIL-C-3769 —Crates, Intermediate, Sheathed, Wood, Nailed (for Maximum Net Loads of 3,000 Pounds).
- MIL-C-3774 —Crates, Open, Wood (2,500 to 10,000 Lb.).
- MIL-B-4229 —Boxes, Paperboard Metal-Stayed.
- MIL-B-10377 —Boxes: Wood-Cleated, Veneer, Paper Overlaid.
- MIL-L-10547 —Liners, Case, Waterproof.

**STANDARDS****MILITARY**

- MIL-STD-129 —Marking for Shipment and Storage.

(Copies of specifications, standards, drawings, and publications required by contractors in connection with specific procurement functions should be obtained from the procuring agency or as directed by the contracting officer.)

**2.2 Other publications.** The following document forms a part of this specification. Unless otherwise indicated, the issue in effect on date of invitation for bids shall apply.

**CONSOLIDATED CLASSIFICATION COMMITTEE****Consolidated Freight Classification Rules**

(Application for copies should be addressed to the Consolidated Classification Committee, 202 Chicago Union Station, Chicago 6, Ill.)

**3. REQUIREMENTS****3.1 Cleaning, drying, preservation, and packaging.****3.1.1 Level A.**

**3.1.1.1 Cleaning and drying.** Valves, fittings, and flanges shall be cleaned and dried in accordance with any of the applicable procedures of Specification MIL-P-116.

**3.1.1.2 Preservation.**

**3.1.1.2.1 Valves of ferrous or aluminum construction.** Valves of ferrous or aluminum construction shall be preserved by method I of Specification MIL-P-116. Internal ferrous or aluminum surfaces shall be sprayed or flushed with preservative type P-2, P-3, P-7, P-8, P-9, or P-10 of Specification MIL-P-116, as specified (see 6.2) except that valves intended for operation in steam or water systems shall be sprayed or flushed internally with preservative type P-3 of Specification MIL-P-116 unless otherwise specified (see 6.2). External surfaces of movable parts shall be coated with preservative type P-2 or P-7 of Specification MIL-P-116. When removal of the preservative film can be readily accomplished without damage to the item or where removal of the preservative is not required in order to place the item in use, external unprotected surfaces shall be coated with preservative type P-1 of Specification MIL-P-116. When the specific type of preservative is not specified in the contract or order for internal preservation of valves not intended for operation in steam or water, the selection from the preservatives specified may be at the option of the contractor.

**3.1.1.2.2 Valves of nonferrous (except aluminum) construction.** Unless otherwise specified in the contract or order, valves of nonferrous (except aluminum (see 3.1.1.2.1)) construction shall be protected by method III of Specification MIL-P-116 and the application of contact preservative will not be required.

**3.1.1.2.3 Fittings and flanges.** Unless otherwise specified in the contract or order,

fittings and flanges shall be preserved in the same manner as specified in 3.1.1.2.1 for preservation of external surfaces or in accordance with 3.1.1.2.2 as applicable for the materials used in construction.

#### 3.1.1.3 *Removal of packing material.*

When specified by the bureau or agency concerned, valves having stems of ferrous materials except preset, automatic or relief valves, shall have the packing removed prior to cleaning and the application of preservatives. The required packing material shall be separately packaged by method IC-1 of Specification MIL-P-116. The bag containing the packing material shall be securely taped to the individual valve and the valve shall be marked with precautionary information requiring the installation of the packing material prior to placing the valve in use.

#### 3.1.1.4 *Packaging.*

3.1.1.4.1 Valves which are not wrapped or boxed as a part of the packaging procedure shall have all ports or other openings to the interior of the valve plugged or sealed with molded plastic, tin-plated wood, or other plugs to prevent the entrance of dust or other foreign materials. If wood-plugs or flange covers are used, barrier materials conforming to grade A of Specification MIL-B-121 shall be inserted between the plug and valve port or between flange faces and wood flange covers. If metal plugs or flange covers are used, the cover or plugs shall be adequately protected against corrosion by painting or by the use of preservative type P-1 of Specification MIL-P-116.

3.1.1.4.2 Care shall be taken to insure that external moving parts are cushioned and protected from damage. Male threads of air-tested fittings shall be protected with paperboard sleeves, plastic caps or sleeves, or metal caps, or as an alternate, may be protected by dipping in material conforming to Specification JAN-C-149 where this material can be readily removed. Surfaces of plugs, seals, or other types of protectors shall be neutral and acid free as defined in Specification MIL-B-121, and shall be

greaseproof when in contact with preservative compounds.

3.1.1.4.3 Exterior surfaces of valves, fittings, or flanges coated with soft film preservatives shall be wrapped with greaseproof barrier material as required by Specification MIL-P-116. No overwrapping with greaseproof material will be required for surfaces coated with type P-1 preservative of Specification MIL-P-116. Barrier material shall be secured in place with pressure-sensitive tape conforming to type II or III of Specification JAN-P-127.

3.1.1.4.4 *Valves, fittings, or flanges weighing 20 pounds or less.* Unless otherwise specified in the contract or order or as specified in 3.1.1.4.4.1, valves, fittings, or flanges weighing 20 pounds or less shall be packaged in commercial quantities in folding cartons, set-up, metal stayed, corrugated or solid fiberboard boxes conforming to Specification PPP-B-566, PPP-B-676, MIL-B-4229, JAN-P-108, LLL-B-631 or LLL-B-636. The gross weight of paperboard boxes shall not exceed the weight limitations of the applicable box specification, that of fiberboard boxes shall not exceed approximately 20 pounds.

3.1.1.4.4.1 *For Army use only.* When level A packing (see 3.2.1) has been specified, fiberboard boxes shall conform to Specification JAN-P-108 with all seams and joints sealed with tape conforming to Specification UU-T-116 or PPP-T-76. The other optional containers specified in 3.1.1.4.4 will only be permissible where level B or level C packing (see 3.2.2 or 3.2.3) has been specified.

3.1.1.4.5 *Valves, fittings, or flanges weighing more than 20 pounds.* Unless otherwise specified in the contract or order, packaging in unit containers will not be required for valves, fittings, or flanges weighing more than 20 pounds. Valves, fittings, and flanges weighing more than 20 pounds shall be packed directly into shipping containers as specified in 3.2.1, 3.2.2, or 3.2.3, as applicable with the selection of shipping container at the option of the contractor.

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**3.1.2 Level C.** Cleaning, preservation, and packaging shall be in accordance with the manufacturer's commercial practice.

**3.2 Packing.****3.2.1 Level A.**

**3.2.1.1 Valves, fittings, and flanges weighing 20 pounds or less.** Valves, fittings or flanges weighing 20 pounds or less, preserved and packaged by level A or level C as specified (see 6.2) shall be packed in wood-cleated fiberboard, overseas type wood-cleated plywood, overseas type wood-cleated kraft veneer, nailed wood, wirebound wood or fiberboard boxes conforming to Specification JAN-P-103, PPP-B-601, MIL-B-10377, JAN-P-106, PPP-B-585 or JAN-P-108 as applicable. Boxes shall be closed and strapped in accordance with the applicable container specification and appendix thereto. Fiberboard boxes shall have all joints sealed with tape conforming to Specification UU-T-116, PPP-T-76, or type I or II, grade B of JAN-P-127. The gross weight of wood or wood-cleated container shall not exceed approximately 200 pounds; that of fiberboard boxes, 70 pounds.

**3.2.1.2 Valves, fittings, and flanges weighing more than 20 pounds.** Valves, fittings, and flanges shall be packed as specified in 3.2.2, for valves, fittings and flanges weighing more than 20 pounds except that boxes shall conform to Specification PPP-B-601 (overseas type) PPP-B-585 (overseas type) or JAN-P-106, as applicable, and when valves are packed in crates, fully sheathed crates conforming to Specification MIL-C-3769 or JAN-P-104 shall be used in lieu of unsheathed crates.

**3.2.1.3 Case liners.** Sealed case liners conforming to the requirements of Specification MIL-L-10547 and appendix thereto shall be provided when shipping container contents include unpackaged items, interior containers, identification markings or labeling, or cushioning materials not otherwise protected against water, any of which are subject to damage or deterioration from the effects of water.

**3.2.2 Level B.**

**3.2.2.1 Valves, fittings, or flanges weighing 20 pounds or less.** Valves, fittings, or flanges weighing 20 pounds or less preserved and packaged by level A or level C as specified (see 6.2) shall be packed in wood-cleated fiberboard, domestic type wood-cleated plywood, nailed wood, wirebound wood, wood-cleated kraft veneer or fiberboard boxes conforming to Specification NN-B-591, PPP-B-601, PPP-B-585, MIL-B-10377 or to the special requirements of Specification LLL-B-631 or LLL-B-636. The gross weight of wood or wood-cleated shipping containers shall not exceed approximately 200 pounds.

**3.2.2.2 Valves weighing more than 20 pounds.** Valves weighing more than 20 pounds shall be packed in domestic type cleated plywood domestic type wirebound or nailed wood boxes or in unsheathed crates conforming to Specification PPP-B-601, PPP-B-585, NN-B-621, MIL-C-132 or MIL-C-3774, with the selection of the container at the option of the contractor. Handwheels may be left on or removed from the stems in accordance with the manufacturer's commercial practice. If removed, the handwheel shall be either packed separately and included within the same container with the valve, or tightly and securely wired or strapped to the valve. The stem end shall be protected, as necessary, with a metal or plastic nipple or wood block and nut and washer. If a wood block is used, the stem shall be wrapped in barrier material conforming to Specification MIL-B-121 prior to applying the block. Boxes shall be modified by the addition of a minimum of two nominal 2 by 4 inch skids placed flat at right angles to the long dimension for weights exceeding 200 pounds in order to facilitate materials handling. Unsheathed crates shall be used for the shipment of valves weighing more than 500 pounds. When specified (see 6.2) valves shall be shrouded within unsheathed crates in accordance with the appendix to Specification MIL-C-132.

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**3.2.2.3 Fittings and flanges weighing more than 20 pounds.** Flanges and fittings weighing more than 20 pounds shall be packed in the same manner as specified for valves in 3.2.2.2 except that large flanges may be stacked and securely bolted in bundles face to face or hub to hub with flanged face out and with outer flange faces fully protected by wood pressed wood, metal or similar flange covers bolted to the face. If wood or wood product flange covers are used, greaseproof barrier material conforming to Specification MIL-B-121 shall be inserted between the flange face and the wood flange cover. If metal covers are used, they shall be painted or otherwise suitably protected against corrosion. Fittings weighing over 50 pounds, except butt welding or silver brazing fittings which do not require packing for physical protection, shall have flange faces of fittings protected in the same manner as flanges. Soil pipe cast-iron water pipe fittings and flanges in bolted bundles may be shipped unpacked or may be packed on pallets to facilitate handling.

**3.2.3 Level C.** Valves, fittings, and flanges, preserved and packaged by level A or level C, as specified (see 6.2), shall be packed in a manner to insure safe delivery and acceptance at destination. Containers shall comply with the Consolidated Freight Classification Rules or other common carrier regulations applicable to the mode of transportation.

**3.3 Marking.** In addition to any special marking required by the contract or order, unit and intermediate packages and shipping containers shall be marked in accordance with Standard MIL-STD-129.

**4. QUALITY ASSURANCE PROVISIONS**

**4.1 Sampling, inspection, and tests.** Sampling, inspection, and tests of cleaning, preservation, and packaging methods shall be as specified in Specification MIL-P-116.

**5. PREPARATION FOR DELIVERY**

**5.1** Not applicable.

**6. NOTES**

**6.1 Intended use.** This specification is primarily intended for mechanical valves, fittings, and flanges not installed as a component of equipment, and is not intended to provide complete delivery requirements for valves having hydraulic or electric actuating mechanisms or controls. Sufficient information is provided for preservation of the basic valve. Additional information or special requirements may be required for peculiar types of valves.

**6.2 Ordering data.** Procurement documents should specify the following.

- (a) Title, number, and date of this specification.
- (b) Whether preservation and packaging should be for level A or level C; and whether packing should be for level A, level B or level C.
- (c) Type of preservative for internal surfaces (see 3.1.1.2).
- (d) When removal of packing material is required (see 3.1.1.3).
- (e) When valves should be shrouded within unsheathed crates (see 3.2.2.2).

**Notice.** When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation the United States Government thereby incurs no responsibility nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

**Preparing activity:**

**Custodians:**  
 Army—Corps of Engineers  
 Navy—Bureau of Ships  
 Air Force

**Other interests:**

Army—MOT  
 Navy—AMCSY