

GG-D-635D
 June 5, 1984
 SUPERSEDING
 GG-D-635C
 September 13, 1978

FEDERAL SPECIFICATION

DRAWING BOARD AND DRAWING BOARD TRESTLES

This specification was approved by the Assistant Administrator, Office of Federal Supply and Services, General Services Administration, for the use of all Federal Agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers drawing boards and drawing board trestles of various sizes.

1.2 Classification. Drawing boards shall be the following types and sizes, as specified (see 6.2).

Type I - Wood drawing boards with wood end cleats.

Size: 12 by 17 inches (MS39123-1)
 16 by 21 inches (MS39123-2)
 20 by 26 inches (MS39123-3)
 23 by 31 inches (MS39123-4)
 31 by 42 inches (MS39123-5)

Type II - Wood drawing boards with metal end cleats.

Size: 12 by 17 inches (MS39123-1)	23 by 31 inches (MS39124-1)
16 by 21 inches (MS39123-2)	31 by 42 inches (MS39124-2)
20 by 26 inches (MS39123-3)	38 by 48 inches (MS39124-3)
23 by 31 inches (MS39123-4)	43.5 by 60 inches (MS39124-4)
31 by 42 inches (MS39123-5)	43.5 by 72 inches (MS39124-5)
	43.5 by 84 inches (MS39124-6)

FSC 6675

GG-D-635D

Type III - Composition core drawing boards, with wood or metal banding on all edges.

Size: 12 by 17 inches (MS39123-1)	23 by 31 inches (MS39124-1)
16 by 21 inches (MS39123-2)	31 by 42 inches (MS39124-2)
20 by 26 inches (MS39123-3)	38 by 48 inches (MS39124-3)
23 by 31 inches (MS39123-4)	43.5 by 60 inches (MS39124-4)
31 by 42 inches (MS39123-5)	43.5 by 72 inches (MS39124-5)
	43.5 by 84 inches (MS39124-6)

Type IV - Wood drawing boards with 3 battens and metal end-cleats.

Size: 60 by 120 inches (MS39124-7)

(Note: Sizes may vary up to +1 inch to allow acceptance of a contractor's commercial product (see 6.3).)

2. APPLICABLE DOCUMENTS

2.1 Government publications. The issues of the following documents, in effect on date of invitation for bids or solicitation for offers, form a part of this specification to the extent specified herein.

Federal Specifications

QQ-S-781	- Strapping, Steel, and Seals.
TT-S-300	- Shellac, Cut.
PPP-B-601	- Boxes, Wood, Cleated-Plywood.
PPP-B-621	- Boxes, Wood, Nailed and Lock-corner.
PPP-B-636	- Boxes, Shipping, Fiberboard.

Federal Standards

FED-STD-123	- Marking for Shipment (Civil Agencies).
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(Activities outside the Federal Government may obtain copies of Federal specifications, standards, and commercial item descriptions, as outlined under General Information in the Index of Federal Specifications, Standards, and Commercial Item Descriptions. The Index, which includes cumulative bimonthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

(Single copies of this specification, other Federal specifications, standards and commercial item descriptions required by activities outside the Federal Government for bidding purposes are available without charge from General Services Administration Business Service Centers in Boston, MA; New York, NY; Philadelphia, PA; Washington, DC; Atlanta, GA; Chicago, IL; Kansas City, MO; Fort Worth, TX; Denver, CO; Houston, TX; San Francisco, CA; Los Angeles, CA; and Seattle, WA.

(Federal Government activities may obtain copies of Federal standardization documents and the Index of Federal Specifications, Standards and Commercial Item Descriptions from established distribution points in their agencies.)

Military Specifications

- | | |
|-------------|--|
| MIL-G-20241 | - Gasket Material, Wool Felt, Impregnated, Adhesive, Pressure-Sensitive. |
| MIL-S-81733 | - Sealing and Coating Compound, Corrosion Inhibitive. |

Military Standards

- | | |
|-------------|--|
| MIL-STD-105 | - Sampling Procedures and Tables for Inspection by Attributes. |
| MIL-STD-129 | - Marking for Shipment and Storage. |
| MIL-STD-889 | - Dissimilar Metals. |
| MS39115 | - Trestle, (23 x 31 Inch Drawing Board). |
| MS39116 | - Trestle, (31 x 42 Inch Drawing Board). |
| MS39117 | - Trestle, (38 x 48) Inch Drawing Board). |
| MS39118 | - Trestle, (38 x 48; 43.5 x 60, 72, 84; 60 x 120 Inch Boards). |
| MS39123 | - Drawing Boards, Type I, II, III. |
| MS39124 | - Drawing Boards, Type II, III, IV. |

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

Federal Regulations

- | | |
|---------------|------------------------|
| 41 CFR 1-1.25 | - Recovered Materials. |
|---------------|------------------------|

(The Code of Federal Regulations (CFR) is for sale on a subscription basis by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. When indicated, reprints of certain regulations may be obtained from the Federal agency responsible for issuance thereof.)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on date of invitation for bids or request for proposal shall apply.

GG-D-635D

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) STANDARDS

ASTM D 3951 - Standard Practice for Commercial Packaging.

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

3. REQUIREMENTS

3.1 Description. The drawing boards with or without applicable trestles shall be in accordance with the following, and as specified herein:

Type I, type II, type III desk boards - MS39123.

Type II, type III, type IV trestle boards - MS39124. When specified (see 6.2), trestles shall be in accordance with MS39115, MS39116, MS39117, or MS39118 and as specified herein.

3.2 Material. Material shall be as specified herein and as shown on the applicable MS Sheet. Materials not specified shall be selected by the contractor and shall be subject to all provisions of this specification.

3.2.1 Regulatory requirements. The offeror/contractor is encouraged to use recovered materials in accordance with Public Law 94-580 (41 CFR 1-1.25) to the maximum extent practical.

3.2.2 Material deterioration and control. The drawing board and trestles shall be fabricated from compatible materials, inherently corrosion and deterioration resistant or treated to provide protection against the various forms of corrosion and deterioration that may be encountered in any of the applicable storage and operating environment to which the item may be exposed.

3.2.2.1 Dissimilar metals. Dissimilar metals, as defined in MIL-STD-889, shall be electrically insulated from one another to minimize or prevent galvanic corrosion. Insulation may be provided by an insulating barrier such as a corrosion inhibiting sealant conforming to MIL-S-81733 or chromate tape conforming to MIL-G-20241. Protection against any galvanic corrosion could also be obtained by exclusion of the electrolyte if feasible.

3.2.2.2 Identification of materials and finishes. The contractor shall identify the specific material, material finish or treatment for use with components and sub-components, and shall make information available, upon request, to the contracting officer or designated representative.

3.2.3 Wood drawing boards. Wood shall be seasoned or kiln dried to assure dimensional stability and permanent configuration. Cross grain (slope of grain) whether on the face or edge of a piece shall be not more than 1 inch in a length of 10 inches. Wood shall be free from decay, splits, checks, shakes, bark, pitch pockets, holes, and knots. Plywood or veneer shall be free of blemishes that would impair the working surfaces of the boards.

3.2.4 Composition core drawing boards. The composition core board shall be plastic-filled with the core having a density of not less than 30 pounds per cubic foot and a urea formaldehyde resin content of not less than 7 percent, or a commercially proven equivalent. Working surfaces shall be not less than 1/16 inch thick. Multiple plies of wood used for strength shall be laminated in cross-grain patterns of continuous wood, and sanded smooth on each side as specified in 3.4.

3.2.4.1 Edge banding. Edge banding of core boards shall be basswood, pecan, maple, oak, birch, white pine or ponderosa pine, and shall be applied to all exposed edges. Metal channel molding mounted flush with the working surfaces for parallel end guides and cross sectional support shall be acceptable. When mounting strips are laminated into core boards, strip areas shall be plainly marked on the edges of the board.

3.2.5 Wood trestles. Wood used in trestles shall be seasoned or kiln dried to assure lamination integrity and dimensional stability. Wood shall be oak, maple or dense hardwood variety with cross graining not more than 1 inch in 20 linear inches, and free of decay, splits, checks, shakes, bark, pitch pockets, holes, and knots.

3.2.6 Steel. Wood screws, bolts, washers and hardware moldings, chains, etc., shall be of commercial grade corrosion-resisting steel or shall be made corrosion-resistant by commercial standards.

3.3 Construction. Wood boards shall be made from the same species of wood for the entire working surface of one drawing board. The working surface shall be composed of continuous wood lengths, 1-3/4 to 5 inches each uniform in width, extending the entire length of the working surface with grain running full length whenever practical. The laminated body of the board shall be made up of full length pieces bonded together with waterproof resin adhesive. Bonded joints, fully set, shall have a strength greater than the wood being bonded. Drawing boards more than 45 inches in width and 85 inches in length made from laminates of wood, uniform in length, shall be reinforced across the grain with three battens not less than 1-1/16 inch x 2 inches in cross sectional dimensions, standing perpendicular to the board and secured with thermosetting waterproof resin adhesive and with recessed steel fasteners at intervals of not less than 1 foot. The exposed grain ends of these boards shall be banded as specified in 3.2.4.1.

3.4 Finish. All fabricated wood and plastic surfaces shall be sanded smooth and shall be free of cracks, splits, and splintered edges.

GG-D-635D

3.4.1 Protective finishing. The drawing boards shall be protected with one coat, and the trestle wood surfaces with two coats, of shellac conforming to TT-S-300, type I, grade B, body 2, or in accordance with the contractor's usual standard practice, as specified (see 6.2).

3.5 Workmanship. Drawing boards and trestles shall be free from defects and imperfections which might affect their serviceability.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1 Component and material inspection. The contractor is responsible for insuring that components and materials used are manufactured, examined, and tested in accordance with referenced specifications and standards.

4.2 Classification of inspections. The inspection requirements specified herein are classified as follows:

- a. Quality conformance inspection (see 4.3).
- b. Inspection of preparation for delivery (see 4.5).

4.3 Quality conformance inspection.

4.3.1 Sampling. Sampling for examination shall be in accordance with MIL-STD-105, inspection level S-2.

4.3.2 Examination. Samples selected in accordance with 4.3.1 shall be examined as specified in 4.4.1. AQL shall be 2.5 percent defective.

4.4 Inspection procedure.

4.4.1 Examination. Drawing boards or drawing boards and trestles shall be examined for the following defects:

101. Material not as specified.
102. Materials are not resistant to corrosion and deterioration or treated to be made resistant to corrosion and deterioration for the applicable storage and operating environment.
103. Dissimilar metals as defined in MIL-STD-889 are not effectively insulated from each other.
104. Contractor does not have documentation available for identification of material, material finishes or treatments.
105. Finish not as specified.
106. Accuracy and tolerance dimensions not as specified.
107. Construction not as specified.

4.5 Inspection of preparation for delivery.

4.5.1 Quality conformance inspection of pack.

4.5.1.1 Unit of product. For the purpose of inspection, a completed pack prepared for shipment shall be considered a unit of product.

4.5.1.2 Sampling. Sampling for examination shall be in accordance with MIL-STD-105, inspection level S-2.

4.5.1.3 Examination. Samples selected in accordance with 4.5.1.2 shall be examined for the following defects. AQL shall be 2.5 percent defective.

108. Containers and materials not as specified for level A or B. Each incorrect container or each incorrect material shall constitute one defect.
109. Drawing boards not enclosed in plastic film bags and sealed as specified for level A or B.
110. Box closure not method V as specified for level A.
111. Trestles not unassembled and packaged as specified for level A or B.
112. Packaging and packing not in accordance with the referenced document as specified for commercial.
113. Packing not as specified for level A or B.
114. Strapping not as specified for level A or B.
115. Marking missing, illegible, incorrect, or incomplete for level A, B or commercial.

5. PREPARATION FOR DELIVERY

5.1 Packaging. Packaging shall be level A or commercial as specified (see 6.2).

GG-D-635D

5.1.1 Level A.

5.1.1.1 Drawing boards. Each drawing board shall be enclosed within a plastic film bag, and the bag heat sealed. The drawing board contained in the bag shall be placed in a close-fitting box conforming to PPP-B-636, class weather-resistant, style optional. Box closure shall be in accordance with the appendix to the box specification, method V.

5.1.1.2 Trestles. The trestles shall be unassembled. The trestle components shall be placed in a box as specified in 5.1.1.1. Cushioning and blocking shall be provided to prevent movement and damage to the contents. Box closure shall be as specified in 5.1.1.1.

5.1.2 Commercial. Drawing boards and trestles shall be packaged in accordance with ASTM D 3951.

5.2 Packing. Packing shall be level A, level B, or commercial as specified (see 6.2).

5.2.1 Level A. The drawing boards of like description with or without trestles, packaged as specified in 5.1, shall be packed together in boxes conforming to PPP-B-601, overseas type style optional or PPP-B-621, class 2, style optional, in quantities not to exceed the weight limitation of the box. The contents shall be blocked or braced as applicable to prevent movement or damage. Box closure and strapping shall be in accordance with the appendix to the applicable box specification. Strapping shall conform to QQ-S-781, class 1, type I or IV, size as applicable. Unless otherwise specified (see 6.2), strapping shall be finish B. When specified (see 6.2), strapping shall be finish A.

5.2.2 Level B. The drawing boards, and drawing boards with trestles shall be packed in containers as specified for level A, except boxes shall be domestic type or class as applicable and strapping shall be finish A.

5.2.3 Commercial. Drawing boards and trestles packaged as specified in 5.1 shall be packed in accordance with ASTM D 3951.

5.3 Marking.

5.3.1 Military packaging. Marking shall be in accordance with MIL-STD-129.

5.3.2 Commercial packaging. Marking shall be in accordance with ASTM D 3951. In addition, weight and cube data shall be marked on the shipping container.

5.3.3 Civil agencies. Marking shall be in accordance with FED-STD-123.

6. NOTES

6.1 Intended use. The drawing boards and trestles are to be used for drafting, layout or military projection applications.

6.2 Ordering data.

6.2.1 Procurement documents. Purchasers should select the preferred options permitted herein, and include the following information in procurement documents.

- a. Title, number, and date of this specification.
- b. Type and size required (see 1.2).
- c. When trestles are required and size (see 3.1).
- d. Type of protective coating required (see 3.4.1).
- e. Level of packaging and level of packing required (see 5.1 and 5.2).
- f. When finish A strapping is required (see 5.2.1).

6.3 Metric conversion. Metric or English equivalents of all dimensions are permissible. Metric units should conform to FED-STD-376.

MILITARY INTEREST:

CIVIL AGENCY COORDINATING ACTIVITIES:

Custodians

Army - ME
Air Force - 99

GSA - FSS
OSS

PREPARING ACTIVITY:

Review activities

Air Force - 82
DLA - GS

Army - ME

Project 6675-0764

User activities

Army - GL
Navy - MC, YD

Orders for this publication are to be placed with General Services Administration, acting as an agent for the Superintendent of Documents. See Section 2 of this specification to obtain extra copies and other documents referenced herein.

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions - Reverse Side)

1. DOCUMENT NUMBER GG-D-635D		2. DOCUMENT TITLE Drawing Board and Drawing Board Trestles	
3a. NAME OF SUBMITTING ORGANIZATION		4. TYPE OF ORGANIZATION (Mark one)	
b. ADDRESS (Street, City, State, ZIP Code)		<input type="checkbox"/> VENDOR	
		<input type="checkbox"/> USER	
		<input type="checkbox"/> MANUFACTURER	
		<input type="checkbox"/> OTHER (Specify): _____	
5. PROBLEM AREAS			
a. Paragraph Number and Wording:			
b. Recommended Wording:			
c. Reason/Rationale for Recommendation:			
6. REMARKS			
7a. NAME OF SUBMITTER (Last, First, MI) - Optional		8. WORK TELEPHONE NUMBER (Include Area Code) - Optional	
c. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional		9. DATE OF SUBMISSION (YYMMDD)	

INSTRUCTIONS: In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge (*DO NOT STAPLE*), and mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

NOTE: This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

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