

**SPECIFICATION
FOR
TABLE, UNIT PUPIL, WOOD**

(This interim specification is released for procurement purposes until revised, rescinded.)

SCOPE

This specification covers wood unit pupil tables of the conventional design.

I. CLASSIFICATION

The tables covered by this specification shall be classified in the following classes:

Class I	- 20" - 24"	Top Height (1st. 3 grades)
Class II	- 25" - 27"	Top Height (2nd. 3 grades)
Class III	- 28" - 30"	Top Height (7th grade and up)

II. APPLICABLE STANDARDS

The following document of issue in effect on the date of the Invitation for Bids shall form a part of this specification.

NEMA LD-3 - High Pressure Decorative Laminates
National Electrical Manufacturers Association (NEMA)
2101 L Street, NW
Washington, DC 20037

III. REQUIREMENTS

A. MATERIALS

1. Wood (Species)

The woods shall be of the following:

- a) Hard Maple - Acer Saccharum
- b) Hard Birch - Betula Lutea or Betula Lenta
- c) Hard Beech - Fagus Grandifolia
- d) Hard Oak - Quercus (genus)
- e) White Ash - Fraxinus Americana

The woods are to be clear of defects; kiln-dried to commonly accepted tolerances for glued parts and also properly dried so there will be no checking or splitting occurring when used.

2. Glues

The glues shall be with good commercial practice so that the glue joints are as strong as the wood.

3. Glides

The glides shall be nickel-plated, case-hardened, and rubber cushioned.

4. Finish

The furniture (or panels) shall meet the following requirements:

- a) The color and appearance of the finished furniture shall be within the tolerances defined by the standard control panels for the furniture on contract. The standard control panels to be furnished by the contracting agency. The finish shall be natural but can be toned or stained for uniformity.
- b) The finish shall be smooth and uniform and shall contain no foreign matter or packing marks.

B. CONSTRUCTION

1. Top

- a) Solid tops shall be made of tongue and grooved or straight joint edge-glued Beech, Birch, or Hard Maple, 3/4" minimum thickness.
- b) Plastic surfaces shall be in accordance with NEMA LD-3-1980 standard or issue in effect at the time of the bid. Plastic thickness shall be not less than .050". The plastic shall be General Purpose Type Decorative Laminate grade GP50. Backs shall be equal to grade BK20.

The plastic surface as described above and backing sheet shall be glued on a plywood or high density particleboard core so that the finished thickness shall be not less than 3/4". The individual veneer plies shall be hardwood not more than 1/10" in thickness. (Note: If particleboard is used as core for the tops, the manufacturer must guarantee the top against loosening, breaking, or any other condition causing the top to be unsatisfactory for a period of three years from the date of delivery).

The top shall be securely fastened to the rails.

2. Rails and Stretchers

Rails and stretchers on three sides mortised and tenion or double dowelled to the posts. Rails to be rabbeted to receive bottom of book compartment.

3. Book Compartment

Bottom of book compartment shall be either plywood or solid construction and a minimum of 3/4" thick. Pencil groove to be located inside book compartment.

4. Glides

Glides shall be furnished with each table.

C. DIMENSIONS

The tables shall meet the following minimum finished dimensions:
(Classes I, II, AND III).

Top size	18" x 24" ± ½"
Top thickness	¾" ± 1/16"
Overall height (Incl. glides)	20" through 30" (In 1" increments)
Side rails (2)	5¼" ± ¼" x 13" ± ½" x ¾"
Front rails (1)	5¼" ± ¼" x 19" ± ½" x ¾"
Legs	1 ¾" x 1 ¾" ± 1/8"
Side stretchers (2)	1 13/16" ± 3/16" x 13" ± ½" x ¾"
Front stretcher (1)	1 13/16" ± 3/16" x 19" ± ½" x ¾"
Book box opening	4¼" ± ¼" x 19" ± ½"

Minimum distance from bottom of book compartment to floor to be overall table height (20" through 30") less 6" ± ¼".

IV. WARRANTY

The contractor warrants to the owner that all wood unit pupil tables furnished under this specification will be new, of good material and workmanship, and agrees to replace promptly any part or parts which by reason of defective material or workmanship shall fail under normal use, free of negligence or accident, for a minimum period of three years from date put in operation. Such replacement shall be free of any charge to the owner or his representative.

V. SERVICE, PARTS, AND MANUALS

None required under this specification.

VI. ACCEPTANCE EVALUATION AND QUALITY ASSURANCE

1. Contractor Inspection

Unless otherwise herein specified, the supplier is responsible for the performance of all inspection requirements prior to submission for state inspection and acceptance.

2. Classes of Inspection

All examination and testing shall be to determine conformance to the requirements of this specification to serve as a basis for acceptance.

3. Inspection Lot

For purpose of sampling and testing, a lot shall consist of all wood unit pupil tables offered for delivery for one location at one time.

B. INSPECTION

The field inspector shall pick at random one wood unit pupil table from a shipment for test purposes.

C. LOT ACCEPTANCE

The sample selected by the field inspector shall be subjected to tests herein specified. If the sample fails in one or more of these tests, the lot shall be rejected. Rejected lots may be resubmitted for acceptance tests provided the contractor has reworked all nonconforming materials.

D. TEST PROCEDURE

The following tests are to be performed after the furniture (or panels) has been aged at least 10 days at not less than 70°F.

1. Print Test

Place a piece of surgical gauze folded twice to form a pad approximately 3"x3" on the finish surface (at room temperature). Apply a weight equivalent to two pounds per square inch. Allow to remain in contact for 24 hours. Remove weight and gauze. One hour later examine. There shall be no evidence of printing except those marks which can be easily polished out.

2. Hot Water Test

Pour 25cc of boiling water in a pool on the finish surface. Allow to cool and blot up. Polish with a clean, dry cloth. There shall be no evidence of whitening or spotting.

3. Cold Water Test

Apply a pool of 2cc of cold water to the finish surface. Cover with a 3" watch glass. Allow to remain in contact for 24 hours. Remove watch glass and blot up water. One hour later, polish with a clean, dry cloth. There shall be no evidence of whitening, spotting, or checking.

4. Adhesion Test

Using a single edge razor blade, make cuts through the film into the wood 1" long, 1/8" apart at an angle 45° to the grain on the wood. Then repeat at a 90° angle to the first cuts, forming 1/8" squares. The squares so formed should adhere to the wood and not chip off or break in a brittle manner when rubbed with a cloth.

5. Impact Test

Drop a one-pound steel ball on the finish from a height of one foot. Examine the crater so formed. Finish shall not be shattered or loosened.

6. Smear Test

Make smears on the finish surface with lipstick and carbon paper. Smears shall be easily removed with a cloth dampened with VM&P Naphtha.

7. Wood Classroom Furniture Finish - Tri-Sodium Phosphate (Detergent) Test

A 5% solution of tri-sodium phosphate shall be confined by means of a putty ring over an area of approximately three square inches for a period of 24 hours. Cover the solution and putty ring with a piece of glass to prevent evaporation. At completion of test, the solution and putty ring shall be removed and the completion surface wiped dry and clean with a cloth. There shall be no permanent discoloration or softening of film.

8. Ink Test

Apply a pool of ½cc of ink to the finish surface. Allow to remain in contact 30 minutes. Blot and wipe clean with a damp cloth. There shall be no staining.

9. Chemical and Stain Resistance Test

The finish shall be resistant to staining and spotting from contact with various liquids, foods, etc. The following group being representatives:

- | | |
|-----------------|-----------------|
| a. Coffee | e. Tomato Juice |
| b. Vinegar | f. Butter |
| c. Lemon Juice | g. Milk |
| d. Orange Juice | h. Tea |

Place several drops or a daub of each material on the finish being tested. Cover with a watch glass. Allow to remain in contact for 18 hours. Remove materials with a damp cloth. After a two hour recovery period, examine. There shall be no spotting, staining or discoloration. (The above tests are of such a nature that they may be performed in the field. In addition, the finish shall meet the following laboratory requirements after at least 10 days aging at not less than 70°F.)

10. Cold Check Test

Finish shall withstand 10 hot to cold cycles without cracking. One cycle is as follows:

- a) One hour at 120°F.
- b) Followed immediately by one hour at 5°F.
- c) One hour at room temperature after which panel is examined (preferably while holding the panel at a 45° angle to the rays of bright sunlight or some other strong source of light) for checks in the finish.

11. Abrasion Test

A wood block with rounded edges approximately 4"x6" faced with 1.05-54 sateen and loaded with a total weight of ten pounds shall be moved reciprocally across the finish surface, the pad being saturated with Dutch Cleanser paste (20 grams of Dutch Cleanser in one ounce, liquid measure, of tap water). Rewet with paste every 50 reciprocations. The finish shall withstand at least 300 motions in each direction without being worn through or cut through to wood.

E. SAMPLES

If samples with the bids are necessary, they shall be specifically asked for in the Invitation for Bids and the particular purpose to be served the bid sample shall be stated.

VII. DELIVERY AND PAYMENT

Delivery of and payment for all wood unit pupil tables purchased under this specification shall be in accordance with the terms and conditions of the Invitation for Bids. The contractor shall be responsible for any packing, packaging, or protection required to insure safe delivery in an undamaged condition.

VIII. ORDERING DATA

1. Title, number, and date of this specification
2. Class and size of tables desired
3. Species of wood desired

This interim specification shall, until revised or rescinded, apply as far as practicable in terms and effect to every state purchase of the commodity described herein; however, modifications may be made by the Secretary of Administration prior to the adoption of revisions.