

PPP-B-2122
October 1, 1981

FEDERAL SPECIFICATION
BOX, FOLDING (PAPERBOARD, FOR ARCHIVAL MICROFICHE)

This specification was approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers the requirements for a collapsible microfiche box, consisting of one paperboard flat, for storage of archival microfiche (see Federal Specification PPP-B-650 for box for non-archival fiche).

1.2 Classification.

1.2.1 Style. The paperboard box covered by this specification shall be furnished in the following style and size.

Style - one piece, hinged lid
Size - L 14-3/4" W x 6-1/2" D x 5", inside dimensions (see 6.2)

2. APPLICABLE DOCUMENTS

2.1 The following documents, of the issues in effect on the date of invitation for bid or request for proposal, form a part of this specification to the extent specified herein:

Federal Specifications

PPP-B-636 - Boxes, Shipping, Fiberboard,
PPP-B-638 - Boxes, Caps, Liners and Sleeves, Fiberboard, Knocked Down, Flat; Packing of
PPP-B-650 - Boxes, Corrugated Fiberboard, Special Purpose (Records Retiring)

Federal Standards:

Fed. Std. No. 123 - Marking for Shipment (Civil Agencies)

(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, 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; New York; Washington, DC; Philadelphia; Atlanta; Chicago; Kansas City, MO; Fort Worth; Houston; Denver; San Francisco; Los Angeles; and Seattle, WA.

(Federal Government activities may obtain copies of Federal specifications, standards, and commercial item descriptions, and the Index of Federal Specifications, Standards and Commercial Item Descriptions from established distribution points in their agencies.)

Military Standards:

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-129 - Marking for Shipment and Storage

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

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.

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National Motor Freight Traffic Association, Inc., Agent:

National Motor Freight Classification.

(Application for copies should be addressed to the American Trucking Associations, Inc., Traffic Department, 1616 P Street, NW, Washington, DC 20036.)

Uniform Classification Committee, Agent:

Uniform Freight Classification.

(Application for copies should be addressed to the Uniform Classification Committee, Room 1106, 222 South Riverside Plaza, Chicago, IL 60606.)

Technical Association of the Pulp and Paper Industry (TAPPI) Test Methods:

- T-452 - Brightness test.
- T-511 - Folding Endurance Test of Paper (M.I.T. Tester).
- T-414 - Internal Tearing Resistance of Paper (Elmdorf).
- T-435 - Hydrogen Ion Concentration (pH) of Paper Extracts.
- T-441 - Cobb size test.
- T-476 - Abrasion Loss of Paper and Paperboard.
- T-489 - Stiffness of Paperboard.
- UM-574 - Smoothness of Paper.
- T-807 - Bursting Strength of Paperboard and Liner Board.
- UM-461 - Fading Resistance of Paper and Paperboard.
- T-401 - Fiber Analysis of Paper and Paperboard.
- T-411 - Thickness of Paper and Paperboard

(Copies of these Technical Association publications may be obtained from the Technical Association of the Pulp and Paper Industry, 360 Lexington Avenue, New York, New York 10017.)

3. REQUIREMENTS

3.1 Dimensions. The first two dimensions specified for the box shall be the dimensions of the open face of the body or base of the box; the larger dimension shall be known as the length and the lesser, the width. The remaining dimension of the body shall be the depth. All dimensions shall be inside measurements. Unless otherwise specified, a tolerance of plus or minus 1/16-inch will be permitted in the length, width, or depth of boxes. In specifying dimensions, the order shall be length, width, and depth.

3.2 Construction. Each box shall consist of one .040 inch paperboard flat constructed of not less than two or more than four plies, assembled to comply with the box style illustrated in figure 1. Boxes shall be assembled in such manner that when the box is tested the failure shall be in the paperboard. A moisture resistant non-oxidizing adhesive shall be used when laminating the plies to achieve the required thickness.

3.3 Paperboard. The paperboard shall be made from fully bleached kraft pulp. It shall be free of lignin, groundwood, particles of metal, waxes and plasticizers. The board shall be hard sized with chemically saturated organic compounds to a Cobb size test of not more than 100 grains per square meter (TAPPI T-441 (os-69)). The surface of the board shall be smooth and free from knots, shives and abrasive particles.

3.3.1 pH range: The paperboard shall have a pH of not less than 8.5 nor more than 10.2.

3.3.2 Sizing: Alkaline sizing shall be used in place of alum-rosin sizing.

3.3.3 Alkaline reserve: The paperboard shall contain a minimum of 3% calcium carbonate (CaCO₃).

3.3.4 Abrasion test: The paperboard shall show maximum fibre loss of one-tenth of one percent after 100 cycles according to TAPPI 476.

3.3.5 Smoothness test: According to TAPPI UM-518, paperboard should show a minimum smoothness of 195 Sheffield units following the test.

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3.3.6 Folding endurance test: The .010 paperboard shall withstand a minimum of 1,000 double folds in the weakest direction at 1 kg. load, after conditioning according to TAPPI T-511.

3.3.7 Internal tearing resistance of paper (Elmdorf): The .010 paperboard shall have a minimum tear resistance of 350 grams per sheet after conditioning TAPPI T-414.

3.3.8 Stiffness test: The 0.10 paperboard shall have 2,800 stiffness units in the machine direction and 1,400 stiffness units in the cross direction in accordance with TAPPI T-489.

3.3.9 Color Unless otherwise specified (see 6.2), the outer surface of the paperboard shall be natural tan dyed with light-fast and non-bleeding dye. The paperboard shall have a dull non-reflecting surface.

3.3.10 Bleeding test: Immersion in distilled water for 24 hours between two sheets of white board under a weight of 150 g. shall show no transfer of color and no bleeding.

3.3.11 Fading test: When the paperboard is exposed in a standard fadcometer TAPPI UM-461 for 30-hours, the difference in brightness TAPPI T-452 measured on the exposed and unexposed portions of the sample shall be less than 5 points.

3.3.12 Bursting strength. The paperboard shall have a bursting strength of 300 pounds per square inch when tested in accordance with TAPPI T-807.

3.4 Workmanship. Paperboard boxes shall be manufactured in accordance with good commercial practice and shall be free from imperfections which may affect their utility. Scoring of paperboard shall be uniform and of such depth as to retain maximum board strength along the score line consistent with the proper forming to the box. Cutting of the surface of the paperboard along score lines is not permitted.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract, the contractor may use his own facilities or any other 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 specifications where such inspections are deemed necessary to assure that supplies and services conform to prescribed requirements.

4.1.1 Inspection lot. Unless otherwise specified, a lot shall consist of boxes of the same style and size manufactured by the same process the same manufacturer and submitted for delivery at the same time.

4.2 Sampling for lot acceptance and test. All sampling for lot acceptance and testing shall be in accordance with MIL-STD-105.

4.2.1 Sampling for visual and dimensional inspection. From each examination lot of material offered for inspection, a random sample of items shall be selected. The sample unit shall be S-2 with an AQL of 4.0 expressed in terms of percent defective. At the option of the inspector, double or multiple samples may be used.

4.2.2 Sampling for tests. After completion of examination for acceptance, a sample unit shall be taken from the inspected samples and tested as specified in 4.4. The AQL shall not be more than 2.5 percent defective.

4.3 Examination. Each sample selected in accordance with 4.2.1 shall be visually and dimensionally examined to verify conformance to the requirements of this specification. Any nonconforming sample item shall be rejected and if the number of nonconforming items in the sample exceeds the acceptance number specified, the entire lot shall be rejected.

4.4 Lot test. Each sample selected in accordance with 4.2.2 shall be tested as specified in 4.5. If the number of nonconforming items exceeds the acceptance number, the entire lot shall be rejected.

4.5 Test procedures.

4.5.1 Bursting strength. The bursting strength shall be tested in accordance with TAPPI T-807

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4.5.2 The following tests shall be made in accordance with methods described in TAPPI:

<u>Test</u>	<u>Method</u>
Thickness of Paper and Paperboard	T-411
Fiber Analysis of Paper and Paperboard	T-401

4.5.3 Hydrogen-ion concentration (pH). The pH shall be in the range of 8.5 to 10.2 inclusive when tested in accordance with TAPPI T-435, hot extraction.

4.6 Resubmitted inspection lots. Rejected lots may be resubmitted for inspection provided that the contractor has satisfactorily reworked or removed all nonconforming items.

4.7 Examination of preparation for delivery. An examination shall be made to determine compliance with the requirements of Section 5. The sample unit shall be one shipping container fully prepared for delivery. Sampling shall be in accordance with MIL-STD 105. The inspection level shall be S-2 with an AQL of 4.0 expressed in terms of percent defective.

5. PREPARATION FOR DELIVERY

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

5.1.1 Level A. The boxes shall be packed in accordance with the level A requirements of PPP-B-638.

5.1.2 Level B. Twenty-five boxes shall be knocked down flat and wrapped in 60-pound basis weight (min) kraft paper and secured with tape or twine.

5.1.3 Commercial. The boxes shall be packed in accordance with normal commercial practice to insure delivery at destination, provide for redistribution by the initial receiving activity, and be acceptable by common carrier under the National Motor Freight Classification and Uniform Freight Classification.

5.2 Marking.

5.2.1 Civil agencies. In addition to any marking required by the contract or order, all marking shall be in accordance with Fed. Std. No. 123.

5.2.2 Military activities. In addition to any marking required by the contract or order, all marking shall be in accordance with MIL-STD-129.

6. NOTES

6.1 Intended use. The boxes covered by this specification are intended for the storage of archival microfiche. When used for shipping, boxes shall be used only as interior shipping containers.

6.2 Ordering data.

- (a) Style of box, if other than that specified in 1.2.1.
- (b) Inside dimensions of box, if other than those specified in 1.2.1.
- (c) Color of box, if other than specified in 3.3.9.
- (d) Level of packing required (see 5.1).
- (e) Marking required (see 5.2).

CIVIL AGENCY COORDINATING ACTIVITY:

GSA-FSS

PREPARING ACTIVITY:

GSA-FSS

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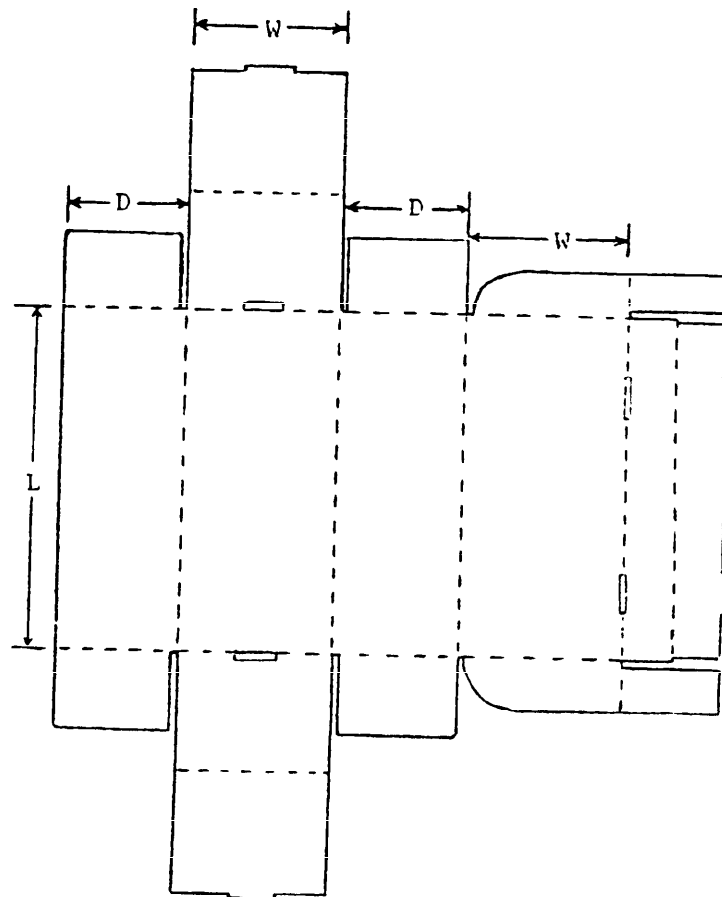
ARCHIVAL CONTAINER FOR MICROFICHE

L = 14-3/4"

W = 6-1/2"

D = 5"

Dimensions are not to be restrictive, but are only to indicate finished (assembled) in inside dimensions of the box.



NOTE: Dashed lines are score/fold lines.

FIGURE 1

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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