

UU-L-49D

March 3, 1976

SUPERSEDING

Int. Fed. Spec. UU-L-0049C (GSA-FSS)

February 29, 1972 and

Fed. Spec. UU-L-49A

August 8, 1956

FEDERAL SPECIFICATION

LABELS, PAPER; GUMMED (WATER-ACTIVATED)

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. The specification covers nonremovable blank paper labels, coated with water-activated gum adhesive.

1.2 Classification.

1.2.1 Classes and styles. Labels shall be furnished in the following classes and styles, as specified (see 6.2):

Class A - Individual labels.

Style 2 - Rectangular with colored border.

Class B - Labels in book form.

Style 2 - Rectangular with colored border.

Class D - File folder labels.

Style 1 - Rectangular, all white.

Class E - Address labels in perforated sheets.

Style 1 - Rectangular, all white.

2. APPLICABLE DOCUMENTS

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

Federal Specifications:

UU-P-121 - Paper, Bond and Writing, White and Colored.

PPP-B-566 - Boxes, Folding, Paperboard.

PPP-B-636 - Boxes, Shipping, Fiberboard.

PPP-B-676 - Boxes, Setup.

PPP-F-320 - Fiberboard, Corrugated and Solid, Sheet Stock (Container Grade), and Cut Shapes.

Federal Standard:

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

(Activities outside the Federal Government may obtain copies of Federal Specifications, Standards, and Handbooks as outlined under General Information in the Index of Federal Specifications and Standards and at the prices indicated in the Index. The Index, which includes cumulative monthly 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 and other Federal Specifications required by activities outside the Federal Government for bidding purposes are available without charge from Business Service Centers at the General Services Administration Regional Offices in Boston, New York, Washington, DC, Atlanta, Chicago, Kansas City, MO, Fort Worth, Denver, San Francisco, Los Angeles, and Seattle, WA.

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(Federal Government activities may obtain copies of Federal Specifications, Standards, and Handbooks and the Index of Federal Specifications and Standards 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 suppliers in connection with specific procurement functions should be obtained from the procuring activity 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.

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

T 401 - Fiber Analysis of Paper and Paperboard.
T 402 - Standard Conditioning and Testing Atmospheres for Paper, Board, Pulp Handsheets and Related Products.
T 410 - Weight Per Unit Area (Basis Weight or Substance) of Paper and Paperboard.
T 477 - Blocking Resistance of Paper and Flexible Materials.

(Application for copies should be addressed to the Technical Association of the Pulp and Paper Industry, One Dunwoody Park, Atlanta, GA 30341.)

Technical Manual of the American Association of Textile Chemists and Colorists.

(Copies of AATCC Color Index may be obtained from the Executive Secretary, AATCC National Headquarters, Lowell, MA, or the Howes Publishing Corporation, 44 East 23rd Street, New York, NY.)

National Motor Freight Traffic Association, Inc., Agent:

National Motor Freight Classification.

(Application for copies should be addressed to the American Trucking Associations, Inc., Tariff Order Section, 1616 P Street, N.W., 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.)

3. REQUIREMENTS

3.1 Materials. Materials shall conform to the requirements hereinafter specified. Materials not definitely specified shall be of the quality used for the purpose in commercial practice.

3.1.1 Paper. Label paper shall be made from a blend of bleached chemical pulp and not more than 25 percent unbleached chemical or groundwood pulp including reclaimed fibers and shall conform to the physical requirements of 3.2 when tested as specified in 4.2.1. The paper shall have a smooth finish.

3.1.2 Adhesive. Gum adhesive shall not be obnoxious to the taste or smell and shall be nontoxic. It shall be formulated to be quickly activated with water and to adhere immediately to paper, fiberboard, wood and glass, except silicone treated glass, when tested as specified in 4.4.2.

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3.2 Physical requirements, label paper.

3.2.1 **Basis weight.** The paper used to fabricate the labels shall have a basis weight, before gumming, of not less than 56 pounds per 500 sheets of a basic ream size of 25 by 38 inches when tested as specified in 4.2.1.

3.3 **Design and construction.** Labels shall be made of paper as specified in 3.1.1, and shall be completely coated on one side with a smooth uniform film of adhesive in accordance with 3.1.2. Labels with borders (style 2) shall have the border printed on the ungummed side.

3.3.1 **Dimensional tolerances.** Label dimensions hereinafter specified are minimum. A plus tolerance of 1/32 inch shall be permitted in both dimensions, except that for class D labels a plus tolerance of 3/16 inch shall be permitted in the long dimension. The width of colored borders, as applicable, shall not vary more than 1/32 inch on any one label.

3.3.2 **Class A, individual labels.** Class A labels shall be style 2 as specified (see 6.2). Labels shall be unattached with smooth cut edges and shall be of the sizes in table I, as specified (see 6.2).

TABLE I. Class A, style 2

Styles	Size (inches)	Width of border	Labels per box
2	4-1/16 by 1-3/4	5/32 to 7/32	35
	4-5/8 by 2	3/16 to 1/4	30
	5 by 3	3/16 to 1/4	20
	3/4 by 9/16	1/16 to 3/32	100
	7/8 by 11/16	1/16 to 1/8	90
	1-11/16 by 1-5/16	3/32 to 5/32	45
	2-1/2 by 1-1/2	3/32 to 5/32	30

3.3.3 **Class B, labels in book form.** Labels supplied in book form shall be style 2 and shall be furnished in perforated sheets, assembled into books, in the quantities specified in table II. Books shall be bound with covers of paper board, having a minimum thickness of 0.014 inch. One edge shall be stapled with not less than two staples. The staples shall pass through the entire book, but not through the labels themselves. The sheets of labels, in the quantities specified in table II, may be interleaved with glassine, waxed, or other suitable paper, to which the labels shall not adhere. In no case shall the sheets of labels adhere to one another, when tested in accordance with 4.4.3. Labels shall be perforated on all adjoining sides in a manner so that they can be easily separated. Labels shall be furnished in the sizes in table II, as specified (see 6.2).

TABLE II. Class B, style 2

Size (inches)	Width of border	Labels per book	Sheets per book
15/16 x 11/16	1/32 + 1/64	1120	20
1-3/4 x 1-3/8	1/8 to 5/32	240	20
2-5/8 x 1-5/8	1/8 to 5/32	180	20

3.3.4 **Class D, labels for file folders.** Labels shall be style 1, furnished assembled in a continuous fanfold of 500 labels, consisting of 100 folds of five labels each. Each label shall be scored in the long dimension 11/16 inch from the bottom edge. Labels shall be perforated on adjoining edges for easy separation.

3.3.4.1 **Colors and sizes.** Class D labels shall be furnished in the following sizes and colors, as specified (see 6.2):

Sizes	Colors
3-1/4 (+ 3/16) x 1-1/8 inches	Blue Buff Green Pink
3-3/4 (+ 3/16) x 1-1/8 inches	Salmon White Canary

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3.3.5 Class E, address sheets. Class E labels shall be style 1, furnished in sheets 8-1/2 by 11 inches. The sheets shall be perforated to make 33 labels, sized 2-13/16 inch by 1 inch in size. Unless otherwise specified (see 6.2), the color of the sheets shall be white.

3.4 Physical properties, labels.

3.4.1 Adhesion. Labels shall tack quickly to the test surfaces and shall adhere without curling or breaking. Two hours after application it shall not be possible to remove the labels without fiber separation, when tested as specified in 4.4.2.

3.4.2 Blocking. Labels shall not block when tested as specified in 4.4.3.

3.4.3 Writing quality. Written characters shall show no feathering or spreading of the ink when tested as specified in 4.4.1.

3.5 Workmanship. Labels shall be free of adhesive on the writing surface. Unless otherwise specified, label edges shall be smooth and clean cut. There shall be no breaks in the fanfolded packs. The labels shall be free from lint, dust, grit, spots, calendered scorches, wrinkles, folds, holes, tears, and other imperfections.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier 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 that supplies and services conform to prescribed requirements.

4.1.1 Inspection. Sampling for inspection shall be performed in accordance with MIL-STD-105, except where otherwise indicated.

4.1.2 Inspection of components and materials. In accordance with 4.1 above, the supplier is responsible for insuring that components and materials used were manufactured, examined, and tested in accordance with this specification or referenced subsidiary specifications and standards.

4.1.2.1 Component testing. Each lot of paper used in the fabrication of labels shall be tested in accordance with the applicable test methods specified hereinafter, to determine compliance with the requirements of section 3. Each inspection lot shall consist of a component of a single type or grade manufactured by the same source, under essentially the same conditions and used in the production of the quantity of the end item submitted for inspection at one time.

4.1.2.2 Evidence of compliance. In lieu of using his own facilities, the contractor may submit a report of analysis of component materials from a laboratory acceptable to the Government, whether an independent test facility or the laboratory of the raw material supplier, as evidence of compliance with the specification requirements. The report of analysis shall include, in addition to the actual test data, the manufacturers' name, name and address of the testing laboratory, date of test, and quantity of material represented by the test report. Where certificates of compliance or reports of analysis are submitted, the Government reserves the right to check test such items to determine the validity of the certification or analysis.

4.2 Testing of components.

4.2.1 Paper. The label paper shall be tested for the applicable characteristics specified in table III. The test shall be made in accordance with the indicated TAPPI methods. The lot size for the purpose of determining the sample size shall be expressed in pounds of paper, used in the manufacture of the labels. The sample unit shall consist of not less than 2000 square inches of base paper. The sample size shall be drawn in accordance with level S-1 of MIL-STD-105.

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Test results shall include all values upon which the results are based and there shall be no failures to meet the composite, or lot average requirements. The composite sample shall consist of approximately equal amounts drawn from all the samples combined into a single sample. Except where otherwise specified, all samples shall be conditioned and tested under uniform atmospheric conditions as specified in TAPPI method T402.

TABLE III. Instructions for testing components

Characteristic	Specification reference		Requirements applicable to	Results reported as	
	Requirement	Test method		Pass or fail	Nearest
Atmospheric conditions	4.2	T 402	All testing		
Fiber identification	3.1.1	T 401	Composite		5.0%
Basis weight	3.2.1	T 410	Lot average		0.1 lb.

4.3 Inspection of the end item.

4.3.1 Examination of the end item. The end item shall be examined for the defects set forth in the applicable subparagraphs at the inspection levels and acceptable quality levels (AQLs) set forth therein.

4.3.1.1 Examination of preparation for delivery. An examination shall be made to determine whether markings, materials, and workmanship comply with the requirements of section 5. The lot size shall be expressed in units of shipping containers. The inspection level shall be S-2 and the AQL shall be 4.0 expressed as percent defective. The sample unit shall be one shipping container, fully prepared for delivery. Examine for defects listed below.

Examine	Defect
Marking (exterior and interior)	Incorrect; incomplete; illegible; omitted; of improper size, location, sequence, or method of application.
Material	Any nonconforming component; component missing, damaged or otherwise defective.
Workmanship	Inadequate application of components.
Contents	Number of intermediate packages per shipping container is less than specified.

4.3.1.1.1 Examination of closure, waterproofing, and banding. When containers are required to comply with PPP-B-566, PPP-B-636 and PPP-B-676, the examination for defects in closure, waterproofing and banding shall be in accordance with the appendix of the appropriate specification.

4.3.1.2 Examination of end item for count. The boxes and books of labels shall be examined for the defects listed below. The lot size shall be expressed in units of boxes for class A, D, and E labels and units of books for class B labels. The inspection level shall be S-4 and the AQL shall be 4.0 expressed as percent defective. The sample unit shall be one box or book, as applicable.

Examine	Defect
Box or book, as applicable	Labels not perforated, where specified. Count per book or box not as specified.

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4.3.1.3 Examination of the end item for dimensional and visual defects. The labels shall be examined for the defects listed below. The lot size shall be expressed in units of labels. The inspection level shall be S-4 and the AQL shall be 2.5 expressed as percent defective. The sample unit shall be one label selected at random from the issue unit sampled in 4.3.1.2. Not more than five labels shall be selected from any one book or box.

Examine	Defect
Design and construction	Class or style not as specified. Labels not white, or the color specified. Colored border not as specified. Edges not smoothly cut, as applicable. Not water-activated adhesive; adhesive missing.
Dimensions	Any dimension not within the specified tolerance.
Workmanship	Adhesive on writing surface, not clean or free from lint, dust, grit, spots, scorches, wrinkles, folds, holes, or tears.

4.3.2 Testing of the end item. Each lot of labels of one class and style shall be tested as specified in 4.4 for compliance with the requirements in 3.4. Twenty-four labels of the same class and style shall be randomly selected from the boxes or books selected as specified in 4.3.1.2. Not more than six labels shall be taken from one book or box. For the lot to be acceptable there shall be no failure of any of the labels tested to meet the specification requirements.

4.4 Test methods.

4.4.1 Writing quality. Write or draw several lines of words or characters on the un gummed side of the paper using a pen with a firm medium point and a 1 percent aqueous solution of either C.I. Acid Red 1 (Color Index Number 18050) or C.I. Acid Green 3 (Color Index Number 42085) (see 6.4). To be considered satisfactory, the lines or characters shall be clear-cut and legible without feathering or spreading.

4.4.2 Adhesion. The gummed side of each of four labels shall be uniformly wetted with water and firmly pressed in contact with bond paper (type III of UU-P-121), fiberboard (grade V3c or V3s of PPP-F-320), finished pine, and a glass surface. To be considered satisfactory, the labels shall immediately tack to the surfaces without curling or tearing and after two hours drying time shall not strip from the test surfaces without fiber separation.

4.4.3 Blocking. Select 20 sheets of bond paper slightly larger than the labels in size conforming to type III of UU-P-121 and condition the labels and the paper at $73 \pm 3.5^{\circ}\text{F}$. and 80 ± 2 percent relative humidity for 24 hours. At the end of the conditioning period stack the labels evenly and interleave them with the bond papers. Place a weight equal to 0.5 psi on the stack and recondition the stack at the stated conditions for an additional 24 hours. Remove and condition the weighted stack for an additional 24 hours at the same temperature except that the relative humidity shall be 50 ± 2 percent. Remove and examine the labels for adhesion to the paper in accordance with TAPPI T 477.

5. PREPARATION FOR DELIVERY

5.1 Packaging. Packaging shall be level A, B, or C as specified (see 6.2).

5.1.1 Level A and B.

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5.1.1.1 Unit container. Labels of one description in the form, as specified (see 6.2) shall be packaged in quantities as specified in table IV in a box conforming to PPP-B-566, PPP-B-676 or in a box used by the industry for the item. The box shall be closed to prevent accidental opening.

5.1.1.2 Intermediate container. Packages of labels in quantities specified in table IV shall be intermediately packaged in a box conforming to PPP-B-566, PPP-B-636, PPP-B-676 or in a box used by the industry for the item. The box shall be closed to prevent accidental opening.

5.1.2 Level C. Labels shall be packaged to afford adequate protection against damage during shipment from the supply source to the first receiving agency.

Class	Packaging	Intermediate Packaging	Packing
A	see table I	12	50
B	BOOK	none	25
D	see Para. 3.3.3.3	10	15
E	25 sheets	12	5

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

5.2.1 Level A. Shipping container. Labels, packaged and intermediately packaged, as specified in 5.1, shall be packed in box conforming to PPP-B-636, class weather resistant. The box shall be closed, waterproofed and banded in accordance with the appendix to the box specification.

5.2.2 Level B. Shipping container. Labels, packaged and intermediately packaged as specified in 5.1 shall be packed in a box conforming to PPP-B-636, class domestic. The box shall be closed in accordance with the appendix to the box specification.

5.2.3 Level C. Shipping container. Labels in quantities as specified (see 6.2) shall be packed in a container complying with the Uniform Freight or National Motor Freight Classification as applicable. The containers shall be packed to assure carrier acceptance and safe arrival at destination.

5.3 Marking. The unit, intermediate and shipping containers shall be marked in accordance with Fed. Std. No. 123 or MIL-STD-129, as applicable.

6. NOTES

6.1 Intended use. Gummed labels are intended for general purpose labeling on paper, cardboard, wood and glass surfaces, except silicone coated glass.

6.2 Ordering data. 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) Style and class of label (see 1.2.1).
- (c) Size of labels (see 3.3.2, 3.3.3, 3.3.4, and 3.3.5).
- (d) Color of identification stripe (see 3.3.3 and 3.3.4).
- (e) Applicable level of packaging and packing (see 5.1 and 5.2).
- (f) Marking document required (see 5.3).
- (g) Quantities required (see 5.2.3).

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6.3 Color designations are those listed in the Technical Manual of the American Association of Textile Chemists and Colorists. Acid Red 1, Color Index No. 18050 may be obtained from Textile Aniline and Chemical Company. Acid Green 3, Color Index No. 42085 may be obtained from the following: Sandoz, Incorporated; National Aniline Division of Allied Chemical Corporation; Geigy Chemical Corporation; and American Cyanamid Corporation.

DOD has waived coordination of this specification.

Military Custodian:

Army - GL
Navy - SA
Air Force - 69

Preparing activity:

GSA - FSS

Civil Agency Coordinating Activities:

GSA - FSS
NASA - JFK

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