

[INCH-POUND]
L-H-490B
January 6, 1992
SUPERSEDING
L-H-490A
January 11, 1965

FEDERAL SPECIFICATION

HOLDER, CARD-LABEL, (PLASTIC)

This specification is 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 pressure-sensitive adhesive-mounting, transparent plastic card-label holders with insertable blank labels (see 6.1).

1.2 Classification.

1.2.1 Type, styles, and classes. Card-label holders covered by this specification shall be the following types, styles, and classes, as specified (see 6.2)

Type I - Cellulose acetate butyrate or ethylcellulose plastic.

Style A - Extruded, seamless tubing (partially flattened).

Style B - Extruded, seamless triangular tubing.

Type II - Cellulose acetate propionate plastic.

Style C - Extruded, seamless tubing (partially flattened).

Style D - Extruded, folded flat strip, open one edge.

Type III - Cellulose triacetate plastic.

Style E - Folded strip with thermoformed bead one edge, open on other edge.

:Beneficial comments, recommendations, additions, deletions, :
:clarifications, etc. and any data which may improve this document:
:should be sent to: General Services Administration, Engineering:
:Group (7FXEE), 819 Taylor St., Fort Worth, TX 76102 :
:

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public release; distribution is unlimited.

FSC 9905

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- Class 1 - Clear with white label insert.
- Class 2 - Tinted with white label insert.
- Class 3 - Clear with tinted plastic inserts and white label inserts.

1.2.2 Width. Card-label holders shall be of the following internal widths as specified in the contract or order (see 6.2). An allowance factor shall be added to assure a smooth unbinding fit of the paper or plastic insert over the entire length of the label.

Inches - 3/8, 1/2, 3/4, 1, 2.

2. APPLICABLE DOCUMENTS

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

Federal Specifications:

- L-P-504 - Plastic Sheet and Film, Cellulose Acetate.
- UU-P-31 - Paper, General Specifications and Methods of Testing.

Federal Standards:

- FED-STD-123 - Marking for Shipment (Civil Agencies).
- FED-STD-175 - Adhesives: Methods of Testing.
- FED-STD-376 - Preferred Metric Units for General use by the Federal government.

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.

Federal Government activities may obtain copies of Federal Specifications, Standards, and Handbooks from established distribution points in their agencies.

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Military Standards:

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

Copies of military standards may be obtained from the Standardization Documents Order Desk, Bldg. 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

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

ASTM Standards:

- D 256 - Standard Test Methods for Impact Resistance of Plastics and Electrical Insulating Materials.
- D 568 - Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Flexible Plastics in a Vertical Position.
- D 570 - Standard Test Method for Water Absorption of Plastics.
- D 707 - Standard Specification for Cellulose Acetate Butyrate Molding and Extrusion Compounds.
- D 785 - Standard Test Method for Rockwell Hardness of Plastics and Electrical Insulating Materials.
- D 817 - Cellulose Acetate Propionate and Cellulose Acetate Butyrate, Methods of Testing.
- D 882 - Standard Test Methods for Tensile Properties of Thin Plastic Sheetings.
- D 1562 - Standard Specification for Cellulose Propionate Molding and Extrusion Compounds.

Application for copies should be addressed to ASTM, 1916 Race Street Philadelphia, PA 19103.

National Motor Freight Traffic Association, Inc. Agent

National Motor Freight Classification.

Application for copies should be addressed to the National Motor Traffic Association, 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, Tariff Publishing Officer, Room 1106, 222 South Riverside Plaza, IL 60606.

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2.3 Order of Precedence. In the event of a conflict between the text of this specification and the references specified herein, the text of this specification shall take precedence. Nothing in this specification, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 General requirements. The pressure-sensitive adhesive shall be applied to one side of the plastic tubing or strips by means of a conformable plastic foam tape with the adhesive on both sides of the tape. The holders shall have an easily-removable sheet or film to serve as a protective backing for the adhesive while holders are in storage. Each tube and strip holder shall be of uniform thickness throughout. Each holder with the folding type paper insert labels shall be packaged in a paper or plastic envelope.

3.1.1 Plastic.

3.1.2 Type I. Type I holders shall be extruded from transparent virgin cellulose acetate butyrate in accordance to ASTM D 707 or transparent virgin ethylcellulose meeting the physical properties specified in table I. The wall thickness of the tubes shall be 0.015 inch plus or minus 0.003 inch.

3.1.2.1 Style A. Internal width dimensions shall be as specified (see 1.2.2 and 6.2). The space between the front and back wall of the tubing, provided for the insertion of the label, shall be 1/16 inch plus or minus 1/64 inch.

3.1.2.2 Style B. Internal width dimensions shall be 1/2 inch or 1 inch, as specified (see 6.2), plus an allowance factor shall be added to assure a smooth unbinding fit of the paper insert over the entire length of the label. The tubing shall be angled 45 degrees forming a triangular holder with two face surfaces; one face of the tube shall be for viewing and the other face of the tube shall be coated with pressure-sensitive adhesive (see 3.2.3). A continuation of the above-mentioned faces shall form an inverted angle approximately 1/4 inch deep to securely hold the label insert and to indicate the position as to whether the holder shall be affixed above or below eye level.

3.1.3 Type II. Type II holders shall be extruded from transparent virgin cellulose acetate propionate in accordance to ASTM D 1562, grade I. The wall thickness of the tubes shall be 0.0175 inch plus or minus 0.003 inch.

3.1.3.1 Style C. Style C tubing shall be seamless. Internal width dimensions shall be as specified (see 6.2). The space between the front and back wall of the tubing, provided for the insertion of the label, shall be 1/16 inch plus or minus 1/64 inch.

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3.1.3.2 Style D. Style D holders shall be folded on one edge forming a flat strip and open on the other edge for insertion of the label insert. Internal width dimensions shall be as specified (see 1.2.2 and 6.2). The space between the front and back wall of the strip shall be sufficient for insertion of the label.

3.1.4 Type III. Type III holders shall be extruded from transparent virgin cellulose triacetate meeting the physical properties specified in table II when tested in accordance with ASTM D 817. The wall thickness of the strips shall be 0.010 inch \pm 0.0025 inch. The tinted plastic inserts for class 3 holders shall be extruded from 0.0075 inch gauge cellulose acetate, in accordance with L-P-504 type I. Internal width dimensions shall be as specified (see 1.2.2 and 6.2).

3.1.4.1 Style E. Style E holders shall be folded with a thermoformed bead on one edge and open on the other edge for insertion of the label and tinted plastic insert. Internal width dimensions shall be as specified (see 1.2.2 and 6.2). The space between the front and back wall of the strip shall be sufficient for insertion of the label or plastic insert.

3.2 Finish. Unless otherwise specified (see 6.2), the outer surface of tubing and strips for type I, II, and III holders shall have a matte finish to prevent reflected light from interfering with readability of the insert labels. The matte finish shall not visibly reduce the light transmittance of the tubing or strips.

3.2.1 Dimensions. The card-label holders shall be in lengths as specified (see 6.2). The mating insert labels and tinted plastic inserts for type III holders shall have widths of 3/8, 1/2, 3/4, 1, or 2 inches, minus 1/64 inch.

3.2.2 Colors. Plastic for class 1, type I, II, and III holders and class 3, type III holders shall be clear. Plastic for class 2, type I and II holders and the tinted plastic inserts for class 3, type III holders shall be amber, blue, green, pink, red, or other commercially available color, as specified (see 6.2).

3.2.3 Adhesives. The adhesive shall be a pressure-sensitive, water insoluble, homogeneous material capable of withstanding changes of temperature and humidity experienced in normal atmospheric conditions (see 3.2.4). The pressure-sensitive adhesive shall require no moisture, heat, or other special preparations prior to application of the label holder to the surface on which it is being applied. The minimum peel or stripping of adhesive shall be in accordance with method 1041.1 of FED-STD-175 and as specified in 4.5.2. No part of the surface to which the adhesive is applied shall have bare spots or air pockets.

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The adhesive shall be of uniform thickness and there shall be no tendency, when removing the protective backing, for the adhesive to separate from the plastic tubing and strips. The adhesive shall be compatible with type I, II, and III plastics, the protective backing, and with all finishes customarily used for steel furniture.

3.2.4 Storage stability (shelf life). Holders shall show no evidence of deterioration or change in the properties of the adhesive or protective backing such as to make the holders unfit for use when stored under warehouse conditions at a temperature of 70 to 90 degrees F. (21 to 32 degrees C.) and 50 percent plus or minus 2 percent relative humidity for one year (see 4.5.1).

3.2.5 Protective backing. The backing provided for protection of the adhesive material while the card-label holder is in storage (see 3.2 and 3.2.4), shall be a plastic sheet, film, or other chemical treated material that releases easily yet protects the adhesive from deterioration by aging when stored under normal conditions. Waxed, oil treated, or other release liner impregnated with materials incompatible to the adhesive will not be accepted. The protective backing shall completely cover the adhesive area to afford maximum protection, and shall extend 1/8 inch, plus 1/16 or minus 1/32 inch, beyond one end of the plastic holder or beyond the edge of the adhesive on not less than two sides, unless treated for easy release, to facilitate its removal. Flammability rating of the plastic backing shall be a maximum of 24 square inches per minute when tested in accordance with ASTM D 568.

3.2.6 Paper. Paper used for insert labels shall be of stock weighing 110 pounds (25 1/2 inches by 30 1/2 inches, 500 sheets) having a thickness of not less than 0.0055 inch, and shall conform to the requirements of UU-P-31 when tested as specified in 4.5.2.

3.2.7 Insert labels. The insert labels shall be furnished in sheet form, minimum 6 inches wide, suitable for entry into a typewriter carriage. Sheets shall be arranged with alternate score lines and perforations to permit tearing off individual (double height) labels in such a manner as to require that they be folded along their longitudinal center line to fit the plastic holder. Four double-fold labels in the length as specified (see 6.2) shall be furnished for each label holder. The labels shall be white in color and have a smooth finish suitable for writing on with pencil or pen and ink without feathering.

3.3 Workmanship. The holder shall be free from cracks, splits, and crazing and shall be free from defects which may affect appearance or serviceability.

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3.4 Regulatory requirements. In accordance with section 23.403 of the Federal Acquisition Regulations, the Government's policy is to acquire items composed of the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition without adversely affecting performance requirements or exposing suppliers' employees to undue hazards from the recovered materials. The term "recovered materials" means materials which have been collected or recovered from solid waste and reprocessed to become a source of raw materials as opposed to virgin raw materials. None of the above shall be interpreted to mean that the use of used or rebuilt products are allowed under this specification unless otherwise specified.

3.7 Metric products. Products manufactured to metric dimensions will be considered on an equal basis with those manufactured using inch/pound units, provided they fall within the tolerances specified using conversion tables contained in the latest revision of FED-STD-376, and all other requirements of this specification are met.

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 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.

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

- (a) Quality conformance inspection (see 4.2.1).
- (b) Preparation for delivery inspection (see 4.6).

4.2.1 Quality conformance inspection. Quality conformance inspection shall be performed on the sample label holders selected in accordance with 4.4 and 4.5.

4.2.2 Inspection lot. All units of the same type and design, manufactured by the same manufacturer, and offered to the Government at one time, shall be considered a lot for purpose of inspection. The sample unit shall be one complete card label holder.

4.3 Sampling. A random sample of label holders shall be selected from each lot in accordance with MIL-STD-105.

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4.3.1 Sampling for examination. Examination of the label holders shall be based on inspection level I, and an Acceptable Quality Level (AQL), or 2.5 percent defective for all major defects.

4.3.2 Sampling for tests. Tests shall be based on inspection level S-2 and an AQL of 2.5 percent defective.

4.4 Examination. Each sample selected in accordance with 4.3.1 shall be examined for defects listed in table III.

4.5 Tests.

4.5.1 Adhesion test. A 6-inch length of a sample holder of the width specified shall be applied to the surface of a piece of plate glass 1/4 by 5 by 15 inches. The adhesive side of the holder shall be firmly pressed onto the plate glass using necessary thumb pressure to ensure maximum contact. The holder shall be located across the 5-inch dimension of the glass, near the center of the 15-inch dimension, such that with one end of the holder flush with the edge of the glass, the other end will project one inch beyond the opposite edge of the glass. The force required to pull the holder from the glass surface shall be measured in pounds and/or ounces, after mounting the glass on a suitable gantry type of support on the platform of a dial indicating scale such that the force exerted to remove the sample may be read in pounds and/or ounces on the scale dial. The force shall be applied in a downward direction at an angle of approximately 90 degrees from the plane of the sample by means of a suitably shaped wood slat inserted into the full length of the opening in the plastic tube of the holder. The wood slat shall be 8 inches long shaped and sized to conform to the internal cross-sectional shape of the plastic tube, but shall cause no distortion which might affect the test results. The glass surface shall be prepared for the test by thoroughly washing with a suitable detergent and water, after which it shall be rinsed in running water to remove all traces of detergent. The glass shall then be dried with a clean lintless cloth and cleaned with carbon tetrachloride applied on a lintless cloth. After the carbon tetrachloride has evaporated the glass shall be wiped with a dry lintless cloth. Minimum adhesive value in pounds for 6-inch sample of nominal width shall be as follows:

3/8 inch	- 3 pounds
1/2 inch	- 4 pounds
3/4 inch	- 5 pounds
1 inch	- 6 pounds
2 inch	- 10 pounds

4.5.2 Paper test. The paper used for insert labels shall be tested in accordance with the following test methods described in UU-P-31 as specified in 3.2.6:

Basic weight	- Test method no. 110
Thickness	- Test method no. 173

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4.5.3 Test methods for plastics: The following test methods shall be used to determine physical properties of table I:

Impact strength, IZOD	- ASTM D 256
Water absorption	- ASTM D 570
Rockwell indentation hardness	- ASTM D 785
Tensile strength and elongation	- ASTM D 822

4.6 Preparation for delivery inspection. A random sample of unit, intermediate and shipping containers (as applicable) shall be selected from each lot and examined for conformance with the preservation, packaging, packing, labeling and marking required in the contract or order. Samples shall be selected in accordance with Inspection level S-2, AQL 6.5 expressed in terms of defects per hundred unit.

5. PREPARATION FOR DELIVERY

5.1 Preservation, packaging, packing, labeling and marking. The preservation, packaging, packing, labeling and marking shall be as specified in the contract or order.

5.2 Marking. In addition to any special marking required by the contract, interior packages and shipping containers shall be marked in accordance with FED-STD-123 or MIL-STD-129, as applicable (see 6.2).

6. NOTES

6.1 Intended use. The plastic card label holders are intended for use in mounting on shelves, bins, sorting cases, desk trays, and cabinet drawers.

6.2 Ordering data. Purchasers should select the preferred options offered herein and include the following data in procurement documents:

- (a) Title, number, and date of this specification.
- (b) Type, style, and class required (see 1.2.1).
- (c) Width of holder required (see 1.2.2).
- (d) Length of holder required (see 3.2.1).
- (e) Color required (see 3.2.2).
- (f) If other than a matte finish is required (see 3.2).

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TABLE I. Physical properties for ethyl cellulose plastic

:Property	: Unit	: Value	:
:	: Measurement	: Required	:
:Tensile Strength (Instron):	P.S.I.	5,400	:
:Elongation, 73 degrees F	: Percent	20	:
:Impact strength, IZOD,	:	:	:
: min.,	:	:	:
: 1/8" x 1/2" bar at	: Ft. lb./1W	:	:
: 73 degrees F	: of notch	2.5	:
: 1/8" x 1/2" bar at	: Ft. lb./1W	:	:
: 0 degrees F	: of notch	0.6	:
:Rockwell indentation hard-	:	:	:
: ness	: R-scale	108	:
:Water absorption (24 hrs)	:	:	:
: Total water absorbed	: Percent	1.4	:
: Soluble matter extracted	: Percent	0.4	:

TABLE II. Type III holders - Physical properties for cellulose tracetate plastic

:Property	: Unit	: Value	:
:	: Measurement	: Required	:
:Tensile Strength (Instron):	p.s.i.	9,000 to	:
:	:	11,000	:
:	:	:	:
:Total elongation	: percent	25 to 40	:
:	:	:	:
:Tear resistance	: grams	100 to 300	:
: (Elmendorf)	:	:	:
:	:	:	:
:Flammability:	:	:	:
: Area burned	: inch	6 to 10	:
: Burning time	: seconds	self-ex-	:
:	:	tinguishing:	:
:	:	:	:
:Tensile heat distortion	:	:	:
: temperature (2 percent	:	:	:
: elongation at 50 p.s.i)	: degrees F	260-280	:
:	:	:	:
:Moisture absorption	:	:	:
: (24 hours)	:	:	:
:Total water absorbed	: percent	3 to 4	:
:Soluble matter extracted	: percent	0.5 to 1.5	:

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TABLE III. Classification of defects

:Examine	Defects	Major	:
:Holder and	Not sealed in paper or plastic		:
:insert label:	bags.	X	:
:			:
:Adhesive:	Not applied uniformly; does not have		:
:	protective backing of sheet or film		:
:	Separates from plastic tubing or		:
:	strip when protective backing is		:
:	removed.	X	:
:			:
:Tubing or	Cracked, split, or crazed; not of		:
:Strip:	uniform thickness throughout; rough		:
:	or sharp edges; sharp corners; edges		:
:	not straight or square.	X	:
:			:
:Construction:	Not as specified.	X	:
:			:
:Reading	Stained, rough, or discolored.	X	:
:Surface of			:
:Plastic:			:
:			:
:Color:	Not as specified.	X	:
:			:
:Insert label:	Not scored for folding on longitudinal		:
:	center; not double-fold type with four		:
:	usable surfaces conforming to 3.2.6.	X	:
:			:

MILITARY INTEREST:

Military Coordinating Activity

Army - GL

Custodian

Air Force - 99

Review Activities

Navy - SA

Air Force - 84

CIVIL AGENCY INTEREST:

GSA - PBS - PMP

PREPARING ACTIVITY:

GSA - FSS