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DDD-L-20E
March 7, 1980
SUPERSEDING
Fed. Spec. DDD-L-20D
December 16, 1975

FEDERAL SPECIFICATION

LABEL: FOR CLOTHING, EQUIPAGE, AND TENTAGE, (GENERAL USE)

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 six types of labels, utilized in fabricated textile, plastic coated, and leather items.

1.2 Classification.

1.2.1 Types and classes. The labels shall be of the following types and classes, as specified (see 6.2 and 6.4).

Type:

I	-	Deleted (see 6.9)
II	-	Deleted (see 6.9)
III	-	Marking, heat transfer (decalcomania)
IV	-	Marking, direct printing, stamping, or stenciling
V	-	Label, cloth, cotton, polyester or polyester/cotton blend; heat sealable, adhesive coated, printed
VI	-	Label, nonwoven, spunbonded polyester cloth, impregnated, acrylic coated, mildew-resistant printed

Class:

1	-	Identification label for garments
2	-	Size label for garments
3	-	Instruction label for garments
4	-	Combination identification and size label for headwear, neckwear and handwear
5	-	Identification label for equipage
6	-	Identification label for tentage
7	-	Instruction label for tentage

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8	-	Identification label for paulins and covers
9	-	Special markings
10	-	Personal identification label
11	-	Identification label for aerial delivery items
12	-	Identification label for coated items
13	-	Instruction label for coated items
14	-	Combination size, identification and instruction label for garments
15	-	Combination identification and instruction label for garments

2. APPLICABLE DOCUMENTS

2.1 The following documents, of the issue 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:

O-T-236	-	Tetrachloroethylene (Perchloroethylene); Technical Grade
P-D-680	-	Dry Cleaning Solvent
PPP-T-45	-	Tape, Gummed, Paper Reinforced and Plain, for Sealing and Securing
PPP-B-566	-	Boxes, Folding, Paperboard
PPP-B-636	-	Boxes, Shipping, Fiberboard
PPP-B-676	-	Boxes, Setup

Federal Standards:

Fed. Std. No. 123 - Marking for Shipment (Civil Agencies).
Fed. Test Method Std. No. 191 - Textile Test Methods.

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

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

Military Specification:

MIL-L-15040 - Label Garment Woven Rayon

Military Standards:

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-129 - Marking for Shipment and Storage
MIL-STD-1188 - Commercial Packaging of Supplies and Equipment

(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.)

LAWS AND REGULATIONS

Rules and Regulations under the Fur Products Labeling Act
Rules and Regulations under the Textile Fiber Products Identification Act
Rules and Regulations under the Wool Products Labeling Act of 1939

(Copies may be obtained without charge from the Federal Trade Commission, Washington, DC 20580.)

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:

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, 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.)

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American Society for Testing and Materials (ASTM) Standards:

D 1876 - Peel Resistance of Adhesives (T-Peel Test)
D 1922 - Propagation Tear Resistance of Plastic Film and Thin Sheeting by Pendulum Method
E 380 - Metric Practice (Complete in Part 41 Only, Excerpts (in Related Material) in All other Parts)

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

Technical Manual of the American Association of Textile Chemists and Colorists

Method 61 - Colorfastness to Washing, Domestic; and Laundering, Commercial Accelerated

Method 8 - Colorfastness to Crocking

(Application for copies of the AATCC Manual should be addressed to the AATCC, Technical Center, P.O. Box 12215, Research Triangle Park, NC 27709.)

3. REQUIREMENTS

3.1 Standard sample. Unless otherwise specified, the labels and markings shall be equal to the standard sample in respect to legibility, quality of printing, colorfastness of printing, durability of finish, and where applicable in the ability to accept writing (see 6.2 and 6.5).

3.2 Materials (see 6.8).

3.2.1 Type III marking. Heat transfer (decalcomania) markings shall be applied by a dry-heat transfer process. The initial print shall be well defined, clearly legible, and shall not show smearing, bleeding, or offsetting and shall not show objectionable strike-through of the cloth to which applied. Unless otherwise specified, the printing shall be black.

3.2.2 Type IV marking. Unless otherwise specified, type IV markings shall be applied to the cloth by a black marking medium. The initial print shall be well defined, clearly legible, and shall not show smearing, bleeding, or offsetting and shall not show objectionable strike-through of the cloth to which applied.

3.2.3 Type V label. Cotton, polyester, or polyester/cotton blend, coated (one side) with heat sealable adhesive, printed.

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3.2.3.1 Cloth. Unless otherwise specified, (see 6.2), the label cloth shall be white undyed cotton, polyester, or a blend of undyed cotton and polyester. The finished, heat-sealable, adhesive-coated cloth shall weigh not less than 4.5 nor more than 10.0 ounces per square yard (153 to 339 g/m^2), and shall have a minimum of 80 ends per inch (32/cm) in the warp and 72 picks per inch (28/cm) in the filling when tested as specified in 4.2.4.

3.2.3.2 Adhesive coating. The reverse side of the label shall be coated with a heat sealable adhesive. The bond strength of the label after heat sealing shall be 20 pounds (89 N) (min) when tested in accordance with the method specified in 4.2.4. The bond strength shall also be determined on samples subjected to accelerated laundering or dry cleaning tests specified in 4.2.4, as applicable. The labels for the tests shall be heat sealed to materials specified in end item specifications. Heat sealing of samples for tests shall be in accordance with the temperature, pressure and time elements used in production applications of the adhesive being tested.

3.2.3.3 Blocking. The coated labels for types V and VI shall not block to an extent greater than represented by scale rating No. 2 when tested as specified in 4.2.4.

3.2.3.4 Printing medium. Unless otherwise specified, (see 6.2), the color of the label printing medium shall be black and shall consist of suitable non-toxic dye(s) or pigment(s) in a medium which yields a permanent impression suitable for heat-sealing temperatures and later processing. The printing, initial and after heat-sealing, shall not show off-setting, smearing, bleeding or discoloration.

3.2.4 Type VI label. The cloth for type VI label shall be impregnated and coated with a permanent pigmented acrylic composition.

3.2.4.1 Basic cloth. The basic cloth shall be a spunbonded nonwoven material made from 4.0 denier (.44 Tex), continuous filament white polyester fiber. The polyester fiber shall be randomly dispersed and bonded at filament junctions. The overall weight of the basic cloth shall be not more than 2.2 ounces per square yard (75 g/m^2) when tested as specified in 4.2.4.

3.2.4.2 Coating. The impregnation coating shall be a pigmented acrylic or nitrocellulose coating which is composed of white pigments such as clay, chalk, titanium dioxide, blanc fixe, and affixed by an appropriate acrylic or nitrocellulose resin. The coating composition shall not contain leachable skin irritants or toxic materials. Substances that will support mildew growth should not be included. The finished impregnated labels shall have a smooth matte surface and shall be free from objectionable odors (see table II).

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3.2.4.3 Physical requirements. The finished impregnated label shall be as specified in table I when tested as specified in 4.2.4.

TABLE I. Physical requirements for type VI finished label

Weight oz per sq yd (g/m^2) minimum	Breaking strength lbs. (newton) minimum		Tearing strength g (newton) minimum		Bursting strength psi (kPa) Minimum
	Machine direction	Transverse direction	Machine direction	Transverse direction	
3.2 (108)	60 (267)	48 (214)	400 (3.9)	650 (6.4)	85 (586)

3.2.4.4 Color. Unless otherwise specified (see 6.2) the color of the finished label shall be bleached white.

3.2.4.5 Printing medium. Unless otherwise specified (see 6.2) the labels shall be printed with a black marking medium. The initial printing shall be legible and shall not shown off-setting, smearing, or bleeding.

3.2.4.6 Blocking. (see 3.2.3.3).

3.3 Printing (see 6.2).

3.3.1 Print type. All classes of labels shall be printed with Gothic, sansserif type. Italic or script type shall not be used. All printing shall be in capitals except instruction labels as specified in 3.3.2.3.

3.3.2 Print format. Unless otherwise specified (see 6.20), all classes of labels shall be printed with the contents, and in the format and size of print specified below. Unless otherwise specified, the space between lines shall be not less than the following for the size specified (exclusive of space resulting from type shoulder):

6-through 16-point type sizes incl.
- space 2 points

18-through 36-point type sizes incl.
- space 4 points

For all type sizes larger than 36 points
- space 6 points

The end item description to be utilized in the labels shall be as specified in the applicable end item specification or procurement document.

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3.3.2.1 Class 1. The contents, size of characters of inscription, and the format of class 1 labels shall be as follows (see 6.4):

Item description
- Minimum 10-point (approx. 1/8 inch (3 mm))

Contract number
- Minimum 8-point (approx. 3/32 inch (2.4 mm))
Fur, Wool or Fiber Products Act information as applicable
- Minimum 8-point (approx. 3/32 inch (2.4 mm))

Supplier's name (Bottom of label)
- Maximum 8-point (approx. 3/32 inch (2.4 mm))

On items where class 2 labels are not specified, the following shall be included:

Stock number
- Minimum 8-point (approx. 3/32 inch (2.4 mm))

The fur, wool, or fiber content shall be included in the item description wherever possible.

3.3.2.2 Class 2. The contents, size of characters of the inscription, and the format of class 2 labels shall be as follows when the size is expressed adjectively (see 6.4):

Size
- Minimum 10-point (approx. 1/8 inch (3 mm))
Stock number
- Minimum 8-point (approx. 3/32 inch (2.4 mm))

When the size is expressed numerically, the size shall be printed in characters a minimum of 18 point (approximately 1/4 inch (6 mm) in height) with fractions of comparable size.

3.3.2.3 Class 3. The contents, size of characters of the inscription and the format of class 3 labels, shall be as follows (see 6.4):

1/ Item description
- Minimum 10-point (approx. 1/8 inch (3 mm))
Body of instructions
- Minimum 8-point (approx. 3/32 inch (2.4 mm))
Warnings or special notations
- Minimum 10-point (approx. 1/8 inch (3 mm))

1/ When class 3 label is used in combination with class 1 label, the item description shall be omitted.

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The content of the instruction labels shall be as specified in the applicable specification or procurement document. The item description and warning or special notations shall be printed in capitals. The body of the instructions shall be in capitals and lower case characters as shown by the example in the applicable end item specification or procurement document.

3.3.2.4 Class 4. The contents, size of characters of the inscription, and format of class 4 labels shall be as follows (see 6.4):

Item description
Contract number
Stock number
Fur, Wool or Fiber Products Act information as applicable
Suppliers name (Bottom of label)

SIZE

The item description and the size, when indicated adjectively, shall be in characters not less than 8 point (approximately 3/32 inch (2.4 mm)) in height, and the contract number, stock number and Fur, Wool or Fiber Products Act information in characters not less than 6 point (approximately 1/16 inch (2 mm)) in height. When the size is expressed numerically, the height of the numerals shall be a minimum of 18 point (approximately 1/4 inch (6 mm)) in height with fractions of comparable size. The fur, wool or fiber content shall be included in the item description whereever possible.

3.3.2.5 Class 5. The contents, size of characters of the inscription, and the format of class 5 labels shall be as follows (see 6.4):

Item description
- Minimum of 18-point (approx. 1/4 inch (6 mm))
Contract number
- Minimum of 18-point (approx. 1/4 inch (6 mm))
Stock number
- Minimum of 18-point (approx. 1/4 inch (6 mm))
Size (when specified)
- Minimum of 18-point (approx. 1/4 inch (6 mm))
Suppliers name (bottom of label)
- Maximum of 18-point (approx. 1/4 inch (6 mm))

3.3.2.6 Class 6. The contents, size of characters of the inscription and the format of class 6 labels shall be as specified for class 5 labels (see 6.4).

3.3.2.7 Class 7. The contents, size of characters, and the format of class 7 labels shall be as specified in the applicable procurement document or end item specification (see 6.2 and 6.4).

3.3.2.8 Class 8. The contents and the format of class 8 labels shall be as specified for class 5 labels. The size of characters for the size and class (when applicable), shall be 1-1/2 inches (38 mm) minimum height. The item identification, contract number, and stock number shall be in characters a minimum of 1/2 inch (13 mm) in height (see 6.4).

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3.3.2.9 Class 9. The contents, size of marking, and format of class 9 labels shall be as specified in the applicable procurement document or end item specification (see 6.2 and 6.4).

3.3.2.10 Class 10. The contents, size of characters of the inscription, and the format of class 10 labels shall be as follows:

Name
- Minimum 10-point (approx. 1/8 inch (3 mm))
Service No.
- Minimum 10-point (approx. 1/ inch (3 mm))

When specified, the class 10 labels shall be combined with the class 1 label. When the combination is specified. the information required by the class 10 label shall precede the information required of the class 1 label.

3.3.2.11 Class 11. The contents, size of characters of the inscription, and format of class 11 labels shall be as specified in the applicable procurement document or end item specification. The suppliers name shall be included at bottom of label.

3.3.2.12 Class 12. The contents, size of characters of the inscription, and the format of class 12 labels shall be as follows:

Item description
- Minimum of 10-point (approx. 1/8 inch (3 mm))
Contract number
- Minimum of 10-point (approx. 1/8 inch (3 mm))
Stock number
- Minimum of 10-point (approx. 1/8 inch (3 mm))
Size (when specified)
- Minimum of 10-point (approx. 1/8 inch (3 mm))
Suppliers name (bottom of label)
- Maximum of 10-point (approx. 1/8 inch (3 mm))

3.3.2.13 Class 13. The contents, size of characters of the inscription, and the format of class 13 labels shall be as follows (see 6.4):

1/ Item description
- Minimum 10-point (approx. 1/8 inch (3 mm))
Body of instructions
- Minimum 8-point (approx. 3/32 inch (2.4 mm))
Warnings or special notations
- Minimum 10-point (approx. 1/8 inch (3 mm))

1/ When class 13 label is used in combination with class 12 label, the item description shall be omitted.

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3.3.2.14 Class 14. The identification label (class 1), size label (class 2) and instruction label (class 3) may be combined into one label. The three labels shall be printed as one continuous label with the size label first and the identification and instruction labels placed below the size label. The size and identification labels may be combined and the contents placed above the instruction label. A space of 1/2 inch (13 mm) minimum shall be maintained between the labels. In addition, a solid line 1/16 inch (2 mm) minimum width shall extend across the entire label approximately midway between the 1/2 inch (13 mm) blank space.

3.3.2.15 Class 15. The identification label (class 1) and instruction label (class 3) may be combined into one label. The two labels shall be printed as one continuous label with the identification label first and instruction label placed below. A space of 1/2 inch (13 mm) minimum shall be maintained between the labels. A solid line 1/16 inch (2 mm) minimum width shall extend across the entire label approximately midway between the 1/2 inch (13 mm) blank space.

3.3.2.16 Fur, fiber, and wool products labeling acts. It is the responsibility of the supplier to insure complete compliance with the Rules and Regulations under the Fur Products Labeling Act, and the rules and Regulations under the Textile Fiber Products Identification Act, and the Rules and Regulations under the Wool Products Labeling Act of 1939. When applicable, this information and the supplier's registration number shall appear on the identification label.

3.4 Label size. Unless otherwise specified, the size of the labels shall be at the option of the supplier governed by the contents and size of characters of the inscription, space between lines, and, as applicable, blank margins on sides of label (see 6.2).

3.4.1 Type VI labels. Type VI labels shall be provided with a 1/4 ± 1/16 inch (6 ± 2 mm) blank margin on all four sides for sewing purposes.

3.4.2 Type V. Type V labels shall require only a 1/8 inch (3 mm) minimum blank margin on all four sides as sewing is not required.

3.5 Fastness of printing.

3.5.1 Classes 1, 2, 3, 4, 14 and 15 labels. Colorfastness for classes 1, 2, 3, 4, 14 and 15 labels shall be as specified in the applicable end item specification or procurement document (see 3.5.1.3). When colorfastness to laundering or drycleaning is specified, the provisions in 3.5.1.1 or 3.5.1.2 shall apply.

3.5.1.1 Colorfastness to laundering. When specified, classes 1, 2, 3, 4, 14 and 15 lables shall show colorfastness to accelerated laundering equal to or better than the standard sample when tested as specified in 4.2.4. When no standard sample is available, the labels shall be clearly legible, and shall show "good" colorfastness to accelerated laundering.

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3.5.1.2 Fastness to drycleaning. When specified classes 1, 2, 3, 4, 14 and 15 labels shall show colorfastness to accelerated drycleaning equal to or better than the standard sample when tested as specified in 4.2.4. When no standard sample is available, the labels shall be clearly legible, and shall show "good" colorfastness to accelerated drycleaning.

3.5.1.3 Fastness to crocking. Classes 1, 2, 3, 14 and 15 labels shall show "good" fastness to crocking (wet and dry) when tested as specified in 4.2.4.

3.5.1.4 Types III, IV, and V, classes 1, 2, 3, 4, 14 and 15 labels. The test specified (see 3.5.1) shall be performed on labels printed on samples of the same material of which the end item is fabricated during the course of production of the end item. In addition to the test, the labels in the fabricated end item shall show colorfastness equal to or better than the standard sample when subjected to dry and wet heat (hot pressing) test specified in 4.2.4.

3.5.1.5 Fraying. There shall be no fraying on edges of type V labels after laundering or after drycleaning cycles specified in 3.5.1.1 and 3.5.1.2 respectively.

3.5.2 Classes 5 and 6 labels. Classes 5 and 6 labels shall be clearly legible after subjection to the accelerated laundering procedure specified in 4.2.4.

3.5.3 Class 7 labels. Class 7 labels shall be clearly legible and shall show colorfastness to accelerated laundering equal to, or better than, the standard sample when tested as specified in 4.2.4. When no standard sample is available, the class 7 labels shall be clearly legible and shall show "good" colorfastness after subjection to accelerated laundering when tested as specified in 4.2.4 (see 6.2).

3.5.4 Class 8 labels. Class 8 labels shall be clearly legible after subjection to accelerated weathering when tested as specified in 4.2.4.

3.5.5 Class 9 labels. The colorfastness properties of the class 9 labels shall be as specified in the applicable end item specification or procurement document. When requirements for any of the following characteristics are specified conformance shall be determined as specified in 4.2.4.

Colorfastness to laundering transference.
Colorfastness to dry and wet heat (hot pressing).
Colorfastness to accelerated laundering.
Colorfastness to accelerated drycleaning.
Colorfastness to accelerated weathering.
Colorfastness to laundering transference (wool method).

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3.5.6 Class 10 labels. Class 10 labels shall show colorfastness properties as specified for class 1 labels and, in addition, shall be equal to or better than, the standard sample when subjected to the writing test specified in 4.2.4. When a combination of classes 1 and 10 labels is specified (see 3.7.2.10), the fastness of the combined label shall be as specified for class 10 labels.

3.5.7 Class 11 labels. Class 11 labels shall be clearly legible after subjection to the accelerated laundering procedure specified in 4.2.4.

3.5.8 Classes 12 and 13 labels. Classes 12 and 13 printed labels shall be well defined and clearly legible after being tested for crocking, both wet and dry, when tested as specified in 4.2.4. When specified, the information shall be marked directly on the coated cloth.

3.6 Workmanship. The finished labels shall be clean, free from objectionable odor, and shall conform to the quality and grade of product established by this specification. The occurrence of defects shall not exceed the applicable acceptable quality levels (AQLs).

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 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 that supplies and services conform to prescribed requirements.

4.1.1 Certificate of compliance. Where certificates of compliance are submitted, the Government reserves the right to check test such items to determine the validity of the certification.

4.2 Quality conformance inspection. Sampling and inspection shall be performed in accordance with MIL-STD-105 except where otherwise indicated.

4.2.1 Components and material inspection. In accordance with 4.1, components and materials shall be inspected in accordance with all the requirements of referenced specifications, drawings, and standards unless otherwise excluded, amended, modified, or qualified in this specification or applicable purchase documents.

4.2.2 Visual examination of the end item. Defects found during this examination shall be classified as listed in table II. The required number of labels shall be inspected. The sample unit for this examination shall be one label. The AQL shall be 2.5 defects per hundred units. The sample size shall be in accordance with inspection level II of MIL-STD-105. The lot size shall be expressed in units of one label each.

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TABLE II. Classification of visual defects

Labels	Defect
Labels (all types)	Misshaped or distorted Objectionable odor
Labels, printing (all types)	Incorrect Omitted Illegible, smeared, bleeding or discoloration Wrong color (label or marking medium) Misplaced Not specified size Spacing between lines less than specified Print type not as specified Not all capitals (exception 3.3.2.3) Format not as specified
Labels (type VI only)	Coating not as specified Coating blistered or missing Holes, cut, tear or break Abrasion or rub mark resulting in damage to fibers 1/ Crease or wrinkle, hard embedded or lump 1/ Spots or stains clearly noticeable 1/ Margin for sewing purposes less than 3/16 inch or more than 5/16 inch
Labels (type V)	Margin less than 1/8-inch on all sides

1/ At normal inspection distance (approximately 3 feet).

4.2.3 Packaging inspection. An examination shall be made to determine that preservation, packing, and marking comply with section 5 requirements. Defects shall be scored in accordance with the following list. The sample unit shall be one shipping container fully packaged with the exception that it need not be closed. Defects of closure listed as follows shall be examined on shipping containers fully packaged. The lot size shall be the number of shipping containers in the end item inspection lot. The inspection level shall be S-2 and the AQL shall be 2.5 defects per hundred units.

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Examine	Defect
Markings	Omitted, incorrect; illegible, of improper size, location, sequence, or method of application
Materials	Any component missing or damaged, affecting serviceability
Workmanship	Inadequate application of components, such as incomplete closure of container flap, improper taping, loose strapping, etc. Bulging or distortion of containers
Bundles	Consisting of more than one type or class
Weight of contents:	
Intermediate container	Exceeds requirement of 10 pounds
Shipping container	Exceeds requirement of 65 pounds

4.2.4 Testing of the end item. The methods of testing specified in Fed. Test Method Std. 191, wherever applicable and as listed in table III shall be followed. The physical and chemical values specified in section 3 apply to the average of the determinations made on a sample unit for test purposes as specified in the applicable test methods. The sample unit shall be as follows for the specified type:

Type	Sample unit
V	300 square inches (or equivalent in cut labels)
VI	340 square inches (or equivalent in cut labels)
III and IV	15 labels

The sample size shall be as follows:

Lot size (labels)	Sample size
800 or less	2
801 up to and including 22,000	3
22,001 and over	5

The lot shall be unacceptable if one or more sample units fail to meet any test requirement specified.

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TABLE III. Tests

Characteristic	Requirement paragraph	Number determinations per sample unit	Test method	Results reported as
Yarns per inch (type V)				
Warp	3.2.3.1	—	5050	—
Filling	—	—	5050	—
Basic material (type VI):	3.2.4.1	—	2/	—
Breaking strength	3.2.4.3	—	5100	—
Tearing strength	3.2.4.3	—	5132 8/	—
Bursting strength	3.2.4.3	—	5122	—
Blocking (types V and VI)	3.2.3.3 and 3.2.4.6	1	5872 1/	Pass or fail
Finished weight (oz./sq yd) (types V and VI)	3.2.3.1 and 3.2.4.3	—	5041	—
Coating (types V and VI)	3.2.3.2 and 3.2.4.2	—	2/	—
Writing test (classes 1 and 10)	3.5.6	1	4.2.4.1	Pass or fail

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TABLE III. Tests (cont'd)

Characteristic	Requirement paragraph	Number determinations per sample unit	Test method	Results reported as
Fastness of printing:	3.5	---	4.2.4.5	---
Colorfastness to laundering transference	---	1	5610 3/	Pass or fail
Colorfastness to dry and wet heat (hot pressing)	---	1	5640 4/ 5/	Pass or fail
Colorfastness to accelerated laundering	---	10	AATCC No. 61 Test IVA	Pass or fail
Colorfastness to accelerated drycleaning	---	1	4.2.4.6	Pass or fail
Colorfastness to accelerated weathering	---	1	5671 6/	Pass or fail
Colorfastness to laundering transference (wool)	---	1	5614 4/	Pass or fail

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TABLE III. Tests (cont'd)

Characteristic	Requirement paragraph	Number determinations per sample unit	Test method	Results reported as
Colorfastness to crocking	3.5.1.3 and 3.5.8	---	AATCC No. 8	---
Bond strength (type V)	3.2.5.2	1	ASTM D 1876 (modified) 7/	Pass or fail
Fraying (type V)	3.5.1.5	1	4.2.4.3	Pass or fail

1/ Method 5872 shall be followed except as follows:

a. The test specimen shall consist of four finished labels plied together, face to face, back to back, and face to back.

b. If the dimensions of the finished labels are under the 4 1/2- by 4 1/2-inch size of the glass plates, they shall be placed approximately in the center of the glass plates.

c. If the dimensions of the finished labels are in excess of the 4 1/2- by 4 1/2-inch size of the glass plates, they shall be trimmed where required to the 4 1/2- by 4 1/2-inch dimensions.

2/ A certificate of compliance is required and will be acceptable for the stated requirement.

3/ Method 5610 shall be followed except that in evaluating the results of this test only the staining of the color transfer cloth shall be evaluated.

4/ When a white or yellow printing medium is specified, the transfer cloth utilized in the test shall conform to the colored crock cloth specified in Method 5651 of Fed. Test Method Std 191.

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5/ Method 5640 shall be followed except that the evaluation shall be conducted as follows:

a. When a standard sample has been established, the color transfer shall be evaluated as "satisfactory" or "unsatisfactory" by comparing the transfer produced by the standard sample with that produced by the specimen under examination.

b. When no standard sample has been established, the transfer onto the transfer press cloth shall be rated as follows:

Excellent	-	No transfer to the transfer cloth
Good	-	No more than very slight transfer of marking to transfer cloth requiring close examination
Fair	-	Appreciable but not objectionable transfer of the marking to the transfer cloth readily discernible upon examination
Poor	-	Objectionable transfer of the marking to the transfer cloth

6/ The time of exposure shall be 100 standard hours.

7/ ASTM D 1876 modified conditioning 24 hours at 65 percent RH, 70°F, 10 pounds per inch of width peel strength at 12 inch per minute head speed with 3 inch peel from fabric substrate.

8/ Except that the constant radius test specimen of ASTM D 1922 shall be used.

4.2.4.1 Writing test. One test specimen subjected to the laundry transference procedure (Method 5610) as specified in 4.2.4 and another in the state as received shall be printed, by pen, with a commercial-grade indelible black ink. The printing on the unlaundered and the laundered test specimens shall be compared with the printing on the standard sample under the same conditions of test and shall show no more skipping, smudging, or blotting than the standard sample.

4.2.4.2 Test specimens. Test specimens for laundering, except for types III, IV, and V labels, shall be prepared in accordance with requirements of AATCC Method 61 - Test IVA. Test specimens for types II and IV labels shall be pinked along each edge. In addition, a thin ribbon of adhesive, preferably a latex acrylic type (see 6.6) shall be applied to each pinked edge. Test specimens for type V labels shall be prepared in accordance with ASTM D 1876 (modified).

4.2.4.3 Colorfastness to laundering. Colorfastness to laundering shall be good when evaluated in accordance with color transference requirements of AATCC Method No. 61, test IVA, and the visual evaluation of 4.2.4.5 through 4.2.4.5.3.

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4.2.4.4 Bond strength of type V label after laundering. Bond strength of type V labels after laundering shall be determined after separating one end of each specimen to provide tabs of sufficient length to perform the test. The separation may be effected by hand immediately after heating the area to be separated with a hot iron. Only the area to be separated shall be heated.

4.2.4.5 Evaluation of color and legibility. Change in basic color of label or color loss (if applicable), or change in definition of print shall be considered in rating colorfastness to laundering. (Color transference is also applicable to laundered samples) (see 4.2.4.3).

4.2.4.5.1 The comparison shall be made with the test specimen and the standard or comparison sample which was tested in a similar manner. The comparison shall be made at normal reading distance under average north-sky daylight or equivalent light in the standard manner.

4.2.4.5.2 When a standard of comparison has been established the test specimen shall be compared with the specimen tested from the standard sample and rated as follows:

Satisfactory	- Equal or superior to the standard sample
Unsatisfactory	- Inferior to the standard sample

4.2.4.5.3 When no standard sample for comparison has been established, unless otherwise specified, the tested specimen shall be rated as to definition and legibility of print at a normal reading distance. Specimens shall be rated as follows:

Excellent	- Practically no change in colors, legibility or definition of print
Good	- Slight change in color and readily legible
Fair	- Not readily legible, but without need for deciphering
Poor	- Not readily legible, requiring deciphering

4.2.4.6 Fastness to drycleaning.

4.2.4.6.1 Test specimen.

4.2.4.6.1.1 Test specimen (except type V). The test specimen shall consist of a number of rectangles of labels weighing a total of 4.5 ± 0.5 g., each unit measuring approximately 2 by 4 inches shall be lap stitched together, each sample faced in the same plane. Labels larger than 2 by 4 inches shall be cut to conform to the specified unit size.

4.2.4.6.1.2 Test specimen (type V label). Test specimens for type V labels shall be prepared in accordance with ASTM D 1876. Type V labels shall also be tested for bond strength after drycleaning. Preparation of drycleaned specimens for this test shall be as cited in 4.2.4.4 for laundered type V labels.

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4.2.4.6.2 Apparatus.

4.2.4.6.2.1 Launderometer or similar machine as described in Method 5610.

4.2.4.6.2.2 Pressing equipment.

4.2.4.6.2.2.1 Steam pressing. Flat bed press at temperature of 135° to 149°C. (275° to 300°F); hot head or polished metal top for flat fabrics; cloth top press for rough crepes.

4.2.4.6.2.2.2 Hand pressing. A hand iron weighing approximately 2 to 3 lbs., capable of maintaining temperatures between 135° to 149°C. (275° to 300°F.).

4.2.4.6.2.3 Covered frame or screen suitable for drying specimen in room.

4.2.4.6.3 Reagents.

4.2.4.6.3.1 Stoddards solvent. Drycleaning solvent conforming to P-D-680.

4.2.4.6.3.2 Perchloroethylene. Tetrachlorethylene (perchloroethylene) technical grade conforming to O-T-236.

4.2.4.6.3.3 Drycleaning soap. Drycleaning soap made by dissolving 56 g. of caustic potash (KOH) in 100 ml. of water. This solution is poured slowly with constant stirring into a mixture of 340 g. of oleic acid, 400 ml. of Stoddard solvent, 100 ml. of tertiary butyl alcohol or an equal quantity of butyl cellosolve.

4.2.4.6.4 Procedure.

4.2.4.6.4.1 The specimen shall be placed in the stainless steel container with 150 ml. of perchlorethylene, 1 ml. of drycleaning soap and 100 stainless steel balls. The jar shall be sealed, clamped in the launderometer, and run at 80° ± 2°F. for 10 minutes at which time the solvent is drained.

4.2.4.6.4.2 Replace the solvent with 150 ml. Stoddard solvent and 1 ml. of drycleaning soap and 100 stainless steel balls and run 10 minutes at 80° ± 2°F. following the draining.

4.2.4.6.4.3 Replace the solvent with 150 ml. of perchlorethylene without drycleaning soap and with 100 stainless steel balls run for 10 minutes at 80° ± 2°F. Drain the solvent at the end of the ten minute cycle, remove specimen, blot thoroughly between paper towels or blotters, or extract centrifically to remove excess solvent and then air dry on covered frame or screen.

4.2.4.6.4.4 Pressing. When dry, the specimen shall be pressed as follows:

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4.2.4.6.4.4.1 Hand pressing. Cover with a damp muslin cloth weighing 4 to 4 1/2 ounces per square yard, previously saturated with water and wrung out to retain approximately 75 percent moisture by weight, and press with hand iron until cover cloth is dry.

4.2.4.6.4.4.2 Steam pressing. Lower the head of the machine and hold in contact with the cloth. During this period admit steam from the back of the press for a period of 5 to 10 seconds and maintain the head of the press down until specimen is dry.

4.2.4.6.5 Evaluation of color and legibility. Change in basic color of label or color loss (if applicable), or change in definition of print shall be considered in rating colorfastness to drycleaning. Evaluation shall be in accordance with 4.2.4.5 through 4.2.4.5.3.

5. PREPARATION FOR DELIVERY

5.1 Preservation. Preservation shall be level A or Commercial as specified (see 6.2).

5.1.1 Level A.

5.1.1.1 Size.

5.1.1.1.1 Sizes up to and including nine square inches. Five hundred labels, of one type and class only, shall be neatly stacked in a bundle and securely crosstied with cotton tape or twine, or crossbanded with elastic bands. A quantity of bundles of labels, of one type and class only, not exceeding a net weight of 10 pounds, shall be placed in an intermediate paperboard box as hereinafter specified.

5.1.1.1.2 Sizes over nine square inches. Two hundred labels, of one type and class only, shall be neatly stacked in a bundle and crosstied with cotton tape or twine or crossbanded with elastic bands. A quantity of bundles of labels, of one type and class only, not exceeding a net weight of 10 pounds, shall be placed in an intermediate paperboard box as hereinafter specified.

5.1.1.2 Tape rolls. Labels in the form of printed tape rolls, or tape rolls for in-house printing in quantity not exceeding 10 pounds shall be placed in an intermediate paperboard box as hereinafter specified.

5.1.1.3 Intermediate box. The intermediate box shall be a snug-fitting folding paperboard box conforming to variety 1, style III, type G, class 1 of PPP-B-566; or a setup paperboard box conforming to type I, variety 1, class A, style 3 or 4 of PPP-B-676. Thumb notch requirements shall be optional. The box closure shall be secured with 2-inch minimum width gummed paper tape conforming to type III, grade B of PPP-T-45 at the center of the length opening and extending across the bottom and up the sides.

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5.1.2 Commercial. Labels shall be preserved in accordance with MIL-STD-1188.

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

5.2.1 Level A packing. Labels of one type and class only, preserved as specified in 5.1, shall be packed in a snug-fitting fiberboard shipping container conforming to style RSC, grade V3s of PPP-B-636. Each shipping container shall be closed in accordance with method III, waterproofed in accordance with method V and reinforced as specified in the appendix of PPP-B-636, except that the inspection shall be in accordance with 4.2.3. The weight of contents of each shipping container shall not exceed 65 pounds.

5.2.2 Level B packing. Labels of one type and class only, preserved as specified in 5.1, shall be packed in a snug-fitting fiberboard shipping container conforming to style RSC, type CF, variety SW, grade 275 of PPP-B-636. Each shipping container shall be closed in accordance with method II as specified in the appendix of PPP-B-636, except that the inspection shall be in accordance with 4.2.3. The weight of contents of each shipping container shall not exceed 65 pounds.

5.2.2.1 Weather-resistant containers. When specified (see 6.2), the shipping container shall be a grade V3c, V3s or V4s fiberboard box fabricated in accordance with PPP-B-636 and closed in accordance with method III as specified in the appendix of PPP-B-636, except that the inspection shall be in accordance with 4.2.3.

5.2.3 Commercial packing. Labels, preserved as specified in 5.1, shall be packed in accordance with MIL-STD-1188.

5.3 Marking. Marking shall be in accordance with 5.3.1 or 5.3.2 as specified (see 6.2).

5.3.1 Civil agencies. In addition to any special marking required by the contract, intermediate packs and shipping containers shall be marked in accordance with FED-STD-123 or MIL-STD-1188, as applicable.

5.3.2 Military requirements. In addition to any special marking required by the contract, intermediate packs and shipping containers shall be marked in accordance with MIL-STD-129 or MIL-STD-1188, as applicable.

6. NOTES

6.1 Intended use. The labels covered by this specification are intended for use in items of clothing, tentage, equipage, and related items as specified for the applicable class (see 1.2 and 6.4).

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6.2 Ordering data. Purchasers should exercise any desired options offered herein and procurement documents should specify the following:

(a) Title, number, and date of this specification.
(b) Type and class required (see 1.2).
(c) When a label color other than white is required (see 3.2.3.1 and 3.2.4.4).
(d) Availability of standard sample (see 3.1 and 6.5).
(e) Information and illustrations to be printed on labels (when required) (see 3.3).
(f) Printing, color of printing, contents, and fastness, if other than specified (see 3.3.2 and 3.2.3.4 and 3.5).
(g) Contents, printing, and fastness of classes 7 and 9 labels (see 3.3.2.7, 3.3.2.9, 3.5.3 and 3.5.5).
(h) Contents, size of characters, and format of class 7 labels (see 3.3.2.7).
(i) Size required when applicable (see 3.4 and 6.4).
(j) Fastness properties of type III or IV, class 4 labels when used for leather gloves (see 3.5.1.3).
(k) Selection of applicable levels of preservation and packing (see 5.1 and 5.2).
(l) When weather resistant grade fiberboard shipping containers are required for level B packing (see 5.2.2.1).
(m) When the combination of classes 1, 2, 3, 14 and 15 is allowed (see 6.3).
(n) Types of labels and use (see 6.4).
(o) Special markings (see 6.4).
(p) Type marking required (see 5.3).

6.3 It is to be noted that the intent of this specification is to allow a suitable combination of classes 1, 2, 3, 14 and 15 labels when it is economically and structurally feasible. However, the end item specification or procurement document must state when a combining of these labels is allowed and the extent of the combination (see 6.2).

6.4 Types of labels and use. (Department of Defense only). It is Department of Defense policy to adhere as closely as possible to the following when procuring labels for specific use and when specifying the type of label to be utilized in an end item specification.

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a. All combat and utility clothing will utilize type V or type VI, classes 1, 2, 3, 14 and 15 labels with the exception of cotton shirts as noted in "c" below. Woven labels conforming to MIL-L-15040 may be utilized for size and instruction labels on dress items, but only where they are permanently visible and the use of another type label would adversely affect the appearance of the item.

b. All trousers will utilize the type V or type VI, classes 1, 2, 3, 14 and 15 labels.

c. Cotton shirts, gloves, and miscellaneous items, will utilize the types III, IV, V or VI labels (on shirts the size and stock number will be printed on the collar, and the identification label shall be printed on the left side of the tail).

d. All woolen items, synthetic, or blends of synthetics and knitted items shall utilize type V or type VI label or woven labels as noted above for dress items.

e. Hats and neckwear will utilize type V or type VI, class 4 labels, when possible.

f. Type IV labels shall be utilized for classes 5 and 8 labels.

g. Type V or type VI labels shall be utilized for classes 6 and 7 labels.

h. Special markings class 9 such as "U.S." on tentage and equipage will normally utilize the type IV label (see 6.2).

6.5 Standard sample. For access to standard sample, address the procuring office issuing the invitation for bid.

6.6 Adhesive Bylcanol AL-100-58, available from Oleo Oil and Chemical Corporation, Tranton Avenue and Williams Street, Philadelphia, PA 19150, has been found to adequately seal specimen edges. Materials giving the same degree of sealing of specimen without transfer are acceptable (see 4.2.4.2).

6.7 Metric equivalents. Metric equivalents, indicated in parentheses in section 3 of this document, are based on practices, conversion factors, and symbols specified in ASTM E 380 Standard for Metric Practice, and are for information only. In each instance, the value stated in US customary units shall be controlling.

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6.8 Recycled material. It is encouraged that recycled material be used when practical as long as it meets the requirements of the specification.

6.9 Supersession data. Types I and II labels and their requirements have been deleted. These labels have been replaced by type VI label. In end item specifications where type I or type II label is specified, the requirements for type VI label shall apply.

6.10 When level B packaging requirements are specified for civil agency procurements, the requirements in 5.1.1 shall apply.

Custodians:

Army - GL
Navy - NU
Air Force - 99

Review activities:

Army - MD, EA
Navy - MC
Air Force - 11
DLA - CT

User activities:

Navy - AS
Army - AR
Air Force - 45

Preparing activity:

Army - GL

Civil Agency Coordinating Activities:

GSA-FSS
HEW
VA-DMS
JUS-FPI

Project No. 8315-0286

U.S. GOVERNMENT PRINTING OFFICE : [illegible] - 311-147/11[illegible]

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