INCH-POUND MIL- DTL-32075 October 17, 2000 SUPERSEDING DDD-L-20F March 30, 1990

DETAIL SPECIFICATION

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

This General Services Administration has authorized the use of this Military Detail Specification in preference to DDD-L-20, for the use of all Federal agencies.

1. SCOPE

- 1.1 <u>Scope</u>. This specification covers the requirements for nine types of labels, utilized in fabricated textile, plastic coated, and leather items.
- 1.2 <u>Classification</u>. The labels will be of the following types and classes, as specified (see 6.2 and 6.5).

Type:

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 or nonwoven, 80/20 polyester/cellulose cloth, impregnated, acrylic coated, mildew-resistant printed

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Defense Supply Center Philadelphia, Clothing and Textiles Directorate, ATTN: DSCP-CRFD, 700 Robbins Avenue, Bldg 6D, Philadelphia, PA 19111-5094.

AMSC N/A FSC 8315

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

Type:	(cont'd)						
VII	_	Pressure-sensitive label, smooth finish white paper, rubber-based adhesive with high initial tack, basis weight 20 pounds, bar coded					
VIII	_	Tag, paper, standard bleach sulfate, basis weight 100 pounds, bar coded					
IX	_	Label, heat sealable, durable barcoded					
Class:							
1	— Identification label	for garments					
2	— Size label for garm	nents					
3	— Instruction label for	r garments					
4	— Combination ident	ification and size label for headwear, neckwear, and handwear					
5	 Identification label 	for equipage					
6	— Identification label for tentage						
7	— Instruction label for tentage						
8	 Identification label for tarpaulins 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 (durable)						
14	 Combination size, identification and instruction label for garments 						
15	 Combination identification and instruction label for garments 						
16	 Combination identification and special markings for equipage 						
17	— Bar coding label/tag for personal clothing items						
18	— Bar coding label for	or organizational items					

2 APPLICABLE DOCUMENTS

SPECIFICATIONS

Military Specifications:

MIL-PRF-680 — Degreasing Solvent MIL-L-15040 — Label Garment (Woven Rayon)

2.1 Government publications. Unless otherwise specified 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.

(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 20402-0001.)

(Single copies of this specification, other Federal specifications, and commercial item descriptions required by Services Administration Business Service Centers in Boston, MA; New York, NY; Philadelphia, PA; Washington, DC; Atlanta, GA; Chicago, IL; Kansas City, MO; Fort Worth, TX; Denver, CO; San Francisco, CA; Los Angeles, CA; and Seattle, WA.)

(Federal Government activities may obtain copies of Federal standardization documents and the Index of Federal Specifications, Standards, and Commercial Item Descriptions from established distribution points in their agencies.)

(Unless otherwise indicated, copies of the above specifications, standards, and handbooks are available from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

Federal Regulations:

Federal Trade Commission

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

(The Code of Federal Regulations (CFR) and the Federal Register (FR) are for sale on a subscription basis by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402-0001. When indicated, reprints of certain regulations may be obtained from the Federal agency responsible for issuance thereof.)

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 will apply.

American Association of Textile Chemists and Colorists (AATCC)

Technical Manual of the American Association of Textile Chemists and Colorists

Method 8	— Colorfastness to Crocking
Method 61	 Colorfastness to Washing, Domestic; and Laundering, Commercial: Accelerated
Method 111A	— Weather Resistance
Method 133	— Colorfastness to Heat and Hot Pressing

(Application for copies should be addressed to the American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, NC 27709—2215.)

American Society for Testing and Materials (ASTM)

D-1876	— Peel Resistance of Adhesives (T-Peel Test)
D-1922	 Propagation Tear Resistance of Plastic Film and Thin Sheeting by
	Pendulum Method
D-3951	 — Standard Practice for Commercial Packaging
D-3776	— Weight
D-751	 Blocking for Coated Fabrics
D-5034	— Breaking Strength
D-1974	— Fiberboard Boxes, Methods of Closing, Sealing and Reinforcing
D-1424	— Tearing Strength of Fabric by Failing-Pendulum Type (Elmendorf)
	Apparatus
D-6199	 Standard Practice for Quality of Wood Members of Containers and
	Pallets
D-3786	— Fabrics, Knitted Goods and Nonwoven, Diaphragm Bursting Strength
	Tester Method, Hydraulic Bursting Strength

(Applications for copies should be addressed to American Society For testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428).

Aim USA

BC1 — Uniform Symbology Specification Code 39

(Applications for copies should be addressed to AIM USA 634 Alpha Drive Pittsburgh, PA 15238-2802)

American Society For Quality Control

ASQC-Z1.4 — Sampling Procedures and Tables for Inspection by Attributes

(Applications for copies should be addressed to the American National Standards Institute, 11 42 street, New York, NY 10036)

3. REQUIREMENTS

- 3.1 <u>Samples</u>. Unless otherwise specified, the labels, tags, and markings will be equal to the standard sample with respect to legibility, quality of printing, colorfastness of printing, durability of finish, and where applicable, in the ability to accept writing.
- 3.2 <u>Materials</u>. It is encouraged that recycled material be used when practical as long as it meets the requirements of this specification.
- 3.2.1 Type III marking. Heat transfer (decalcomania) markings will be applied by a dry-heat transfer process. The initial print will be well defined, clearly legible, and will not show smearing, bleeding, or offsetting and will not show objectionable strike-through of the cloth to which applied. Unless otherwise specified, the printing will be black.
- 3.2.2 <u>Type IV marking</u>. Unless otherwise specified, type IV markings will be applied to the cloth by a black marking medium. The initial print will be well defined, clearly legible, and will not show smearing, bleeding, or offsetting and will not show objectionable strike-through of the cloth to which applied.
- 3.2.3 <u>Type V label</u>. Type V labels will be cotton, polyester, or polyester/cotton blend, coated on one side with heat sealable adhesive and will be printed.
- 3.2.3.1 <u>Cloth</u>. Unless otherwise specified (see 6.2), the label cloth will be white undyed cotton, polyester, or a blend of undyed cotton and polyester. The finished, heat-sealable, adhesive-coated cloth will weigh not less than 4.5 nor more than 10.0 ounces per square yard and will have a minimum of 80 ends per inch in the warp and 72 picks per inch in the filling when tested
- 3.2.3.2 Adhesive coating. The reverse side of the label will be coated with a heat sealable adhesive. The bond strength of the label after heat sealing will be a minimum of 20 pounds when tested in accordance with the method specified in 4.2.3. The bond strength will also be determined on samples subjected to accelerated laundering or dry cleaning tests specified in 4.2.3, as applicable. The labels for the tests will be heat sealed to materials specified in end item specifications. Heat sealing of samples for tests will be in accordance with the temperature, pressure, and time elements used in production applications of the adhesive being tested.
- 3.2.3.3 <u>Blocking</u>. The coated labels for types V, VI, and IX shall not block to an extent greater than represented by scale rating No. 2 when tested as specified in 4.2.3.

- 3.2.3.4 <u>Printing medium</u>. Unless otherwise specified (see 6.2), the color of the label printing medium will be black and will consist of suitable nontoxic dye(s) or pigment(s) in a medium that yields a permanent impression suitable for heat-sealing temperatures and later processing. The printing initial and after heat-sealing, will not show offsetting, smearing, bleeding, or discoloration.
- 3.2.4 <u>Type VI label</u>. The cloth for type VI label will be impregnated and coated with a permanent pigmented acrylic composition.
- 3.2.4.1 <u>Basic cloth</u>. The basic cloth will be a nonwoven material of either spunbonded polyester made from 4.0 denier (44 Tex) continuous filament white polyester fiber or 80/20 polyester/cellulose material. The cloth fibers will be randomly dispersed and bonded at filament junctions. The overall weight of the basic cloth will be not more than 2.2 ounces per square yard when tested as specified in 4.2.3.
- 3.2.4.2 <u>Coating</u>. The impregnation coating will be a pigmented acrylic or nitrocellulose coating composed of white pigments such as clay, chalk, titanium dioxide, or blane fixe, and affixed by an appropriate acrylic or nitrocellulose resin when tested as specified in 4.2.3. The coating composition will not contain leachable skin irritants or toxic materials. Substances that will support mildew growth will not be included. The finished impregnated labels will have a smooth matte surface and will be free from objectionable odors (see table II).
- 3.2.4.3 <u>Physical requirements</u>. The finished impregnated label will be as specified in table I when tested as specified in 4.2.3.

TABLE I. Physical requirements for Type VI finished label

	Breaking	Strength	Tearing st	rength	Bursting
Weight (lb.) minimum		imum	(lb. minimum		Strength
(oz .per sq. yd)	Machine	Transverse	Machine	Transverse	psi
Minimum	Direction	Direction	Direction	Direction	Minimum
3.2	15	10	300	250	50

- 3.2.4.4 <u>Color</u>. Unless otherwise specified (see 6.2), the color of the finished label will be bleached white.
- 3.2.4.5 <u>Printing medium</u>. Unless otherwise specified (see 6.2), the labels will be printed with a black marking medium. The initial printing will be legible and shall not show offsetting, smearing, or bleeding.
- 3.2.4.6 Blocking. Blocking for type VI labels will be as specified in 3.2.3.3.

- 3.2.5 <u>Type VII bar coding</u>. Unless otherwise specified, the paper for the pressure-sensitive labels will have a finish compatible with printing technology used. The adhesive will require no solvent, heat, or other preparation prior to application and it will adhere to the surfaces under high or low temperatures. Pressure-sensitive labels will be placed on the outside of individually packaged clothing items. Bar coded labels will be clearly legible and readable by a scanner.
- 3.2.6 Type VIII bar coding. The paper used for the tags will have a smooth finish to accept thermal transfer and direct thermal printing. Bar coded tags will have a hole with its center no more than 1/2 inch from the tying end. The hole will be centered and have a diameter of $5/32 \pm 1/32$ inch, and it will be attached to each clothing item by a fastener. Bar coded tags will be clearly legible and readable by a scanner.
- 3.2.7 Type IX durable bar coding label. The material used for the durable bar coded label will be white, coated polyester, clear cross-linked polyurethane resin with pigmented layers or any other material that will meet the requirements in this specification for type IX. The finished printed bar coded label will be heat sealed to materials specified in the end item specification. Heat sealing will be done at conditions compatible with the fiber content and must remain permanently bonded to the garment and be resistant to removal by laundering, dry cleaning, and normal wear.
- 3.2.7.1 Blocking. Blocking for type IX labels will be specified in 3.2.3.3.
- 3.2.7.2 <u>Printing medium</u>. The color of the label printing medium will be black and the printing medium will consist of suitable nontoxic ink in a medium that yields a permanent impression suitable for heat-sealing temperatures and later processing. The printing, initial and after heat-sealing, will not show off-setting, smearing, bleeding, or discoloration and will maintain a readable bar code symbol in compliance with AIM-BC1 for useful life of the garment.
- 3.3 <u>Printing (see 6.2)</u>.
- 3.3.1 <u>Print type</u>. All classes of labels with the exception of classes 17 and 18 will be printed with Gothic sanserif type. Italic or script type shall not be used. All printing will be in capitals except instruction labels, which will be as specified in 3.3.2.3.
- 3.3.2 <u>Print format</u>. Unless otherwise specified (see 6.2), all classes of labels (1-16) will be printed with the contents, and in the format and size of print specified below. For classes 17 and 18, the bar code density will be medium to high and in accordance with AMI-BC1. Unless otherwise specified, the space between lines will be not less than the following for the size specified (exclusive of space resulting from type shoulder):

6-point through 16-point type sizes inclusive - space 2 points

18-point through 36-point type sizes inclusive - space 4 points

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

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

3.3.2.1 <u>Class 1</u>. The contents, size of characters of inscription, and the format of class 1 labels will be as follows (see 6.5):

Item description

- minimum 10 point (approximately 1/8 inch)

Contract number

- minimum 8 point (approximately 3/32 inch)

Fur, Wool or Fiber Products Act information, as applicable

- minimum 8 point (approximately 3/32 inch)

Contractor's name (Bottom of label)

- maximum 8 point (approximately 3/32 inch)

On items where class 2 labels are not specified, the following will be included on class 1 labels:

Stock number

- minimum 8 point (approximately 3/32 inch)

The fur, wool, or fiber content will be included in the item description whenever possible.

3.3.2.2 <u>Class 2</u>. The contents, size of characters of the inscription, and the format of class 2 labels will be as follows when the size is spelled out (see 6.5):

Size

- minimum 10 point (approximately 1/8 inch)

Stock number

- minimum 8 point (approximately 3/32 inch)

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

3.3.2.3 <u>Class 3</u>. The contents, size of characters of the inscription, and the format of class 3 labels, will be as follows (see 6.5):

Item description <u>1/</u>

- minimum 10 point (approximately 1/8 inch)

Body of instructions

- minimum 8 point (approximately 3/32 inch)

Warnings or special notations

- minimum 10 point (approximately 1/8 inch)
- $\underline{1}$ / When the class 3 label is used in combination with a class 1 label, the item description will be omitted.

The content of the instruction labels will be as specified in the applicable specification or procurement document. The item description and warning or special notations will be printed in capitals. The body of the instructions will 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 <u>Class 4</u>. The contents, size of characters of the inscription, and format of class 4 labels will be as follows (see 6.5):

Item description	S
Contract number	I
National stock number	Z
Fur, Wool or Fiber Products Act information as applicable	Е
Contractor's name (bottom of label)	

The item description and the size, when spelled out, will be in characters not less than 8 point (approximately 3/32 inch) 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) in height. When the size is expressed numerically, the height of the numerals will be a minimum of 18 point (approximately 1/4 inch) in height with fractions of comparable size. The fur, wool, or fiber content will be included in the item description wherever possible.

3.3.2.5 <u>Class 5</u>. The contents, size of characters of the inscription, and the format of class 5 labels will be as follows (see 6.5):

Item description

- minimum of 18 point (approximately 1/4 inch)

Contract number

- minimum of 18 point (approximately 1/4 inch)

National stock number

- minimum of 18 point (approximately 1/4 inch)

Size (when specified)

- minimum of 18 point (approximately 1/4 inch)

Contractor's name (bottom of label)

- maximum of 18 point (approximately 1/4 inch)
- 3.3.2.6 <u>Class 6</u>. The contents, size of characters of the inscription, and the format of class 6 labels will be as specified for class 5 labels (see 6.5).
- 3.3.2.7 <u>Class 7</u>. The contents, size of characters, and the format of class 7 labels will be as specified in the applicable procurement document or end item specification (see 6.2 and 6.5).
- 3.3.2.7 <u>Class 8</u>. The contents and the format of class 8 labels will be as specified for class 5 labels. The size of characters for the size and class (when applicable) will be a minimum of 1-1/2 inch in height. The item identification, contract number, and stock number will be in characters a minimum of 1/2 inch in height (see 6.5).
- 3.3.2.9 <u>Class 9</u>. The contents, size of marking, and format of class 9 labels will be as specified in the applicable procurement document or end item specification (see 6.2 and 6.5).
- 3.3.2.10 <u>Class 10</u>. The contents, size of characters of the inscription, and the format of class 10 labels will be as follows:

Name -

- minimum 10 point (approximately 1/8 inch)

Service No.

- minimum 10 point (approximately 1/8 inch)

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

3.3.2.11 <u>Class 11</u>. The contents, size of characters of the inscription and format of class 11 labels will be as specified in the applicable procurement document or end item specification. The contractor's name will be included at bottom of label.

3.3.2.12 <u>Class 12</u>. The contents, size of characters of the inscription and the format of class 12 labels will be as follows:

Item description

- minimum of 10 point (approximately 1/8 inch)

Contract number

- minimum of 10 point (approximately 1/8 inch)

National stock number

- minimum of 10 point (approximately 1/8 inch)

Size (when specified)

- minimum of 10 point (approximately 1/8 inch)

Contractor's name (bottom of label)

- maximum of 10 point (approximately 1/8 inch)

3.3.2.13 <u>Class 13</u>. The contents, size of characters of the inscription, and the format of class 13 labels will be as follows:

Item description $\underline{1}$ /

- minimum 10 point (approximately 1/8 inch)

Body of instructions

- minimum 8 point (approximately 3/32 inch)

Warnings or special notations

- minimum 10 point (approximately 1/8-inch)
- $\underline{1}$ / When the class 13 label is used in combination with a class 12 label, the item description will be omitted.
- 3.3.2.14 <u>Class 14</u>. The identification label (class 1), size label (class 2), and instruction label (class 3) will be combined into one label (see 6.4). The three labels will 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 will be combined, and the contents placed above the instruction label. A space of 1/4 inch minimum shall be maintained between the labels. In addition, a solid line 1/16 inch minimum width will extend across the entire label approximately midway between the 1/4 inch blank space.

- 3.3.2.15 <u>Class 15</u>. The identification label (class 1) and instruction label (class 3) will be combined into one label (see 6.4). The two labels will be printed as one continuous label with the identification label first and instruction label placed below. A space of 1/4 inch minimum will be maintained between the labels. A solid line 1/16 inch minimum width will extend across the entire label approximately midway between the 1/4 inch blank space.
- 3.3.2.16 <u>Class 16</u>. The identification label (class 5) and special markings (class 9) will be combined into one label (see 6.4). The two labels will be printed as one continuous label with the identification label first and special markings placed below. A space of 1/4 inch minimum will be maintained between the labels. A solid line 1/16 inch minimum width will extend across the entire label approximately midway between the 1/4 inch blank space.
- 3.3.2.17 <u>Classes 17 and 18</u>. The bar coding element for personal and organizational clothing items will be a 13 digit national stock number (NSN). The 3 of 9 bar code type will be used with a medium to high code density and will be human-readable interpretation (HRI).
- 3.3.2.18 <u>Fur, fiber, and wool products labeling acts</u>. It is the responsibility of the contractor to ensure complete compliance with the Rules and Regulations under the Fur Products Labeling Act, 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 contractor's registration number will appear on the identification label.
- 3.4 <u>Label size</u>. Unless otherwise specified (see 6.2), the size of the labels will be at the option of the contractor governed by the contents and size of characters of the inscription, space between lines, and, as applicable, blank margins on sides of label.
- 3.4.1 <u>Type VI labels</u>. Type VI labels will be provided with a $1/4 \pm 1/16$ inch blank margin on all four sides for sewing purposes.
- 3.4.2 <u>Type V</u>. Type V labels will require only a 1/8 inch minimum blank margin on all four sides, as sewing is not required.
- 3.5 Fastness of printing.
- 3.5.1 <u>Classes 1, 2, 3, 4, 14, 15 and 18 labels</u>. Colorfastness for classes 1, 2, 3, 4, 14, 15 and 18 labels will be as specified in the applicable end item specification or procurement document (see 3.5.1.3). In addition for class 18 labels, the barcode parameters will be in compliance with AIM-BC1. When colorfastness to laundering or dry cleaning is specified, the provisions in 3.5.1.1 or 3.5.1.2 will apply.

- 3.5.1.1 <u>Colorfastness to laundering</u>. When specified, classes 1, 2, 3, 4, 14, 15 and 18 labels will show colorfastness to accelerated laundering equal to or better than the standard sample when tested as specified in 4.2.3. In addition for class 18 labels, the barcode parameters will be in compliance with AIM-BC1. When no standard sample is available, the labels will be clearly legible and will have a rating of 3.5 min for colorfastness to accelerated laundering.
- 3.5.1.2 <u>Fastness to dry cleaning</u>. When specified, classes 1, 2, 3, 4, 14, 15 and 18 labels will show colorfastness to accelerated dry cleaning equal to or better than the standard sample when tested as specified in 4.2.3. In addition for class 18 labels, the barcode parameters will be in compliance with AIM-BC1. When no standard sample is available, the labels will be clearly legible and will have a rating of 3.5 min for colorfastness to accelerated dry cleaning.
- 3.5.1.3 <u>Fastness to crocking</u>. Classes 1, 2, 3, 14, 15, and 18 labels will have rating of 3.5 min for fastness to crocking (wet and dry) when tested as specified in 4.2.3.
- 3.5.1.4 <u>Types III, IV, V, and IX classes 1, 2, 3, 4, 14, 15, and 18 labels</u>. The test specified for fastness of printing (see 3.5.1) will be performed on labels printed on samples of the same material from 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 will show colorfastness equal to or better than the standard sample when subjected to dry and wet heat (hot pressing) 300°F to 325°F test specified in 4.2.3.
- 3.5.1.5 <u>Fraying</u>. There will be no fraying on edges of type V labels after laundering or after dry cleaning cycles specified in 3.5.1.1 and 3.5.1.2, respectively.
- 3.5.1.6 <u>Peeling</u>. There will be no peeling on the edges of type IX labels after laundering or after cleaning cycles specified in 3.5.1.1 and 3.5.1.2, respectively.
- 3.5.2 <u>Classes 5 and 6 labels</u>. Classes 5 and 6 labels will be clearly legible after subjection to the accelerated laundering procedure specified in 4.2.3.
- 3.5.3 <u>Class 7 labels</u>. Class 7 labels will be clearly legible and shall show colorfastness to accelerated laundering equal to or better than, the standard sample when tested as specified in 4.2.3. When no standard sample is available, the class 7 labels will be clearly legible and will show "good" colorfastness after subjection to accelerated laundering when tested as specified in 4.2.3 (see 6.2).
- 3.5.4 <u>Class 8 labels</u>. Class 8 labels will be clearly legible after subjection to accelerated weathering when tested as specified in 4.2.3.
- 3.5.5 <u>Class 9 labels</u>. The colorfastness properties of the class 9 labels will be as specified in the applicable end item specification or procurement document. When requirements for any of the following characteristics are specified, conformance will be determined as specified in 4.2.3 (see 6.2).

Colorfastness to laundering transference.

Colorfastness to dry and wet heat (hot pressing).

Colorfastness to accelerated laundering.

Colorfastness to accelerated dry cleaning.

Colorfastness to accelerated weathering.

Colorfastness to laundering transference (wool method).

- 3.5.6 <u>Class 10 labels</u>. Class 10 labels will show colorfastness properties as specified for class 1 labels and, in addition, will be equal to or better than the standard sample when subjected to the writing test specified in 4.2.3. When a combination of Classes 1 and 10 labels is specified (see 3.3.2.10), the fastness of the combined label will be as specified for Class 10 labels.
- 3.5.7 <u>Class 11 labels</u>. Class 11 labels will be clearly legible after subjection to the accelerated laundering procedure specified in 4.2.3.
- 3.5.8 <u>Classes 12 and 13 labels</u>. Classes 12 and 13 printed labels will be well defined and clearly legible after being tested for crocking, both wet and dry, when tested as specified in 4.2.3. When specified, the information will be marked directly on the coated cloth.
- 3.6 <u>Workmanship</u>. The end item will conform to the quality of product established by this specification and the occurrence of defects will not exceed the applicable acceptable quality levels.

4. VERIFICATION

- 4.1 Classification of inspection.
 - a. Qualification inspection (see 4.2)
 - b. Conformance inspection (see 4.3)
- 4.2 <u>Qualification inspection</u>. When certificates of compliance are submitted, the Government reserves the right to inspect such items to determine the validity of the certification.
- 4.3 <u>Conformance inspection</u>. Unless otherwise specified, sampling for inspection will be performed in accordance with ASQC-Z1.4.
- 4.3.1 <u>Component and material inspection</u>. In accordance with 4.1, components and materials will be inspected in accordance with all the requirements of referenced documents unless otherwise excluded, amended, modified, or qualified in this specification or applicable purchase document.

4.3.2 <u>End item visual examination</u>. The end items will be examined for the defects listed in table II. The lot size will be expressed in units of labels. The sample unit will be one label. The inspection level will be II and the acceptable quality level (AQL), expressed in terms of defects per hundred units, will be as specified in the contract or purchase order.

TABLE II. End item visual defects

Examine	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
Labels, printing (all types)	Spacing between lines less than specified
cont'd	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
	Hole, cut, tear, or break
	Abrasion or rub mark resulting in
	damage to fibers $\underline{1}$ /
	Crease or wrinkle, hard embedded or lump $\underline{1}$ /
	Spots or stains clearly noticeable <u>1</u>
	Margin for sewing purposes less than
	3/16 inch or more than 5/16 inch
Labels	
(type V)	Margin less than 1/8 in on all sides
Label/tags (type VII	Bar code not readable by scanner
Type VIII and type IX)	HRI omitted or eligible
- -	Bar code type not as specified
	Code density not as specified

Fraying, peeling Fraying or peeling on edges after laundering (type V and type IX) or after dry cleaning cycles

4.3.4 <u>End item testing</u>. The end items will be tested for the characteristics listed in table III. The methods of testing specified in ASTM D3786, wherever applicable, and as listed in table III, will be followed. The physical and chemical values specified in section 3 apply to the average result of the determinations made on a sample unit for test purposes as specified in the applicable test methods. The lot size will be expressed in units of labels. The sample unit will be as follows for the specified type and criteria for sample size follows:

<u>Type</u>	Sample unit
III and IV	15 labels
V	300 square inches (or equivalent in cut labels)
VI	600 square inches (or equivalent in cut labels)

The sample size will be as follows:

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

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

TABLE III. End item tests

Characteristics	Requirement paragraph	Number of determinations per sample unit	Test method	Results reported as
Yarns per inch (type V)				
Warp	3.2.3.1		ASTM-D-3775	
Filling	3.2.3.1		ASTM-D-3775	
Basic material (type VI):	3.2.4.1		<u>1</u> /	

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

TABLE III. End item tests – cont'd

Characteristics	Requirement paragraph	Number of determinations per sample unit	Test method	Results reported as
Breaking	3.2.4.3		ASTM-D-5034	
Strength	3.2.4.3		ASTM-D-3034	
Tearing Strength				
	3.2.4.3		ASTM-D-1424 <u>2</u> /	
Bursting				
strength	3.2.4.3		ASTM D3787	
Blocking				
(type V, VI				
and IX)	3.2.3.3 and		ASTM-D-751 <u>3</u> /	Does not
	3.2.4.6			exceed No. 3
Finished weight (oz./sq. yd)				
(type V and	3.2.3.3 and		ASTM-D-3776	
VI)	3.2.4.3		Option C	
Coating				
(types V, VI and IX)	3.2.3.2 and			
and ix)	3.2.4.2		<u>1</u> /	
	3.2.4.2		1/	
Writing Test				
(Class 10	3.5.6 and		AATCC-61	min 4.0
and combination Classes 1 and 10)	4.3.1	1	Test 3A	
Fastness of Printing	3.5		AATCC-61 Test 4A	min 4.0

$TABLE \ III. \ \underline{End \ item \ tests} - cont'd$

Characteristics	Requirement paragraph		Number of determinations per sample unit	Test method	Results reported as
Colorfastness to laundering 3.5.1. transference	1	1		AATCC-61 Test 3A	min 4.0
Colorfastness to dry and wet heat (hot pressing	3.5.1.4		1	AATCC-133	min 4.0
Colorfastness to accelerated laundering	3.5.3		(20 cycles for IX only) 10	AATCC 61 Test 4A	Pass or fail
Colorfastness to accelerated dry cleaning	3.5.1.2		(5 cycles for ty IX only)	AATCC 132	
Colorfastness to accelerated weathering	3.5.4		1	AATCC-111A <u>4</u> /	Pass or fail
Colorfastness to laundering transference (wool)			1	AATCC-6	Pass or fail
Colorfastness to crocking	3.5.1.3 and 3.5.8			AATCC 8	8

TABLE III. End item tests – cont'd

Characteristics	Requirement paragraph	Number of determinations per sample unit	Test method	Results reported as
Bond strength (type V)	3.2.3.2	1	ASTM D-1876 (modified) <u>5</u> /	Pass or fail
Fraying (type V)	3.5.1.5	1	Visual	Pass or fail
Peeling (type IX)	3.5.1.6	1	Visual	Pass or fail

- $\underline{1}$ / A certificate of compliance is required and will be acceptable for the stated requirement.
- 2/ Except that the constant radius test specimen of ASTM-D-1922 shall be used.
- 3/ ASTM-D-751 will be followed except as follows:
- a. The test specimen will 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 will 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 will be trimmed where required to the 4-1/2 by 4-1/2 inch dimensions.
- 4/ The time of exposure will be 100 standard hours.
- 5/ 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.

4.3.5 <u>Packaging examination</u>. The fully packaged end items will be examined for the defects listed below. The lot size will be expressed in units of shipping containers. The sample unit will be one shipping container fully packaged. The inspection level will be II in accordance with ASQC/ANZ1.4 and the AQL, expressed in terms of defects per hundred units, will be specified in the contract or purchase order.

Examine Defect

Marking (exterior Omitted; incorrect; illegible; of improper size, location, sequence,

and interior) or method of application

Materials Any component missing, damaged, or not as specified

Workmanship Inadequate application of components, such as incomplete sealing

or closure of flap, improper taping, loose strapping, or inadequate

stapling.

Bulged or distorted container

Content Weight per container is more than required

Weight per intermediate container is more

than specified

Bundles Consist of more than one type or class

4.3.6 <u>Palletization examination</u>. The fully packaged and palletized end items will be examined for the defects listed below. The lot size will be expressed in units of palletized unit loads. The sample unit will be one palletized unit load, fully packaged. The inspection level will be S-1 and the AQL, expressed in terms of defects per hundred units, will be specified in the contract or purchase order.

<u>Examine</u> <u>Defect</u>

Finished dimensions Length, width, or height exceeds,

specified maximum requirement

Palletization Pallet pattern not as specified

Interlocking of loads not as specified,

Load not bonded as specified

Weight Exceeds maximum load limits

Marking Omitted; incorrect; illegible; of improper

size, location, sequence, or method of application

4.4 Methods of inspection.

- 4.4.1 Writing test. One test specimen will be subjected to the laundering transference procedure (AATCC-61 Test 3A) as specified in 4.2.3 and another in the state as received will be printed, by pen, with a commercial-grade indelible black ink. The printing on the unlaundered and the laundered test specimens will be compared with the printing on the standard sample under the same conditions of test and will show no more skipping, smudging, or blotting than the standard sample.
- 4.4.2 <u>Test specimens</u>. Test specimens for laundering, except for types III, IV, IV and IX (heat sealed), VII, and VIII labels, will be prepared in accordance with requirements of AATCC 61 Test 4A. Test specimens for types III and IV labels will be pinked along each edge. In addition, a thin ribbon of adhesive, preferably a latex acrylic type will be applied to each pinked edge. Test specimens for type V labels will be prepared in accordance with ASTM D 1876 (modified).
- 4.4.3 <u>Colorfastness to laundering</u>. Colorfastness to laundering will be not less than grade 3.0 when evaluated in accordance with color transference requirements of AATCC 61, Test 4A, and the visual evaluation of 4.3.5 through 4.3.5.4.
- 4.4.4 <u>Bond strength of type V label after laundering</u>. Bond strength of type V labels after laundering will 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 will be heated.
- 4.4.5 <u>Evaluation of color and legibility</u>. Change in basic color of label or color loss, if applicable, or change in definition of print, will be considered in rating colorfastness to laundering (see 4.3.3). Color transference is also applicable to laundered samples.
- 4.4.5.1 <u>Comparison</u>. The comparison will be made with the test specimen and the standard or comparison sample, which was tested in a similar manner. The comparison will be made at normal reading distance under average north-sky daylight or equivalent light in the standard manner.
- 4.4.5.2 <u>Standard of comparison established</u>. When a standard of comparison has been established, the test specimen will 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

- 4.4.5.3 <u>Standard of comparison not established</u>. When no standard sample for comparison has been established, unless otherwise specified, the tested specimen will be rated as to definition and legibility of print at a normal reading distance. Specimens will 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
- 4.4.5.4 Evaluation of fraying. Fraying for the type V label will meet the criteria as specified in 3.5.1.5.
- 4.4.5.5 Evaluation of peeling. Peeling for type IX label will meet the criteria specified in 3.5.1.6.
- 4.4.6 Fastness to dry cleaning test.
- 4.4.6.1 <u>Test specimen (except types V, VII, VIII and IX)</u>. The test specimen will consist of a number of rectangles of labels weighing a total of 4.5 grams \pm 0.5 gram, each unit measuring approximately 2 by 4 inches, will be lap stitched together, each sample faced in the same plane. Labels larger than 2 by 4 inches will be cut to conform to the specified unit size.
- 4.4.6.1.2 <u>Test specimen (type V and IX label)</u>. Test specimens for type V labels will be prepared in accordance with ASTM D 1876. Type V labels will also be tested for bond strength after dry cleaning. Preparation of dry cleaned specimens for this test will be as cited in 4.3.4 for laundered type V labels. The test specimens for type IX labels are a 2-inch by 4 inch test sample (these labels have been previously heat sealed to fabric).
- 4.4.6.2 Apparatus.
- 4.4.6.2.1 Launderometer of similar machine as described in AATCC 61 Test 4A
- 4.4.6.2.2 <u>Pressing equipment</u>.
- 4.4.6.2.2.1 <u>Steam pressing</u>. Flat be press at temperature of 275° to 300°F; hot head or polished metal top for flat fabrics; cloth top press for rough crepes.
- 4.4.6.2.2.2 <u>Hand pressing</u>. A hand iron weighing approximately 2 to 3 pounds capable of maintaining temperatures between 275°F and 300°F.
- 4.4.6.2.3 Drying rack. Covered frame or screen suitable for drying specimen in the room.
- 4.4.6.3 Reagents.

- 4.4.6.3.1 Stoddards solvent. Degreasing Solvent conforming to MIL-PRF-680
- 4.4.6.3.2 <u>Perchloroethylene</u>. Tetrachloroethylene (perchloroethylene) technical grade conforming to MIL-PRF-680.
- 4.4.6.3.3 <u>Dry cleaning soap</u>. Dry cleaning soap made by dissolving 56 grams of caustic potash (KOH) in 100 mL of water will be poured slowly with constant stirring into a mixture of 340 grams of oleic acid, 400 mL of Stoddard solvent, 100 mL of tertiary butyl alcohol, or an equal quantity of butyl cellosolve.
- 4.4.6.4 <u>Procedure</u>. Place the specimen in the stainless steel container with 150 mL of perchloroethylene, 1 mL of dry cleaning soap, and 100 stainless steel balls. Seal the jar, clamp in the launderometer, and run at $80^{\circ} \pm 2^{\circ}$ F for 10 minutes, at which time the solvent is drained. Replace the solvent with 150 mL Stoddard solvent, 1 mL of dry cleaning soap, and 100 stainless steel balls and run 10 minutes at $80^{\circ} \pm 2^{\circ}$ F following the draining. Replace the solvent with 150 mL of perchloroethylene without dry cleaning soap and with 100 stainless steel balls and run for 10 minutes at $80^{\circ} \pm 2^{\circ}$ F. Drain the solvent at the end of the 10 minute cycle, remove specimen, blot thoroughly between paper towels or blotters, or extract centrifugally to remove excess solvent, and then air dry on covered frame or screen. When dry, the specimen will be pressed using the method specified in 4.3.6.4.1 or 4.3.6.4.2.
- 4.4.6.4.1 <u>Hand pressing</u>. 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.
- 4,4.6.4.2 <u>Steam pressing</u>. 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 hold down the head of the press until specimen is dry.
- 4.4.6.5 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 dry cleaning. Evaluation will be in accordance with 4.3.5 through 4.3.5.3.

5. PACKAGING

5.1 <u>Packaging</u>. For acquisition purposes, the packaging requirements will be specified in the contract or purchase order.

6. NOTES:

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

- 6.1 <u>Intended use</u>. The labels are intended for use in items of clothing, tentage, equipage, and related items as specified for the applicable class (see 1.2 and 6.5).
- 6.2 <u>Acquisition requirements</u>. Acquisition documents must specify the following:
- a. Title, number, and date of this specification.
- b. Type, class, and size required (see 1.2).
- c. Bar coding label, unless otherwise specified (see 1.2).
- d. When a label color other than white is required (see 3.2.3.1 and 3.2.4.4).
- e. Printing, color of printing, contents, and fastness, if other than specified (see 3.2.3.4, 3.3.2, and 3.5).
- f. Information and illustrations to be printed on labels, when required, (see 3.3).
- g. Contents, size of characters, format, and fastness of class 7 labels (see 3.3.2.7 and 3.5.3).
- h. Contents, size of marking, format, and fastness of class 9 labels (see 3.3.2.9 and 3.5.5).
- 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 3.5.1.4).
- k. Levels of preservation and packing (see 5.1 and 5.2).
- 1. Type and class of unit load required (see 5.2.1).
- m. When weather—resistant grade fiberboard shipping containers are required for level B packing (see 5.2.2.1).
- n. Type marking required (see 5.4).
- o. When the combination of classes is allowed (see 6.4).
- p. Type of labels and use (see 6.5).
- q. Special markings (see 6.5).
- 6.3 <u>Sample</u>. For access to samples, address the contracting activity issuing the invitation for bids or request for proposal.
- 6.4 <u>Combination of classes on labels</u>. 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 (or 5, 9, and 16) 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).
- 6.5 Type 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 used in an end item specification.
- 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).
- i. Type VII or type VIII labels shall be utilized for class 17 labels.
- j. Type IX labels shall be utilized for class 18 labels.
- 6.6 Subject term (key word) listing.

Classification Identification Marker Tag

MILITARY INTERESTS:

CIVIL AGENCY COORDINATING ACTIVITIES:

Custodians		GSA - FSS
Army	- GL	JUS - FF1
Navy	- NU	VA - OSS
Air Ford	e - 11.6	HHS - DRDS

Review Activities

PREPARING ACTIVITY:

Army - AR, MD	DLA - CT
Navy - CG, MC	
Air Force – 82	(Project 8315-0409)

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

- 1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
- 2. The submitter of this form must complete blocks 4, 5, 6, and 7, and send to preparing activity.

1. DOCUMENT NUMBER

MIL-DTL-32075

3. The preparing activity must provide a reply within 30 days from receipt of the form.

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a. NAME (Last, First, Middle Initial)	b. ORGANIZATION	b. ORGANIZATION		
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