INCH-POUND MIL-DTL-32075A 01 October 2020 SUPERSEDING MIL-DTL-32075 17 October 2000

DETAIL SPECIFICATION

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

This document is approved for use by all Departments and Agencies of the Department of Defense (DoD).

1. SCOPE

1.1 <u>Scope</u>. This specification covers the requirements for labeling clothing, equipage, and tentage, (general use) labels.

1.2 <u>Classification</u>. This specification covers the following types and classes.

1.2.1 <u>Types</u>.

<u>1 ypcs</u> .	
Type I	- Deleted
Type II	- Deleted
Type III	- Marking, heat transfer
Type IV	- Marking, direct printing, stamping, or stenciling
Type V	- Label, cloth, cotton, polyester or polyester/cotton blend; heat sealable, adhesive coated, printed
Type VI	- Label, nonwoven, spunbonded polyester cloth or nonwoven, 80/20 percent polyester/cellulose cloth, impregnated, acrylic coated, mildew-resistant printed
Type VII	- Pressure-sensitive label, smooth finish white paper, rubber-based adhesive with high initial tack, basis weight 20 pounds, bar coded
Type VIII	- Tag, paper, standard bleach sulfate, basis weight 100 pounds, bar coded
Type IX	- Label, heat sealable, durable bar coded

Comments, suggestions, or questions on this document should be addressed: Attn: DLA Troop Support, 700 Robbins Avenue, Philadelphia, PA 19111-5096. Since contact information can change, verify the currency of the address information using Acquisition Streamlining and Standardization Information System (ASSIST) online database <u>https://assist.dla.mil</u>.

AMSC N/A

FSC 8315

DISTRIBUTION STATEMENT A. Approved for public release. Distribution is unlimited.

1.2.2 Classes.

Class 1	- Identification label for garments
Class 2	- Size label for garments
Class 3	- Instruction label for garments
Class 4	- Combination identification and size label for headwear, neckwear, and
	handwear
Class 5	- Identification label for equipage
Class 6	- Identification label for tentage
Class 7	- Instruction label for tentage
Class 8	- Identification label for tarpaulins and covers
Class 9	- Special markings
Class 10	- Personal identification label
Class 11	- Identification label for aerial delivery items
Class 12	- Identification label for coated items
Class 13	- Instruction label for coated items (durable)
Class 14	- Combination size, identification and instruction label for garments
Class 15	- Combination identification and instruction label for garments
Class 16	- Combination identification and special markings for equipage
Class 17	- Bar coding label/tag for personal clothing items
Class 18	- Bar coding label for organizational items

2. APPLICABLE DOCUMENTS

2.1 <u>General</u>. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3 and 4 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 <u>Specifications, standards, and handbooks</u>. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-L-15040 - Label Garment (Woven Rayon)

(Copies of this document are available online at https://quicksearch.dla.mil.)

2.2.2 <u>Other Government documents, drawings, and publications</u>. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation or contract.

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

(Copies of these documents are available online at https://www.ftc.gov.)

2.3 <u>Non-Government publications</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC)

AATCC EP1	- Evaluation Procedure for Gray Scale for Color Change
AATCC EP8	- Evaluation Procedure for AATCC 9-Step Chromatic Transference
	Scale
AATCC TM8	- Test Method for Colorfastness to Crocking: Crockmeter
AATCC TM20	- Test Method for Fiber Analysis: Qualitative
AATCC TM61	- Test Method for Colorfastness to Laundering: Accelerated
AATCC TM111	- Test Method for Weather Resistance of Textiles: Exposure to
	Daylight and Weather
AATCC TM132	- Test Method for Colorfastness to Drycleaning
AATCC TM133	- Test Method for Colorfastness to Heat: Hot Pressing

(Copies of these documents are available online at https://www.aatcc.org.)

AMERICAN SOCIETY FOR QUALITY (ASQ)

ASQ/ANSI Z1.4 - Sampling Procedures and Tables for Inspection by Attributes

(Copies of this document are available online at <u>https://asq.org.</u>)

ASTM INTERNATIONAL

ASTM D751	- Standard Test Method for Coated Fabrics
ASTM D1424	- Standard Test Method for Tearing Strength of Fabrics by
	Falling-Pendulum (Elmendorf-Type) Apparatus
ASTM D1876	- Standard Test Method for Peel Resistance of Adhesives
	(T-Peel Test)
ASTM D1907/D1907M	- Standard Test Method for Linear Density of Yarn
	(Yarn Number) by Skein Method
ASTM D1922	- Standard Test Method for Propagation Tear Resistance of Plastic
	Film and Thin Sheeting by Pendulum Method

ASTM D3775	- Standard Test Method for End (Warp) and Pick (Filling) Count of Woven Fabrics
ASTM D3776/D3776M	- Standard Test Methods for Mass Per Unit Area (Weight) of Fabric
ASTM D3787	 Standard Test Method for Bursting Strength of Textiles-Constant Rate - of - Traverse (CRT) Ball Burst Test
ASTM D5034	 Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test)

(Copies of these documents are available online at https://www.astm.org.)

INFORMA HEALTHCARE

Repeat Insult Patch Test - Modified Draize Procedure – Principles and Methods of Toxicology, A Wallace Hayes (editor).

(Copies of this document are available online at https://www.crcpress.com.)

2.4 <u>Order of precedence</u>. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations, unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 First article. N/A

3.2 <u>Conformance inspection</u>. When specified, a sample shall be subjected to inspection in accordance with 4.3.

3.3 <u>Standard sample</u>. Unless otherwise indicated, the finished labels, tags, and markings shall match the standard sample for legibility, quality of printing, colorfastness of printing, durability of finish, and the ability to accept printing and shall be equal to or better than the standard sample with respect to all characteristics for which the standard sample is referenced (see 6.3).

3.4 <u>Recycled, recovered, environmentally preferable, or biobased materials</u>. Recycled, recovered, environmentally preferable, or biobased materials should be used to the maximum extent possible, provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs.

3.5 Materials.

3.5.1 <u>Type III marking (heat transfer)</u>. Heat transfer markings shall be applied to the cloth by a dry-heat transfer process. The printing shall be well defined, clearly legible, and shall not

show smearing, bleeding, or offsetting. The printing shall also not show objectionable strikethrough of the cloth to which is applied, when visually examined for defects as specified in 4.4.

3.5.2 <u>Type IV marking</u>. Unless otherwise specified in the contract or procurement documents (see 6.2), direct printing shall be applied to the cloth by a black marking medium. The printing shall be well defined, clearly legible, and shall not show smearing, bleeding, or offsetting. The printing shall also not show objectionable strike-through of the cloth to which is applied, when visually examined for defects as specified in 4.4.

3.5.3 <u>Type V label</u>. The cloth for Type V labels shall be cotton, polyester, or polyester/cotton blend with heat sealable adhesive coating, and it shall be printed.

3.5.3.1 <u>Cloth</u>. Unless otherwise specified in the contract or procurement documents (see 6.2), the label cloth shall be white cotton, polyester, or polyester/cotton blend. The finished cloth shall have a sealable adhesive coating on one side and shall have a weight from 4.5 - 10.0 ounces per square yard. The cloth shall have a minimum of 80 ends per inch in the warp and 72 picks per inch in the filling direction, when tested as specified in 4.5.

3.5.3.2 <u>Sealable adhesive coating</u>. The back side of the label cloth shall be coated with a heat sealable adhesive and it shall have a minimum bond strength of 20 pounds initially, after laundry, and dry cleaning, when tested as specified in 4.5. The labels for the tests shall be heat sealed to materials specified in the end item specifications. Heat sealing of samples for testing shall be in accordance with manufacturer's instruction used in production of the end item.

3.5.3.3 <u>Blocking</u>. The blocking properties for Types V, VI, and IX shall have a rating of resistance to blocking 2 when tested as specified in 4.5.

3.5.3.4 <u>Printing medium</u>. Unless otherwise specified in the contract or procurement documents (see 6.2), the label printing medium shall be durable to heat sealing temperatures and other finishing requirements/processes. The printed label, initially and after heat sealing shall not exhibit offsetting, smearing, bleeding, or discoloration when visually examined for defects as specified in 4.4.

3.5.4 <u>Type VI label</u>. The label cloth shall be a nonwoven material of either spunbonded polyester, 4.0 denier continuous filament 80/20 percent polyester/cellulose material when tested as specified in 4.5. The cloth fibers will be randomly dispersed and bonded at filament junctions.

3.5.4.1 <u>Coating</u>. The cloth for Type VI labels shall be impregnated with a permanent pigmented acrylic or nitrocellulose coating composed of white pigments and affixed by an appropriate acrylic or nitrocellulose resin in accordance with commercial practices. Coating shall not promote mildew growth. The finished labels shall have a smooth matte surface and it shall not have any objectionable odors (see 4.4).

3.5.4.2 <u>Type VI label physical requirements</u>. The finished Type VI label referenced in 3.5.4 shall conform to the physical requirements listed below in Table I when tested as specified in 4.5.

Weight	Breaking	strength	Tearing	strength	Bursting strength
(oz./sq.yd),	(pounds),	minimum	(grams),	minimum	(lbs./sq.in (psi)),
Minimum	Machine	Transverse	Machine	Transverse	minimum
	direction	direction	direction	direction	
3.2	15	10	300	250	50

TABLE I.	Physical rec	quirements f	for Type V	VI finished labels.

3.5.4.3 <u>Blocking</u>. Blocking for Type VI labels shall be as specified in 3.5.3.3.

3.5.5 <u>Type VII pressure-sensitive label</u>. Unless otherwise specified in the contract or procurement documents (see 6.2), the paper for the pressure-sensitive labels shall have a smooth finish that is compatible with printing technology used and shall have a basis weight of 20 pounds (per commercial practice for bond paper). Type VII labels shall have a high initial tack, easy to apply, adhere to the intended surfaces, and remain adhered under high or low ambient temperatures with no special preparation or heat. Pressure-sensitive labels shall be placed on the outside of individually packaged clothing items. The bar coding on the labels shall be clearly legible and readable by a scanner.

3.5.6 <u>Type VIII tag</u>. Unless otherwise specified in the contract or procurement documents (see 6.2), the paper used for the tags shall have a smooth finish that has the capability to accept thermal transfer and direct thermal printing with a basis weight of 100 pounds (per commercial practice for tags). The tags shall have a hole with its center no more than 1/2 (±) 1/8 inch from the tying end. The hole shall be centered and have a diameter of 5/32 (±) 1/32 inch, and it shall be attached to each clothing item by a commercial fastener. The bar coding on the tags shall be clearly legible and readable by a scanner.

3.5.7 <u>Type IX durable bar coding label</u>. Unless otherwise specified in the contract or procurement documents (see 6.2), the material for Type IX shall be white, coated polyester, (clear cross-linked polyurethane resin) with pigmented layers or any commercial material that meets the requirements of this specification for Type IX. The finished printed bar coded label shall be heat sealed to materials specified in the end item specification and shall have a minimum bond strength of 20 pounds initially, after laundry, and dry cleaning, when tested as specified in 4.5. Heat sealing of samples for testing shall be in accordance with manufacturer's instruction used in production of the end item.

3.5.7.1 <u>Blocking</u>. Blocking for Type IX labels will be as specified 3.5.3.3.

3.5.7.2 <u>Printing medium</u>. Unless otherwise specified in the contract or procurement documents (see 6.2), the label printing medium shall be durable to heat sealing temperatures and other finishing requirements/processes. The printed label, initially and after heat sealing shall

not exhibit offsetting, smearing, bleeding, or discoloration, when visually examined for defects as specified in 4.4 and it shall maintain a readable bar code symbol in compliance with Logistics Application of Automated Marking and Reading Symbols (LOGMARS) for the useful life of the garment.

3.6 <u>Color (materials and printing medium) (all)</u>. Unless otherwise specified in the contract or procurement documents (see 6.2), the finished label materials shall be white and all markings, labels, and tags shall be printed in black.

3.7 Printing.

3.7.1 <u>Print type</u>. All classes of labels with the exception of Classes 17 and 18 shall be printed using sans-serif font types in accordance with commercial practices. Italic or script font types shall not be used. All printing shall be in capitals except instruction labels, which shall be as specified in 3.7.3.3.

3.7.2 <u>Print format</u>. Unless otherwise specified in the contract or procurement documents (see 6.2), label Classes 1-16 shall be printed with the contents, and in the format and size of print specified below. For Classes 17 and 18, the bar code density shall be medium to high in accordance with LOGMARS. Unless otherwise specified in the contract or procurement documents (see 6.2), the space between lines shall 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 All type sizes greater 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 otherwise as specified in the contract or procurement documents.

3.7.3 Class content.

3.7.3.1 <u>Class 1</u>. The contents, size of characters of inscription, and the format of Class 1 labels shall be as follows (see 6.6)

- Item description (item name) minimum 10 points (approximately 1/8-inch in height)
- Contract number minimum 8 points (approximately 3/32-inch in height)
- Contractor's name (bottom of label) minimum 8 points

(approximately 3/32-inch in height).

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

- National stock number (NSN) minimum 8 points (approximately 3/32-inch in height)
- The fur, wool, or fiber content will be included in the item description whenever possible minimum 8 points (approximately 3/32-inch in height)

3.7.3.2 <u>Class 2</u>. The contents, size of characters of the inscription, and the format of Class 2 labels shall be as follows when the size is spelled out (see 6.6)

- Size (end item) minimum 10 points (approximately 1/8-inch in height).
- National stock number (NSN) minimum 8 points (approximately 3/32-inch in height).

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

3.7.3.3 <u>Class 3</u>. The contents, size of characters of the inscription, and the format of Class 3 labels shall be as follows (see 6.6):

- Item description (item name) $\underline{1}$ / minimum 10 points (approximately 1/8-inch in height).
- Care instructions minimum 8 points (approximately 3/32-inch in height)
- Warnings or special notations minimum 10 points (approximately 1/8-inch in height).
- <u>1</u>/ When the Class 3 label is used in combination with a Class 1, the item description shall be omitted.

The item description and warnings shall be printed in capitals. The body of the care instructions shall be in capitals and lower case characters as stated or shown by the example in the applicable end item specification or procurement document. The content of the instruction labels shall be as specified in the applicable specification, contract, or procurement documents.

3.7.3.4 <u>Class 4</u>. The contents, size of characters of the inscription, and the format of Class 4 labels shall be as follows (see 6.6):

- Item description (item name)	S
- Contract number	Ι
- National stock number (NSN)	Z
- Fur, wool or fiber Products Act information	E

- Contractor's name (bottom label)

The item description and the size when spelled out, shall be in characters not less than 8 points (approximately 3/32-inch in height), and the contract number, NSN, and Fur, Wool or Fiber Products Act information and the contractor's name in characters not less than 6 points (approximately 1/16-inch in height).

3.7.3.5 <u>Class 5</u>. The contents, size of characters of the inscription, and the format of Class 5 labels shall be as follows (see 6.6):

- Item description (item name) minimum of 18 points (approximately 1/4-inch)
- Contract number minimum of 18 points (approximately 1/4-inch)
- National stock number minimum of 18 points (approximately 1/4-inch)
- Size (when specified) minimum of 18 points (approximately 1/4-inch)
- Contractor's name (bottom of label) minimum of 18 points (approximately 1/4-inch)

3.7.3.6 <u>Class 6</u>. The contents, size of characters of the inscription, and the format of Class 6 labels shall be as specified for Class 5 labels (see 6.6).

3.7.3.7 <u>Class 7</u>. The contents, size of characters of the inscription, and the format of Class 7 labels shall be as specified in end item specification or applicable contract or procurement documents (see 6.2 and 6.6).

3.7.3.8 <u>Class 8</u>. 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 a minimum of 1-1/2-inch in height. The item description, contract number, NSN, and contractor's name shall be in characters a minimum of 1/2-inch in height (see 6.6).

3.7.3.9 <u>Class 9</u>. The contents, size of marking, and format of Class 9 shall be as specified in end item specification or applicable contract or procurement documents (see 6.2 and 6.6).

3.7.3.10 <u>Class 10</u>. The contents, size of characters of the inscription, and the format of Class 10 labels shall be as follows (see 6.6):

- Person's name minimum 10 points (approximately 1/8-inch).
- Service number minimum 10 points (approximately 1/8-inch).

When specified, the Class 10 label 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.

3.7.3.11 <u>Class 11</u>. The contents, size of characters of the inscription and format of Class 11 labels shall be as specified in end item specification or contract or procurement documents (see 6.2)

3.6.3.12 <u>Class 12</u>. The contents, size of characters of the inscription and the format of Class 12 labels shall be as follows (see 6.6):

- Item description (item name) minimum 10 points (approximately 1/8-inch).
- Contract number minimum 10 points (approximately 1/8-inch).
- National stock number (NSN) minimum 10 points (approximately 1/8-inch).
- Size (when specified) minimum 10 points (approximately 1/8-inch).
- Contractor's name (bottom of label) minimum 10 points (approximately 1/8-inch).

3.7.3.13 <u>Class 13</u>. The contents, size of characters of the inscription, and the format of Class 13 labels shall be as follows (see 6.6):

- Item description (item name) $\underline{1}$ / minimum 10 points (approximately 1/8-inch).
- Care instructions minimum 8 points (approximately 3/32-inch).
- Warnings or special notations minimum 10 points (approximately 1/8-inch).
- <u>1</u>/ When Class 13 label is used in combination with a Class 12 label, the item description shall be omitted.

3.7.3.14 <u>Class 14 (combination of identification, size, and care instructions label</u>). The identification label (Class 1), size label (Class 2), and the care instruction label (Class 3) shall be combined into one label (see 6.5). The three (3) labels shall be printed as one (1) continuous label with the size label first and the identification and care instruction labels placed below the size label. The size and identification labels shall be combined, and the contents shall be combined into one (1) label placed above the care 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 shall be added between labels and shall extend across the entire label approximately midway between the 1/4-inch blank spaces.

3.7.3.15 <u>Class 15 (combination of identification and care instructions label)</u>. The identification label (Class 1) and instruction label (Class 3) shall be combined into one (1) label (see 6.5). The two (2) labels shall be printed as one continuous label with the identification label first and care instruction label placed below. A space of 1/4-inch minimum shall be maintained between the labels. A solid line 1/16-inch minimum width shall be added between labels and shall extend across the entire label approximately midway between the 1/4-inch blank spaces.

3.7.3.16 <u>Class 16 (combination of identification and special markings label)</u>. The identification label (Class 5) and special markings (Class 9) shall be combined into one label (see 6.5). The two (2) labels shall be printed as one continuation label with the identification label first and special markings placed below. A space of 1/4-inch minimum shall be maintained between the labels. A solid line 1/16-inch minimum width shall be added between labels and shall extend across the entire label approximately midway between the 1/4-inch blank spaces.

3.7.3.17 <u>Class 17 and 18</u>. The bar coding element for personal and organizational clothing items shall be a 13 digit national stock number (NSN). The 3 of 9 barcode type shall be used with a medium to high code density and shall be human-readable interpretation (HRI) in accordance with LOGMARS.

3.8 <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.

3.9 <u>Label size</u>. Unless otherwise specified (see 6.2), the size of the labels shall be determined by the contractor governed by the contents and size of characters of the inscription, space between lines, and blank margins on sides of label.

3.9.1 <u>Type VI labels</u>. Type VI labels shall be provided with a $1/4 (\pm 1/16)$ -inch blank margin on all four (4) sides for sewing purposes.

3.9.2 <u>Type V and IX</u>. Type V and IX labels shall have a 1/8-inch minimum blank margin on all four sides, as sewing is not required.

3.10 Fastness of printing (all classes, except for 16, 17).

3.10.1 <u>Colorfastness</u>. Unless otherwise specified in the end item specification, contract or procurement documents (see 6.2), the colorfastness requirements shall be as specified in Table II when tested as specified in 4.5. In addition, for Class 17 and 18 labels, the barcode parameters shall be in compliance with LOGMARS.

Characteristics	Classes	Requirement Rating
Colorfastness to laundering	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 14, 15, and 18	4.0
Colorfastness to laundering with bleach (after 10 cycles) <u>1</u> /	1, 2, 3, 4, 9, 10, 14, 15, and 18	4.0
Colorfastness to dry cleaning <u>2</u> /	1, 2, 3, 4, 9, 10, 14, 15, and 18	4.0
Colorfastness to Crocking (dry/wet)	1, 2, 3, 4, 10, 12, 13, 14, 15, and 18	3.5
Colorfastness to Dry and wet heat (hot pressing) <u>3/</u>	1, 2, 3, 4, 9, 10, 14, 15, and 18	4.0
Colorfastness to weather resistance <u>4</u> /	8 and 9	3-4
Writing test <u>5</u> /	10 and combination of 1 and 10	4.0

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TABLE II.	Colorfastness	req	urements.

1/ Type IX labels shall be exposed to 20 laundering cycles

- 2/ Type IX labels shall be exposed to 5 dry cleaning cycles
- 3/ Type III, IV,V, and IX only. The temperature shall be 300-325°F.
- $\underline{4}$ / Time of exposure shall be 100 standard hours and samples shall be evaluated for colorfastness only.
- 5/ Sample shall also show no more skipping, smudging, or blotting than the standard sample.

3.10.2 <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 3.10.1) shall be performed on labels printed (Type III and IV) or heat sealed (Type V and IX) on samples of the same material from which the end item is fabricated during the course of production of the end item.

3.11 <u>Fraying</u>. There shall be no fraying on edges of Type V and IX labels after laundering and after dry cleaning when tested as specified in Table IV.

3.12 <u>Peeling</u>. There shall be no peeling on the edges of Type V and IX labels after laundering and after cleaning when tested as specified in Table IV.

3.13 <u>Toxicity</u>. The finished labels shall not present a health hazard and shall show compatibility with prolonged, direct skin contact when tested as specified in 4.6.3. Chemicals recognized by the Environmental Protection Agency (EPA) as human carcinogens shall not be used.

3.14 <u>Workmanship</u>. The finished labels shall be uniform in quality and shall conform to the quality of product established in this specification. The occurrence of defects as specified in 4.4 and 4.5, shall not exceed the quality acceptance levels as specified in the contract or procurement documents.

4. VERIFICATION

4.1 <u>Classification of inspections</u>. The inspection requirements specified herein are classified as follows:

- a. First article inspection (see 4.2).
- b. Conformance inspection (see 4.3).
- 4.2 First article inspection. N/A

4.3 <u>Conformance inspection</u>. Conformance inspection shall include the visual examination of 4.4 and the tests of 4.5 through 4.6 as applicable. Sampling for inspection shall be performed in accordance with ASQ/ANSI Z1.4 and with acceptance quality limits (AQLs) as specified in the contract or procurement documents, except where otherwise indicated (see 6.2).

4.3.1 <u>Inspection conditions</u>. Unless otherwise specified in this specification or applicable contract or procurements documents (see 6.2), all inspections shall be performed in accordance with this specification and all the requirements of referenced documents.

4.4 <u>Visual examination</u>. The labels shall be examined for the defects listed in Table III. The lot size shall be expressed in units of labels. The sample unit shall be one (1) label.

TABLE III. End item visual defects.

Examine	Defect Description		Classification	
LAdinine	Derect Description	Major	Minor	
Labels (all types)	- Misshaped or distorted	101		
	- Objectionable odor		201	
Labels, printing (all	- Incorrect	102		
types)	- Omitted	103		
	- Illegible, smeared, bleeding, or discoloration	104		
	- Wrong color (label or marking medium)	105		
	- Strikethrough (Type III and IV)		202	
	- Misplaced	106		
	- Not specified size	107		
	- Spacing between lines less than specified		203	
	- Print type not as specified		204	
	- Not all capitals (exception 3.6.3.3)	108		
	- Format not as specified	109		
Type VI only labels	- Coating blistered or missing	110		
	- Hole, cut, tear, or break	111		
	- Abrasion or rub mark resulting in damage to fibers 1/		205	
	- Crease or wrinkle, hard embedded or lump <u>1</u> /		206	
	- Spots or stains clearly noticeable <u>1</u> /	112		
	- Margin for sewing less than 3/16-inch or more		207	
	than 5/16-inch			
Type V and IX labels	- Margin less than 1/8-inch on all sides		208	
	- Uneven adhesion	113		
	- Fraying or peeling on edges after laundering or			
	after dry cleaning	114		
Type VII, Type VIII	- Bar code not readable by scanner	115		
and Type IX	- HRI omitted or eligible	116		
labels/tags	- Bar code type not as specified	117		
	- Code density not as specified	118		
	- Not adhered to the package (Type VII)		209	

1/ At normal inspection distance of 3 feet.

4.5 <u>End item/material testing</u>. The cloth shall be tested for the characteristics listed in Table IV and Table V. The methods of testing as specified wherever applicable and as listed in Table IV and Table V shall be followed. All test reports shall contain the individual values utilized in expressing the final results. The sample unit shall be as cited below for all physical and chemical tests for the specified types. The lot size shall be expressed in units of labels. The lot shall be unacceptable if one (1) or more tests fail to meet the requirement specified.

Type	Sample unit
III and IV	15 labels
V	300 square inches (or equal in cut labels)
VI	600 square inches (or equal in cut labels)

The sample size shall be in accordance with the following:

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

Characteristics	Types	Requirement Reference	Test method
Fiber identification	V, VI,	See 3.5.3.1	AATCC TM20
	IX	See 3.5.4	(see 6.4)
		See 3.5.7	
Yarns per inch	V	See 3.5.3.1	ASTM D3775
Weight	V, VI	See 3.5.3.1, Table I	ASTM D3776/D3776M,
		, , , , , , , , , , , , , , , , , , ,	Option C
Bond strength	V, IX	See 3.5.3.2	ASTM D1876 & 4.6.2 <u>1</u> /
		See 3.5.7	
Blocking	V, VI,	See 3.5.3.3	ASTM D751 <u>2</u> /
	IX	See 3.5.4.3	
		See 3.5.7.1	
Yarn denier	VI	See 3.5.4	ASTM D1907/D1907M
Breaking strength	VI	Table I	ASTM D5034
Tearing strength	VI	Table I	ASTM D1424 <u>3</u> /
Bursting strength	VI	Table I	ASTM D3787
Fraying, (Pass/Fail)	V, IX	3.11	Visual <u>4</u> /
Peeling, (Pass/Fail)	V, IX	3.12	Visual <u>4</u> /

TABLE IV.	Material/label	phy	ysical	testing.

 $\underline{1}$ / ASTM D1876 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.

- 2/ ASTM D751 with the following exceptions:
 - a. The test specimen shall consist of six (6) 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.

 $\underline{3}$ / Except that the constant radius test specimen of ASTM D1922 shall be used.

4/ Evaluated after laundering and dry cleaning cycles, respectively

(see Table V for test methods).

Characteristics	Classes	Requirement Reference	Test method
Colorfastness to	1, 2, 3, 4, 5, 6, 7, 9,	Table II	AATCC TM61, Test
laundering	10, 11, 14, 15, and 18		3A <u>1</u> /
Colorfastness to	1, 2, 3, 4, 9, 10, 14,	Table II	AATCC TM61, Test
laundering (bleaching)	15, and 18		4A <u>1</u> /
Colorfastness to dry	1, 2, 3, 4, 9, 10, 14,	Table II	AATCC TM132 <u>1</u> /
cleaning	15, and 18		
Colorfastness to	1, 2, 3, 4, 10, 12, 13,	Table II	AATCC TM8 <u>2</u> /
crocking (dry/wet)	14, 15, and 18		
Colorfastness to	1, 2, 3, 4, 9, 10, 14,	Table II	AATCC TM133 <u>1</u> /
dry and wet heat	15, and 18	(See 3.10.2)	
(hot pressing)			
Weather Resistance	8 and 9 <u>3</u> /	Table II	AATCC TM111,
(after 100 standard			Option A <u>1</u> /
hours)			
Writing test	10 and combination	Table II	AATCC TM61, Test
	of 1 and 10		3A and 4.6.1 <u>1</u> /

TABLE V. Material/label colorfastness testing.

1/ Rated using the AATCC EP1, Evaluation Procedure for Gray Scale for Color Change.

2/ Rated using the AATCC EP8, Evaluation Procedure for AATCC 9-Step Chromatic Transference Scale.

 $\underline{3}$ Class 9, when specified in end item specification or contract or procurement documents.

4.6 Methods of testing and inspection.

4.6.1 <u>Writing test (Types III, IV, V, VI, IX only)</u>. Two (2) label specimens shall be printed by hand with a commercial indelible black ink pen. One (1) test specimen shall be subjected to laundering as specified in Table V and the other specimen shall remain unlaundered.

The printing on the unlaundered and laundered test specimens shall be compared. The laundered sample shall show no more skipping, smudging or blotting than the unlaundered sample.

4.6.1.1 <u>Test specimen preparation</u>. Test specimens for Type III, IV, and VI shall be prepared in accordance with AATCC 61 Test 3A. In addition, the edges of Type III and IV labels shall be pinked and a thin ribbon of latex acrylic adhesive shall be applied to the pinked edges. Test specimens for Type V and IX labels shall be prepared in accordance with ASTM D1876.

4.6.2 <u>Bond strength after laundering and dry cleaning (Type V and IX</u>). Bond strength of Type V and IX labels after laundering and dry cleaning shall be determined after separating one end of each specimen to provide tabs of sufficient length to perform the test. The separation shall 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.

4.6.3 <u>Toxicity test</u>. When required, (see 6.2) an acute dermal irritation study and a skin sensitization study shall be conducted. When the results of these studies indicate the material is not a sensitizer or irritant, a Repeat Insult Patch Test shall be performed in accordance with the Modified Draize Procedure (see 2.3). If toxicity requirement (see 3.13) can be demonstrated with historical use data, on the finishing treatments used, toxicity testing may not be required (see 6.2).

5. PACKAGING

5.1 <u>Packaging</u>. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of materiel is to be performed by DoD or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activities within the Military Department or Defense Agency, or within the military service's system commands. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD- ROM products, or by contacting the responsible packaging activity.

6. NOTES

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

6.1 Intended use. The labels are intended for use in items of clothing, tentage, equipage, and

- 6.2 <u>Acquisition requirements</u>. Acquisition documents must specify the following:
 - a. Title, number, and date of this specification
 - b. Type and class required (see 1.2)
 - c. The specific issue of individual documents referenced (see 2.2.1)
 - d. Conformance inspection acceptance quality limits (AQLs) (see 4.3)
 - e. Type IV marking, if other than specified (see 3.5.2)
 - f. Type V and IX cloth, if other than specified (see 3.5.3, 3.5.7)
 - g. Type V and IX printing medium, if other than specified (see 3.5.3, 3.5.7)
 - h. Type VII and VIII paper, if other than specified (see 3.5.5, 3.5.6)
 - i. When a label color other than white is required (see 3.6)
 - j. Printing format and spacing, if other than specified (see 3.7.2)
 - k. Contents, size of characters or marking, and format for Class 7 and 9 labels (see 3.7. 3.7, 3.7.2.3.9, and 3.7.3.11)
 - 1. Label size required when applicable (see 3.9)
 - m. Colorfastness properties, if other than specified (see 3.10.1)
 - n. When toxicity testing is required (see 3.13, 4.6.3)
 - o. Inspection conditions (see 4.3.1)
 - p. Packaging (see 5.1)
 - q. When combination of classes is allowed (see 6.5)

6.3 <u>Standard sample</u>. For access to standard samples address the contracting activity issuing the invitation for bids or request for proposals.

6.4 <u>Certificate of compliance</u>. The contracting activity may select to accept a certificate of compliance for stated requirement.

6.5 <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.

6.6 <u>Type of labels and use (Department of Defense only)</u>. 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 will be printed on the left side of the tail).

d. All woolen items, synthetic, or blends of synthetics and knitted items will 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 will be utilized for Classes 5 and 8 labels.
- g. Type V or Type VI labels will 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 will be utilized for Class 17 labels.

j. Type IX labels will be utilized for Class 18 labels.

6.7 <u>Changes from previous issue</u>. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

6.8 Subject term (key word) listing.

Barcode Identification Printing Tag Uniform

Custodians: Army - GL Navy – NU Air Force -11 Preparing activity: DLA-CT

Review activities Army-AR, MD Navy – CG1, MC

(Project: 8315-2020-006)

NOTE: The activities listed above were interested in this document as of date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using ASSIST online database at <u>https://assist.dla.mil</u>.