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DDD-L-20F
March 30, 1990
SUPERSEDING
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March 7, 1980

FEDERAL SPECIFICATION

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

This specification is approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers the requirements for eight types of labels, utilized in fabricated textile, plastic coated, and leather items.

1.2 Classification. The labels shall be of the following types and classes, as specified (see 6.2 and 6.5).

Type:

I	- Deleted (see 6.7)
II	- Deleted (see 6.7)
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
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

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: U.S. Army Natick Research, Development, and Engineering Center, Natick, MA 01760-5014 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A FSC 8315

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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
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
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 organizational items

2. APPLICABLE DOCUMENTS

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.

Federal Specifications:

O-T-236	- Tetrachloroethylene (Perchloroethylene), Technical
P-D-680	- Dry Cleaning and Degreasing 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-123	- Marking for Shipment (Civil Agencies)
FED-STD-191	- Textile Test Methods

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(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 activities outside the Federal Government for bidding purposes are available without charge from the General 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.)

Military Specifications:

MIL-L-35078 - Loads, Unit: Preparation of Semiperishable Subsistence Items; Clothing, Personal Equipment and Equipage; General Specification For

Military Standards:

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-129 - Marking for Shipment and Storage
MIL-STD-147 - Palletized Unit Loads
MIL-STD-731 - Quality of Wood Members for Containers and Pallets
MIL-STD-1189 - Standard Department of Defense Bar Code Symbology

(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.)

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

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(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 shall 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

(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

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103-1187.)

3. REQUIREMENTS

3.1 Samples. Unless otherwise specified, the labels, tags, and markings shall 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 Materials. 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 shall be applied to a dry-heat transfer process. The initial print shall be well defined, clearly legible, and shall not show smearing, bleeding, or off-setting and shall not show objectionable strike-through of the cloth to which applied. Unless otherwise specified, the printing shall be black.

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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 off-setting and shall not show objectionable strike-through of the cloth to which applied.

3.2.3 Type V label. Type V labels shall be cotton, polyester, or polyester/cotton blend, coated on one side with heat sealable adhesive and shall be printed.

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 and shall have a minimum of 80 ends per inch in the warp and 72 picks per inch in the filling when tested as specified in 4.2.3.

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 a minimum of 20 pounds when tested in accordance with the method specified in 4.2.3. The bond strength shall 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 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 4.2.3.

3.2.3.4 Printing medium. Unless othwerwise specified (see 6.2), the color of the label printing medium shall be black and shall 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, 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 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 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 when tested as specified in 4.2.3.

3.2.4.2 Coating. The impregnation coating shall 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 shall not

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contain leechable skin irritants or toxic materials. Substances that will support mildew growth shall not be included. The finished impregnated labels shall have a smooth matte surface and shall be free from objectionable odors (see table II).

3.2.4.3 Physical requirements. The finished impregnated label shall be as specified in table I when tested as specified in 4.2.3.

TABLE I. Physical requirements for type VI finished label

Weight (oz per sq yd) minimum	Breaking strength (lb) minimum		Tearing strength (lb) minimum		Bursting strength psi minimum
	Machine direction	Transverse direction	Machine direction	Transverse direction	
3.2	15	10	300	250	50

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 show off-setting, smearing, or bleeding.

3.2.4.6 Blocking. Blocking for type VI labels shall be as specified in 3.2.3.3.

3.2.5 Type VII bar coding. Unless otherwise specified, the paper for the pressure-sensitive labels shall have a smooth finish to accept thermal transfer printing. The adhesive shall require no solvent, heat, or other preparation prior to application and it shall adhere to the surfaces under high or low temperatures. Pressure-sensitive labels shall be placed on the outside of individually packaged clothing items. Bar coded labels shall be clearly legible and readable by a scanner.

3.2.6 Type VIII bar coding. The paper used for the tags shall have a smooth finish to accept thermal transfer and direct thermal printing. Bar coded tags shall have a hole with its center no more than 1/2-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 fastener. Bar coded tags shall be clearly legible and readable by a scanner.

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3.3 Printing (see 6.2).

3.3.1 Print type. All classes of labels with the exception of classes 17 and 18 shall be printed with Gothic sanserif type. Italic or script type shall not be used. All printing shall be in capitals except instruction labels, which shall be as specified in 3.3.2.3.

3.3.2 Print format. Unless otherwise specified (see 6.2), all classes of labels (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 and in accordance with the Standard DoD Symbology (SDS) of MIL-STD-1189. 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-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 shall be as specified in the applicable end item specification or procurement document.

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 6.5):

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 shall be included on class 1 labels:

Stock number
- minimum 8 point (approximately 3/32 inch)

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

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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 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 shall be printed in characters a minimum of 18 point (approximately 1/4 inch 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 6.5):

Item description 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)

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

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 6.5):

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

SIZE

The item description and the size, when spelled out, shall 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 shall be a minimum of 18 point

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(approximately 1/4 inch) in height with fractions of comparable size. The fur, wool, or fiber content shall be included in the item description wherever 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 6.5):

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

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

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

Size (when specified)
- minimum of 18 point (approximatley 1/4 inch)

Contractor's name (bottom of label)
- maximum of 18 point (approximately 1/4 inch)

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 6.5).

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 6.5).

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 a minimum of 1-1/2 inch in height. The item identification, contract number, and stock number shall be in characters a minimum of 1/2 inch in height (see 6.5).

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 6.5).

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 (approximately 1/8 inch)

Service No.
- minimum 10 point (approximately 1 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.

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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 contractor's 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 (approximately 1/8 inch)

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

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

Item description 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)

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

3.3.2.14 Class 14. The identification label (class 1), size label (class 2), and instruction label (class 3) shall be combined into one label (see 6.4). 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 shall 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 shall extend across the entire label approximately midway between the 1/4 inch blank space.

3.3.2.15 Class 15. The identification label (class 1) and instruction label (class 3) shall be combined into one label (see 6.4). The two labels shall be printed as one continuous label with the identification label first and

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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 extend across the entire label approximately midway between the 1/4 inch blank space.

3.3.2.16 Class 16. The identification label (class 5) and special markings (class 9) shall be combined into one label (see 6.4). The two labels shall be printed as one continuous 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 extend across the entire label approximately midway between the 1/4 inch blank space.

3.3.2.17 Classes 17 and 18. The bar coding element for personal and organizational clothing items shall be a 13 digit national stock number (NSN). The 3 of 9 bar code type shall be used with a medium to high code density and shall be human-readable interpretation (HRI).

3.3.2.18 Fur, fiber, and wool products labeling acts. 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 shall appear on the identification label.

3.4 Label size. Unless otherwise specified (see 6.2), the size of the labels shall 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 Type VI labels. Type VI labels shall be provided with a 1/4 ± 1/16 inch blank margin on all four sides for sewing purposes.

3.4.2 Type V. Type V labels shall 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 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 dry cleaning 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 labels 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 labels shall be clearly legible and shall show "good" colorfastness to accelerated laundering.

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3.5.1.2 Fastness to dry cleaning. When specified, classes 1, 2, 3, 4, 14, and 15 labels shall show no colorfastness to accelerated dry cleaning equal to or better than the standard sample when tested as specified in 4.2.3. When no standard sample is available, the labels shall be clearly legible and shall show "good" colorfastness to accelerated dry cleaning.

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 4.2.3.

3.5.1.4 Types III, IV, and V, classes 1, 2, 3, 4, 14, and 15 labels. The test specified for fastness of printing (see 3.5.1) shall 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 shall show colorfastness equal to or better than the standard sample when subjected to dry and wet heat (hot pressing) test specified in 4.2.3.

3.5.1.5 Fraying. There shall 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.

3.5.2 Classes 5 and 6 labels. Classes 5 and 6 labels shall be clearly legible after subjection to the accelerated laundering procedure specified in 4.2.3.

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 4.2.3. 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 4.2.3 (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 4.2.3.

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 4.2.3 (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 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 4.2.3.

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When a combination of classes 1 and 10 labels is specified (see 3.3.2.10), 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 4.2.3.

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 4.2.3. When specified, the information shall be marked directly on the coated cloth.

3.6 Workmanship. The end item shall conform to the quality of product established by this specification and the occurrence of defects shall not exceed the applicable acceptable quality levels.

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 (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase 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 this specification where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items shall meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

4.1.2 Certificates of compliance. When certificates of compliance are submitted, the Government reserves the right to inspect such items to determine the validity of the certification.

4.2 Quality conformance inspection. Unless otherwise specified, sampling for inspection shall be performed in accordance with MIL-STD-105.

4.2.1 Component and material inspection. In accordance with 4.1, components and materials shall 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.

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4.2.2 End item visual examination. The end items shall be examined for the defects listed in table II. The lot size shall be expressed in units of labels. The sample unit shall be one label. The inspection level shall be II and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 2.5.

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 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 Hole, 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
Label/tags (type VII and type VIII)	Bar code not readable by scanner HRI omitted or illegible Bar code type not as specified Code density not as specified
Fraying (type V)	Fraying on edges after laundering or after dry cleaning cycles

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

4.2.3 End item testing. The end items shall be tested for the characteristics listed in table III. The methods of testing specified in FED-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 result of the determinations made on a sample unit for test purposes as specified in the applicable test methods. The lot size shall be expressed in units of labels. The sample unit shall be as follows for the specified type and criteria for sample size follows:

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

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

TABLE III. End item tests

Characteristic	Requirement paragraph	Number of determinations per sample unit	Test method	Results reported as
Yarns per inch (type V)				
Warp	3.2.3.1	---	5050	---
Filling	3.2.3.1	---	5050	---
Basic material (type VI):	3.2.4.1	---	1/	---

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TABLE III. End item tests (cont'd)

Characteristic	Requirement paragraph	Number of determinations per sample unit	Test method	Results reported as
Breaking strength	3.2.4.3	---	5100	---
Tearing strength	3.2.4.3	---	5132 2/	---
Bursting strength	3.2.4.3	---	5122	---
Blocking (types V and VI)	3.2.3.3 and 3.2.4.6	1	5872 3/	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	---	1/	---
Writing test (class 10 and combination classes 1 and 10)	3.5.6	1	4.3.1	Pass or fail
Fastness of printing:	3.5	---	4.3.3	---
Colorfastness to laundering transference	---	1	5610 4/	Pass or fail
Colorfastness to dry and wet heat (hot pressing)	---	1	5640 5/ 6/	Pass or fail

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TABLE III. End item tests (cont'd)

Characteristic	Requirement paragraph	Number of determinations per sample unit	Test method	Results reported as
Colorfastness to accelerated laundering	---	10	AATCC No. 61 Test IVA	Pass or fail
Colorfastness to accelerated dry cleaning	---	1	4.3.6	Pass or fail
Colorfastness to accelerated weathering	---	1	5671 7/	Pass of fail
Colorfastness to laundering transference (wool)	---	1	5614 5/	Pass of fail
Colorfastness to crocking	3.5.1.3 and 3.5.8	---	AATCC No. 8	---
Bond strength (type V)	3.2.3.2	1	ASTM D 1876 (modified) 8/	Pass or fail
Fraying (type V)	3.5.1.5	1	4.3.3	Pass or fail

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/ 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.

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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.

4/ 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.

5/ 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-STD-191.

6/ 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.

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

8/ 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.

4.2.4 Packaging examination. The fully packaged end items shall be examined for the defects listed below. The lot size shall be expressed in units of shipping containers. The sample unit shall be one shipping container fully packaged. The inspection level shall be S-2 and the AQL, expressed in terms of defects per hundred units, shall be 2.5.

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Examine	Defect
Marking (exterior and interior)	Omitted; incorrect; illegible; of improper size, location, sequence, 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

4.2.5 Palletization examination. The fully packaged and palletized end items shall be examined for the defects listed below. The lot size shall be expressed in units of palletized unit loads. The sample unit shall be one palletized unit load, fully packaged. The inspection level shall be S-1 and the AQL, expressed in terms of defects per hundred units, shall be 6.5.

Examine	Defect
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

4.3 Methods of inspection.

4.3.1 Writing test. One test specimen shall be subjected to the laundering transference procedure (Method 5610) as specified in 4.2.3 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.

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

4.3.3 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 4.3.5 through 4.3.5.4.

4.3.4 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. Ony the area to be separated shall be heated.

4.3.5 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 (see 4.3.3). Color transference is also applicable to laundered samples.

4.3.5.1 Comparison. 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.

4.3.5.2 Standard of comparison established. 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

4.3.5.3 Standard of comparison not established. 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 treated 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

4.3.5.4 Evaluation of fraying. Fraying for the type V label shall meet the criteria as specified in 3.5.1.5.

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4.3.6 Fastness to dry cleaning test.

4.3.6.1 Test specimens.

4.3.6.1.1 Test specimen (except types V, VII, and VIII). The test specimen shall consist of a number of rectangles of labels weighing a total of 4.5 grams ± 0.5 gram, 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.

4.3.6.1.2 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 dry cleaning. Preparation of dry cleaned specimens for this test shall be as cited in 4.3.4 for laundered type V labels.

4.3.6.2 Apparatus.

4.3.6.2.1 Launderometer of similar machine as described in Method 5610.

4.3.6.2.2 Pressing equipment.

4.3.6.2.2.1 Steam pressing. Flat bed press at temperature of 275° to 300°F; hot head or polished metal top for flat fabrics; cloth top press for rough crepes.

4.3.6.2.2.2 Hand pressing. A hand iron weighing approximately 2 to 3 pounds capable of maintaining temperatures between 275° and 300°F.

4.3.6.2.3 Drying rack. Covered frame or screen suitable for drying specimen in the room.

4.3.6.3 Reagents.

4.3.6.3.1 Stoddards solvent. Dry cleaning solvent conforming to P-D-680.

4.3.6.3.2 Perchloroethylene. Tetrachloroethylene (perchloroethylene) technical grade conforming to O-T-236.

4.3.6.3.3 Drycleaning soap. Dry cleaning soap made by dissolving 56 grams of caustic potash (KOH) in 100 mL of water shall 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.

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4.3.6.4 Procedure. 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° ± 2°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° ± 2°F following the draining. Replace the solvent with 150 mL of perchlorethylene without dry cleaning soap and with 100 stainless steel balls and run for 10 minutes at 80° ± 2°F. Drain the solvent at the end of the 10 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. When dry, the specimen shall be pressed using the method specified in 4.3.6.4.1 or 4.3.6.4.2.

4.3.6.4.1 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 approximatley 75 percent moisture by weight, and press with hand iron until cover cloth is dry.

4.3.6.4.2 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 hold down the head of the press until specimen is dry.

4.3.6.5 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 shall be in accordance with 4.3.5 through 4.3.5.3.

5. PACKAGING

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

5.1.1 Level A preservation.

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 cross-tied with cotton tape or twine, or cross-banded 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.

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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 cross-tied with cotton tape or twine or cross-banded 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.

5.1.2 Commercial preservation. Labels shall be preserved in accordance with ASTM D 3951.

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 V2s 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 4.2.4. The weight of contents of each shipping container shall not exceed 65 pounds. Shipping containers shall be arranged in unit loads in accordance with MIL-L-35078 for the type and class of load specified (see 6.2). When unit loads are strapped, strapping shall be limited to nonmetallic strapping, except for type II, class F loads.

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 4.2.4. 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 4.2.4.

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5.2.3 Commerical packing. Labels, preserved as specified in 5.1, shall be packed in accordance with ASTM D 3951.

5.3 Palletization. When specified (see 6.2), labels, packed as specified in 5.2.2 or 5.2.3, shall be palletized on a 4-way entry pallet in accordance with load type Ia of MIL-STD-147. Pallet type shall be type I (4-way entry), type IV or type V in accordance with MIL-STD-147. Pallets shall be fabricated from wood groups I, II, III, or IV of MIL-STD-731. Each prepared load shall be bonded with primary and secondary straps in accordance with bonding means C and D or film bonding means F or G. Pallet pattern shall be in accordance with the appendix of MIL-STD-147. Interlocking of loads shall be effected by reversing the pattern of each course.

5.4 Marking. Marking shall be in accordance with 5.4.1 or 5.4.2 as specified (see 6.2).

5.4.1 Civil agencies. In addition to any special marking required by the contract or purchase order, intermediate packs, shipping containers, and palletized unit loads shall be marked in accordance with FED-STD-123 or ASTM D 3951, as applicable.

5.4.2 Military requirements. In addition to any special marking required by the contract or purchase order, intermediate packs, shipping containers, and palletized unit loads shall be marked in accordance with MIL-STD-129 or ASTM D 3951, as applicable.

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 related items as specified for the applicable class (see 1.2 and 6.5).

6.2 Acquisition requirements. 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).

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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).
l. 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 Sample. For access to samples, address the contracting activity issuing the invitation for bids or request for proposal.

6.4 Combination of classes on labels. 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.

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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).

6.6 Subject term (key word) listing.

Classification
Identification
Marker
Tag

6.7 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.

MILITARY INTERESTS:

Custodians

Army - GL
Navy - NU
Air Force - 99

Review Activities

Army - AR, EA, MD
Navy - CG, MC
Air Force - 82
DLA - CT

User Activities

Navy - AS
Air Force - 45

CIVIL AGENCY COORDINATING ACTIVITIES:

GSA - FSS
HHS - HSM
JUS - FPI
VA - OSS

PREPARING ACTIVITY:

Army - GL

(Project 8315-0341)

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

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

I RECOMMEND A CHANGE:	1. DOCUMENT NUMBER	2. DOCUMENT DATE (YYMMDD)
	DDD-L-20F	1990 March 30

3. DOCUMENT TITLE
Label: For Clothing, Equipage, And Tentage, (General Use)

4. NATURE OF CHANGE *(Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)*

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME (Last, First, Middle Initial)	b. ORGANIZATION	
c. ADDRESS (Include Zip Code)	d. TELEPHONE (Include Area Code) (1) Commercial (2) AUTOVON (If applicable)	7. DATE SUBMITTED (YYMMDD)

8. PREPARING ACTIVITY

a. NAME	b. TELEPHONE (Include Area Code)	
U.S. Army Natick RD&E Center	(1) Commercial 508-651-5221	(2) AUTOVON 256-5221
c. ADDRESS (Include Zip Code) Commander, U.S. Army Natick RD&E Center ATTN: STRNC-ES Natick, MA 01760-5014	IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT: Defense Quality and Standardization Office 5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466 Telephone (703) 756-2340 AUTOVON 289-2340	