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[INCH-POUND]
A-A-59549
19 April 2000

SUPERSEDING
MIL-O-44191A
27 January 1989
Amendment 1
1 May 1991

COMMERCIAL ITEM DESCRIPTION

OVERALLS, COLD WEATHER, SYNTHETIC FLEECE

The General Services Administration has authorized the use of this commercial item description as a replacement for Overalls, Cold Weather, Synthetic Fiber Pile of MIL-O-44191A for all Federal agencies.

1. SCOPE

1.1 Scope. This commercial item description covers the requirements for synthetic fleece overalls used as an insulation component of the Extended Cold Weather Clothing System (ECWCS). The overalls are a modified commercial item since it requires a specific military appearance (See paragraph 3.2).

2. CLASSIFICATION. The overalls shall be of one type in the following sizes as specified:

SCHEDULE OF SIZES

Size	Short/Regular	Long
X-Small	X	X
Small	X	X
Medium	X	X
Large	X	X
X-Large	X	X

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Defense Supply Center Philadelphia, Clothing and Textiles Directorate, Attn: DSCP-COCT, 700 Robbins Avenue, Philadelphia, PA 19111-5092.

AMSC N/A FSC 8415

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3. SALIENT CHARACTERISTICS

3.1 Design and construction. The overalls shall be of the bib type, with adjustable suspenders, side full-length slide fastener closure, and center front slide fastener fly opening. All slide fasteners have a thong for ease of opening when wearing gloves (reference figure 1). This design provides a garment that is light in weight, low in bulk, has environmental protection, and comfort in movement.

3.2 Basic material. The following material shall be used to provide the environmental protection, user comfort; light weight and durability needed for wear in field, combat, and operations other than war. The basic material for the overalls shall be 100% polyester circular knit terry, double-sided, medium weight velour Polartec200 Style 7614® pile or equal. The fabric used may contain a minimum of 75% recycled polyester. The fabric shall be black in color. The material provides the required military appearance and functionality required by the military. The fabric shall conform to the following requirements:

CHARACTERISTIC	REQUIREMENT	TEST METHOD
Weight (oz. per square yard)	7.0 ± 0.5	ASTM D3776
Wales & Courses -Avg.	30Wales & 32Courses	ASTM D 3887
Thickness @ 0.6psi	0.120 minimum	ASTM D1777
Air Permeability, CFM	230 maximum	ASTM D737
Colorfastness:		
Laundering	Excellent	AATCC TM 61- Option 2a, 3 cycles
Crocking	Dry - 4.0 / Wet 4.0	AATCC TM 8
Light		AATCC TM 16
Carbon Arc	20 & 40 Hrs. – Excellent 4-5	Option A and
Xenon	85 & 170 Kj. – Excellent 4-5	Option E
Dimensional Stability – Avg.	Wales: 4.0% max. Courses: 4.0% max.	AATCC TM 135 – 3 cycles, IIIA

3.2.3 Thread. Thread for needle and bobbin (looper) shall be commercial 100% textured polyester thread, size B, 2 or 3 ply conforming to type I, class 1, subclass B of A-A-52095 or cotton covered polyester core thread size 35/2 or 3 ply conforming to A-A-50199. All thread shall be non-staining and show good colorfastness to laundering. The thread color shall approximately match the basic material.

3.2.4 Labels. Each overall shall have a commercial size label, an identification label, and a care label. The size and identification labels may be combined. The identification label shall contain the item description, contract number, fiber content information and the contractor's name. The size label color shall be white. The inscription shall have a minimum font size of 10 points. The inscription legibility, label, and label attachment shall last the expected life of the overalls. If available, a basic material supplier care label and hang tag may be used, except the information must be as cited in paragraph 3.2.4.1.

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3.2.4.1 Care Label. The care label shall include the following information:

Cold/Warm Wash
Tumble Dry Low
or Line Dry
DO NOT USE BLEACH
DO NOT IRON

3.2.4.2 Size label. The size label shall contain, as a minimum, the following information, as applicable:

X-Small-Short/Regular
Chest: Under 33 inches
Height: Under 71"
NSN: 8415-01-472-6867

X-Small-Long
Chest: Under 33 inches
Height: Over 71"
NSN: 8415-01-472-6908

Small-Short/ Regular
Chest: 33-37 inches
Height: Under 71"
NSN: 8415-01-472-6909

Small-Long
Chest: 33-37 inches
Height: Over 71"
NSN: 8415-01-472-6911

Medium-Short/ Regular
Chest: 37-41 inches
Height: Under 71"
NSN: 8415-01-472-6912

Medium-Long
Chest: 37-41 inches
Height: Over 71"
NSN: 8415-01-472-6914

Large-Short/ Regular
Chest: 41-45 inches
Height: Under 71"
NSN: 8415-01-472-6915

Large-Long
Chest: 41-45 inches
Height: Over 71"
NSN: 8415-01-472-6916

X-Large-Short/ Regular
Chest: Over 45 inches
Height: Under 71"
NSN: 8415-01-472-6917

X-Large-Long
Chest: Over 45 inches
Height: Over 71"
NSN: 8415-01-472-6918

3.2.4.3 Label/tag. Each overall shall have a bar-code label affixed as specified in the contract. The barcode label shall be clearly legible and readable by a scanner as well as human readable. The bar coding element shall be a 13 digit national stock number (NSN). The label shall comply with the DOD LOGMARS symbology. It must be located so that it is completely visible when the overalls are folded and/or packaged and shall cause no damage to the item.

3.2.4.4 Label placement. The labels shall be securely attached to the overalls and positioned under the top edge of overalls, at the center back seam, with the hanger loop over label.

3.2.5 Slide fasteners.

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3.2.5.1 Slide fastener, side closure. The slide fastener for the side closure shall use an individual element molded fastener, size MS, Type IV, Style 8 conforming to A-A-55634, except the fastener shall be equipped with 2 single pull sliders, mouth to mouth arrangement, enabling 2 way opening and the finished length of the thong after knotting shall be 3 +/- 1/4 inches.

3.2.5.2 Slide fastener, fly. The slide fasteners for the fly opening shall be black with black thong, nylon or polyester continuous coil or ladder configuration, size MS, Type I, Style 19 conforming to A-A-55634, except that the finished length of the thong after knotting shall be 3 +/- 1/4 inches.

3.2.5.3 Slide fastener thongs. The thongs for all slide fasteners shall be a 1/8 inch diameter black non-elastic nylon cord. If available, thongs from the basic material supplier may be used on the fly slide fastener.

3.2.6 Suspenders. The suspenders shall be South Carolina Elastic Company spandex finish knit elastic, part no. 15034-K-L, 2 inch wide, black, or equal. Cut suspender elastic in the following lengths in inches for sizes X-small to X-Large respectively: 29, 30, 31, 32, 33.

3.2.7 Webbing, nylon. The webbing used to attach the suspender loops shall be 2 inch width and 5-3/8 to 5-5/8 inch length, black, Type VIIIb, Class 2 conforming to MIL-W-4088. Webbing edges shall be seared.

3.2.8 Webbing, nylon. The webbing used to secure the ends of the fly slide fastener shall be 1-1/4 inch width, black, Type III, Class 2 conforming to MIL-W-4088.

3.2.9 Hanger Tape . The tape for the hanger loop shall be flat nylon, black, 3/8 inch in width and conform to the type 3, class 2 requirements of MIL-T-5038.

3.3 Patterns. The government shall furnish a complete set of patterns or a master pattern with grade rules, to maintain uniformity and consistency in manufacturing. Standard patterns provide an allowance of 1/2 inch for setting slide fasteners and for all seams. The government patterns shall be used to create the contractor's working patterns. Minor modifications are permitted to accommodate manufacturing procedures, however the design and finished measurements shall be maintained.

TABLE I. List of pattern parts.

Material	Nomenclature	Cut Parts
Polyester Fleece	Front Back	2 2

3.4 Configuration. The following specifics are needed to provide uniform appearance; comfort and durability in use during field duties, combat, and operations other than war. End item garment construction and appearance shall conform to figure 1 and the finished dimensions (See 5.5) to maintain end item configuration.

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3.4.1 Seaming. The seams shall be consistent, exhibit a uniform appearance and conform to the ASTM D-6193 Stitch Types listed in the table below. The backside of all seams (inside garment) shall be overlocked and not flat locked.

All bartacks, shall be 3/8 to 5/8 inch in length with approximately 27 stitches.

All material edges shall not ravel; Edges may be turned-in, turned-under, serged or seared to prevent raveling.

Special seaming instructions for suspenders apply:

Webbing for suspenders shall be threaded through the female buckle with a 1/2 inch deep loop. The webbing shall be stitched 1/16 to 1/8 from edge through all layers with two rows of stitching approximately 1/4 inch apart. Edge stitch the remaining length of webbing to back side of fabric 1/16 to 1/8 inch from edge and add a 2-1/2 inch long by 1-1/4 inch wide box "X" stitch with the top stitch superimposed on closest top stitch row.

Seaming Areas	Seam type	Gage	Stitch Type
Overedging all pieces	EFd-1		504
Attach labels and hanger loop	Efa-1	1/8 to 1/4 inch from edge.	301
Flat lock fronts and backs together at center seam; flat lock leg inseams	FSa-1		607
Set side slide fasteners and top stitch	Ssa-1 and Efa-1	Top stitching gage - 1/4 inch from folded edge of slide fastener opening.	301
Set front slide fastener and top stitch,	LSbu-1	Top stitch 1/4 to 3/16 inch from edge	301
Attach elastic suspender straps	SSa-1	1/16 to 1/4inch from edge	301
Top Hem stitching	Efa-2	1/16 to 1/8 inch from edge	301

4. REGULATORY REQUIREMENTS

4.1 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable 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.

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5. PRODUCT CONFORMANCE

5.1 Product conformance. The products provided shall meet the salient characteristics of this commercial item description, and shall conform to the producer's own drawings, specifications, standards and quality assurance practices. The Government reserves the right to require proof of such conformance.

5.2 Quality conformance inspection. Sampling for inspection shall be performed in accordance with ANZI/ASQC Z1.4, as defined by contract, except where otherwise indicated.

5.3 Component and end item inspection. In accordance with 5.1, components and end items shall be tested in accordance with all the requirements of referenced documents unless otherwise excluded, amended, modified, or qualified in this document or applicable procurement documents. The government reserves the right to inspect all components and end items to determine conformance to requirements.

5.4. End item visual examination. The shirt shall be examined for the major defects listed below.

EXAMINATION	DEFECT
Material and workmanship	Component part omitted, distorted, full, tight, or twisted; any part of shirt caught in any unrelated stitching, the edge of any component part required to be forced out having folds of more than 1/8 inch
	Hole, cut, tear, smash, burn, drill hole, run, thin place, dye streak, color not as specified, misweave affecting appearance or serviceability
	Seam: puckered, distorted, pleated, wavy, twisted, irregular or open, loose or tight stitch tension, broken or missing thread or stitch, needle chew, visible mend, edge or raised stitching sewn too close to edge, resulting in damage to cloth, seam allowance not as specified, raw edge affecting appearance or serviceability
	Bartacks or backtacks missing, insecure, misplaced, not specified size, stitches loose or broken, bartack/backtack not serving intended purpose.
Shade	Shade variation within a part or between parts Thread color not as specified.
Cleanness	Spot, stain, excessive thread ends not trimmed or removed, odor, affecting appearance or serviceability
Labels	Omitted, incorrect, illegible, not attached where specified; bar-codes omitted, not readable by scanner; human-readable interpretation (HRI) omitted or illegible; bar code not visible on folded, packaged item; bar code attachment causes damage to the item.
Packaging	Any shirt not packaged in accordance with the contract or purchase order

5.5 Finished dimensions. The overalls shall conform to the dimensions listed in inches in the table below:

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Table of Finished Measurements

SIZE	1/2 chest 1/	Inseam 2/	Outseam 3/
X-Small S/R	14 1/2	23 5/8	37 1/2
X-Small Long	14 1/2	27 5/8	42
Small S/R	16 1/2	23 5/8	38
Small Long	16 1/2	27 5/8	42 1/2
Medium S/R	18 1/2	23 5/8	38 1/2
Medium Long	18 1/2	27 5/8	43
Large S/R	20 1/2	23 5/8	39
Large Long	20 1/2	27 5/8	43 1/2
X-Large S/R	22 1/2	23 5/8	39 1/2
X-Large Long	22 1/2	27 5/8	44
Tolerance	+3/4, - 1/2	+/- 3/4	+/- 3/4

Measurements should be taken as follows:

1/ Half Chest - Taken 1 inch below front top from folded edge to folded edge with slide fastener closed.
2/ Inseam measurements – Taken from the center of the crotch to the bottom edge of the leg along the seam.
3/ Outseam measurements - Taken from the topedge of top hem to the bottom edge of the leg parallel with slide fastener.

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6. PACKAGING

6.1 Packaging. The packaging requirements shall be as specified in the contract or purchase order.

7. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory unless otherwise stated in the contract or purchase order.)

7.1 Intended use. The overalls are for wear by military personnel of the Department of Defense as an insulation layer of the Extended Cold Weather Clothing System in field, combat, and operations other than war.

7.2 Acceptance criteria. Sampling for inspection shall be in accordance with ANZI/ASQC Z1.4. The end items shall be examined for visual defects listed in paragraph 5.4. The lot size shall be expressed in units of overalls. The sample unit shall be one overall. The inspection level shall be II and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 2.5 for major defects. The end item shall be examined for dimensional conformance in accordance with paragraph 5.5. Any dimension not within the specified tolerance shall be classified as a defect. The lot size shall be expressed in overalls. The sample unit shall be one shirt. The inspection level shall be S-3 and the AQL, expressed in terms of defects per hundred units, shall be 4.0. Requirements for this acceptance criteria shall be referenced in the contract or purchase order.

7.3 Government documents.

7.3.1 Specifications, standards, and handbooks. 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 shall be those listed in the issue of the department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation.

SPECIFICATIONS

MILITARY

MIL-T-5038	-	Tape, Textile, Nylon
MIL-C-43701	-	Cord, Elastic, Nylon

CIDS

A-A-52095	-	Thread, Polyester
A-A-55634	-	Fasteners, Slide
A-A-55126	-	Fastener Tape, Hook & Loop
A-A-50199	-	Thread, Cotton Covered, Polyester Core

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Source of Government documents. Copies of Military and Federal documents are available from:

Standardization Documents Order Desk
Bldg. 4D
700 Robbins Avenue
Philadelphia, PA 19111-5094

7.3.2 Other Government documents, drawings, and publications. The following Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those specified in the solicitation.

Code of Federal Regulations

(Applications for copies should be addressed to U.S. Government Printing Office, Superintendent of Documents, Mail stop: SSOP, Washington, DC 20402-9328.)

7.3.3 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issue of documents which are DOD adopted shall be those in the issue of the DODISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the documents cited in the solicitation.

ASTM D 3776 Standard Test Method for Mass Per Unit Area (Weight) of Fabric
ASTM D 1777 Standard Test Method for Thickness of Textile Materials
ASTM D737 Standard Test Method for Air Permeability of Textile Fabrics

AMERICAN SOCIETY FOR TESTING AND MATERIALS
(Applications for copies should be addressed to the American Society for Testing and Materials, 100 Barr Harbor, West Conshohocken, PA 19428-2959.)

AATCC TM 61 Colorfastness to Laundering, Home and Commercial: Accelerated
AATCC TM8 Colorfastness to Crocking: AATCC Crockmeter Method
AATCC 15 Colorfastness to Perspiration
AATCC TM16 Colorfastness to Light
AATCC TM 135 Dimensional Changes in Automatic Home Laundering of Woven and Knit Fabrics

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS
(Applications for copies should be addressed to the American Association of Textile Chemists and Colorists, P.O. Box 12215, Triangle Park, NC 27709-2215.)

ANSI/ASCQ Z1.4- Sampling Procedures and Tables for Inspection of Attributes

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(Applications for copies should be addressed to the American National Standards Institute, 1430 Broadway, New York, NY 10018-3308.)

7.3.4 Source of supply. Sources of suggested supply for the suspenders and the suspender fasteners

ITW
230 Gerry Drive
Wood Dalie, Illinois 60101

South Carolina Elastic Co.
Old Howard Gape Rd.
P.O. Box 837
Landrum, South Carolina 29356

MILITARY INTERESTS:

Custodians
Army - GL
Navy - MC

CIVIL AGENCY COORDINATING ACTIVITY:
GSA - FSS

PREPARING ACTIVITY:
DLA - CT
Project 8415-0198

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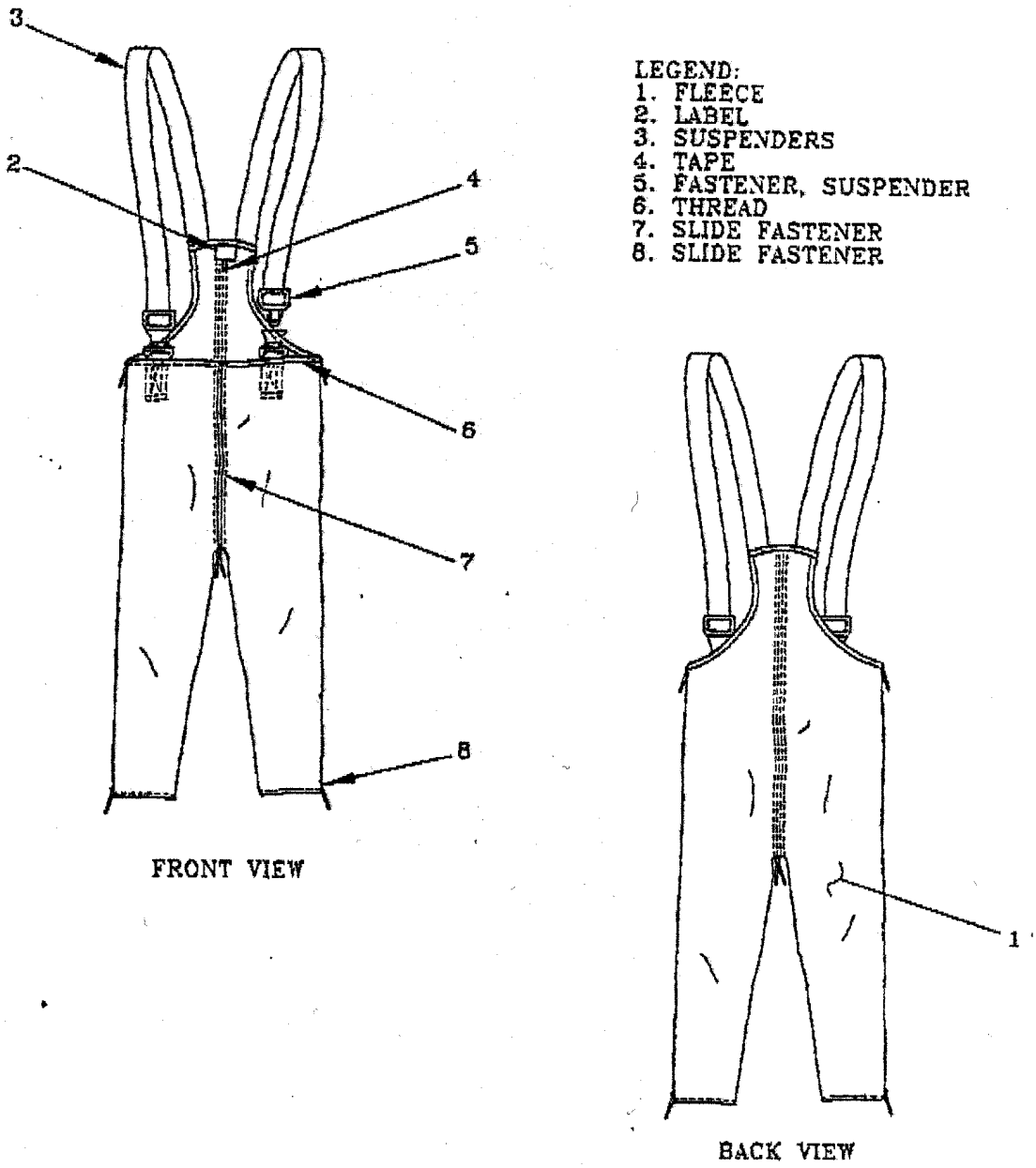

FIGURE 1