

A-A-59369

[INCH-POUND]
A-A-59369
27 August 2003

COMMERCIAL ITEM DESCRIPTION

UNDERSHIRT, SILK WEIGHT
SPEAR System, Lightweight Environmental Protection
(LEP), Layer-1

1. SCOPE.

1.1 Scope. This Commercial Item Description covers the requirements for Layer 1-Silk / Lightweight Undershirt fabricated in 100% polyester Polartec® Powerdry™ style 9023 plaited jersey knit that dimensionally wicks moisture/perspiration away from the body. The undershirt is intended for wear by male and female military personnel of the Department of Defense as an insulation layer of the Extended Cold Weather Clothing System (ECWCS).

- 2. CLASSIFICATION.** The undershirt shall be color Black 470 or Camouflage Green 483, as specified. The undershirt shall be of one type in the following sizes as specified:

SCHEDULE OF SIZES

Small- Regular (SR)	Medium-Regular (MR)	Large-Regular (LR)	Large-Long (LL)
Extra Large-Regular (XLR)	Extra Large-Long. (XLL)		

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 Ave Philadelphia, PA 19111-5096.

AMSC N/A

FSC 8415

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

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3. SALIENT CHARACTERISTICS.

3.1 Design and Construction. The Undershirt shall have a crew neck, contoured longer tail in back and long sleeves with a thumbhole (to aid in donning as well as adding additional protection to the hand/wrist area). All joining seams shall be flat locked construction to reduce chaffing and comfort in movement.

3.2 Basic Material. The following material shall be used to provide environmental protection, user comfort; lightweight and durability needed for wear in field, combat, and operations other than war. The basic material for the undershirt shall be 100% polyester circular knit plaited jersey, weight 3.6 +/- .04 ounces per square yard/ 6.5 +/- .07 ounces per lener, style Polartec® Powerdry™ style 9023 or product with equivalent performance characteristics. The contracting officer must approve any alternate material with equivalent performance characteristics. The fabric shall be Black 470 or Camouflage Green (CG-483), as specified. The material provides the required military appearance and functionality required by the military.

The fabric shall conform to the following requirements:

Fabric Specifications

CHARACTERISTIC	REQUIREMENT
Fiber Content	100% Polyester. Yarn Source U.S.A.
Construction	Plaited Jersey Circular Knit Silkweight Solid with face to back yarn denier differential
Width	60 inches minimum

CHARACTERISTIC	REQUIREMENT	TEST METHOD
Weight (oz. per square yard) (oz. per linear yard)	3.7 +/- 0.4 6.5 +/- 0.7	ASTM D3776
Colorfastness: Laundering	Good – 3.0	AATCC 61 Test No. 2a, 3 cycles, grade poly only
Crocking Light Carbon Arc Xenon	Dry - 4.0 / Wet – 3.0 20 Hrs. – Good - 4 85 Kj. – Good – 4	AATCC TM 8 AATCC TM 16 Option A Option E
Dimensional Stability – Avg.	Wales: 5.0% max. Courses: 5.0% max.	AATCC TM 135 – 3 cycles, 3, III, A, iii
Pilling	4	ASTM D3512 (Random Tumble)
Wicking	Pass	Water Drop Test 1/

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1/ Water Drop Test. Place a small specimen of the cloth on a smooth horizontal surface, face up. Using a pipette or eye dropper, gently deposit one drop of water on the surface of the specimen. After 1 minute, examine the specimen under light at an angle. Absence of light reflectance at the fabric-drop interface shall be taken as evidence of wetting. Three specimens (or areas) taken at various locations across the sample shall be tested. The finished cloth shall show no wetting by water either initially or after 5 launderings. Evidence of wetting on one or more specimens shall be considered a test failure.

3.2.1 Thread. Thread for needle and bobbin (looper) shall be commercial 100% textured polyester thread, size Tex-24 with minimum breaking strength of 2.1 lbs. conforming to type I, class 1 of A-A-52095. The thread shall be non-staining and show good colorfastness to laundering (after 3 cycles) when tested in accordance with ASTM D204 except the specimen should be dried after each of the 3 laundering cycles and the color transfer cloth evaluation should not apply. The thread color shall match the color of basic material.

3.2.2 Labels. Each undershirt 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, NSN 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 garment. If available, a basic material supplier care label and hang tag may be used, except the information must be as cited in paragraph 3.2.3.

3.2.3 Care Label. The care/instruction label for Undershirt shall read:

**Machine wash warm,
Tumble dry low
Do not bleach.
Do not iron.
Do not dry clean.
Avoid the use of fabric softners**

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

SMALL REGULAR

UNDERSHIRT, SILKWEIGHT, LAYER 1
100% POLYESTER
CONTRACT #: xxxxxx-xx-x-xxxx
NSN #: xxxx-xx-xxx-xxxx
Contractor's Name

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3.2.5 Label/Tag. Each undershirt shall have a bar-code label affixed to the garment. The barcode label shall be clearly legible and readable by 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 Department of Defense Logistics Applications of Automated Marking and Reading Symbols (DOD LOGMARS) symbology. DoD LOGMARS is a worldwide standard for government item identification. It must be located so that it is completely visible when the garment is folded and /or packaged and shall cause no damage to the item.

3.2.6 Label Placement. The labels shall be securely attached to the undershirt and positioned as follows:

Care label and Identification/Size label shall be combined and attached to center back neck (+/- 3/4 inch off center) and caught in left side seam near bottom of shirt.

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. 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 / Item	Nomenclature	Cut Parts
100% polyester Polartec® Powerdry plaited jersey knit	Front	1
	Back	1
	Sleeve	2
	Cuff (with thumb hole)	2
	Collar binding (1 inch wide Cross-cut)	1

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 construction and appearance shall conform to Figure 1 – Undershirt.

3.4.1 Seaming. The seams shall be consistent, exhibit a uniform appearance and conform to ASTM D-6193, Stitch and Seam Types listed in the Construction of Undershirt Table II below. All material edges shall not ravel.

TABLE – II. Construction of Undershirt.

No.	Operation	Stitch Type	Seam Type
UNDERSHIRT			
1.	Join right shoulders together.	607	FSa-1
2.	Set 1 inch wide binding tape around collar.	605	BSa-2

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3.	Join left shoulders together.	607	FSa-1
4.	Set sleeves and close sleeves and side seams. Size/Care label Caught in left side seam(as worn) 2 inches \pm 1/2 inch from Bottom of undershirt.	607	FSa-1
5.	Make Cuffs with thumb hole.	301	SSa-1
6.	Set cuff to sleeves.	504	SSa-1
7.	Hem 1/2 inch \pm 1/8 inch bottom of the shirt.	605	EFa-2
8.	Bartack top and bottom of cuff thumb opening and collar Seam at the left shoulder (as worn).	Bartack	-

3.5 Finished Dimensions. The finished Silk/Lightweight Undershirt shall conform to the measurements listed in the Table-III.

Table – III. Undershirt Finished Measurements

SIZE	1/2 – CHEST (1)	1/2 - NECK (2)	BACK LENGTH (3)
SMALL	20-1/4"	9-1/8"	29-5/8"
MEDIUM	21-3/4"	9-1/2"	30-1/8"
LARGE	23-1/4"	9-7/8"	30-5/8"
X-LARGE	25-1/4"	10-3/8"	31-1/8"
LARGE-LONG	23-1/4"	9-7/8"	32-5/8"
X-LARGE-LONG	25-1/4"	10-3/8"	33-1/8"
TOLERANCE	\pm 1/2"	\pm 1/4"	+ 1" - 3/4"

Note: 1/4" Seam Allowance for sewing.

- (1) Chest measurement taken from armseye to armseye with garment laid flat.
- (2) Neck measurement taken along neckline folded edge to folded edge with garment laid flat.
- (3) Back Length measurement taken from center of collar to bottom of shirt with garment laid flat.

Cuff Width: 4 inches, \pm 1/4 inch, for all sizes.

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 cited patterns, 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/ASQCZ1.4, as defined by contract, except where otherwise indicated.

5.3 Component and End Item Inspection. In accordance with 3.2 and 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 Undershirt 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 Undershirt 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.
Cleanness	Spot, stain, excessive thread ends not trimmed or removed, odor, affecting appearance or serviceability.
Shade	Shade variation within a part or between parts. Thread color not as specified.
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 Undershirt not packaged in accordance with the contract or purchase order.

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6. PACKAGING.

6.1 Packaging. The packaging, packing marking used shall be in accordance with ASTM D 3951. Each undershirt shall be packed individually in a commercially acceptable plastic bag and thirty (30) undershirts shall be packed in each box.

6.2 Marking. Marking shall be in accordance with MIL-STD-129.

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 undershirts are for wear by military personnel of the Department of Defense. They are intended for Special Operations Forces Personal Equipment Advance Requirements (SPEAR). They are used 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 undershirts. The sample unit shall be one undershirt. 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 units of undershirts. The sample size shall be one undershirt. 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

Commercial Item Descriptions (CIDS)

A-A-52095 - Thread, Polyester, Textured

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

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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 Acquisition Streamling and Standardization Information System (ASSIST) database cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the ASSIST are the documents cited in the solicitation.

AMERICAN SOCIETY FOR TESTING AND MATERIALS

(For all inquires please contact the American Society for Testing and Materials, 100 Barr Harbor, West Conshohocken, PA 19428-2959). Website address <http://www.astm.org>

ASTM D 3776 Standard Test Method for Mass Per Unit Area (Weight) of Fabric
ASTM D 737 Standard Test Method for Air Permeability of Textile Fabrics
ASTM D 6193 Stitch and Seam Types
ASTM D 3951 Standard Test Method for Commercial Packaging
ASTM D 3512 Standard Test Method for Pilling
ASTM D 204 Standard Test Method for Sewing Threads

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS

(For all inquires please contact the American Association of Textile Chemists and Colorists, P.O. Box 12215, Triangle Park, NC 27709-2215). Website address <http://www.aatcc.org>.

AATCC TM 61 Colorfastness to Laundering, Home and Commercial:
Accelerated
AATCC TM 8 Colorfastness to Crocking: AATCC Crockmeter Method
AATCC 15 Colorfastness to Perspiration
AATCC TM 16 Colorfastness to Light
AATCC TM 135 Dimensional Changes in Automatic Home Laundering
of Woven and Knit Fabrics

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ANSI/ASCQ Z1.4- Sampling Procedures and Tables for Inspection of Attributes
(For all inquiries please contact the American National Standards Institute, 25
West 43rd Street, 4th Floor, New York, NY 10036). Website address
<http://www.ansi.org>.

7.3.4 Source of supply. Sources of suggested supply for the Polartec(R)
PowerDry(TM) Silkweight style 9023.

Malden Mills Industries, Inc.
550 Broadway
Lawrence, MA 01841

*Note: The contracting officer must approve any alternate material with equivalent
performance characteristics.*

1/ Polartec® PowerDry(TM) Performance Characteristics

Polartec(R) and PowerDry(TM) are registered trademarks of Malden Mills
Industries, Inc.

Polartec(R) PowerDry(TM) adds value by offering three key benefits:

1. Dimensional moisture management. Patented bi-component construction
keeps your skin dry when you sweat. Outer surface pulls sweat through the
fabric and spreads it over a wider surface area for maximum evaporation.
Soft inner surface remains dry and comfortable next to skin.
2. Highly breathable to provide comfort in all activities; does not
restrict the movement of moisture vapor.
3. Dries quickly.

Additional benefits of Polartec(R) Powerdry(TM): Provides very good sun
protection (UPF 15) even when wet, soft surface next to skin provides
all-day comfort, machine washable, lightweight and packable.

MILITARY INTERESTS:

Custodians
Army - GL
Navy - MC

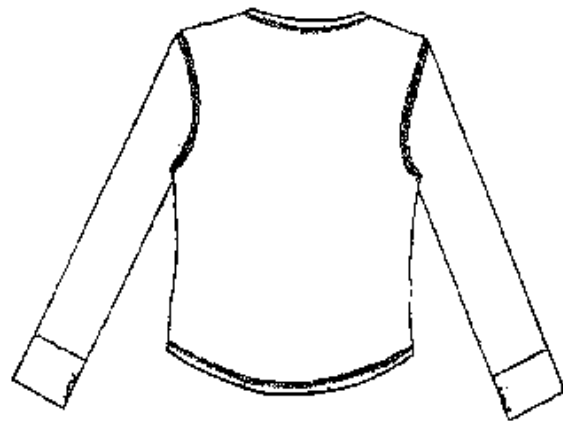
CIVIL AGENCY COORDINATING
ACTIVITY:
GSA - FSS

PREPARING ACTIVITY:
DLA - CT
Project 8415-0245

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Front View



Back View

Figure - Silk Weight, Undershirt