

[INCH-POUND]  
A-A-55297  
December 20, 1999  
SUPERSEDING  
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## COMMERCIAL ITEM DESCRIPTION

### SHIRT, MAN'S (POLYESTER/COTTON, TROPICAL, SHORT SLEEVE)

The General Services Administration has authorized the use of this commercial item description for all Federal agencies.

1. SCOPE. This commercial item description covers the requirements for a polyester/cotton short sleeve shirt. The shirt is worn by male personnel of the Navy.

2. CLASSIFICATION. The shirt shall be in the following classes and sizes:

Class 1 - White (with shoulder loops)

Class 2 - Khaki (without shoulder loops)

Class 3 - White (without shoulder loops)

#### Schedule of sizes

Extra Small (XS), Small (S), Medium (M), Large (L), Extra Large (XL),

Extra Extra Large (XXL), Extra Extra Extra Large (XXXL)

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Beneficial comments (recommendations, additions, deletions, clarifications, etc. and any data which may improve this document should be sent to: Defense Supply Center Philadelphia, ATTN: DSCP-CRDD, 700 Robbins Avenue, Bldg. 6D, Philadelphia, Pennsylvania 19111-5092.
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3. SALIENT CHARACTERISTICS

3.1 Description. The short sleeve shirt shall have turned-back facing, notched collar with collar stays and a back yoke. The front shall have a five-button closure with straight style buttonholes with securely barred ends, and breast pockets with button down flaps. The collar and pocket flaps shall have fusible interlining. The finished pockets shall measure 5-1/2 ( $\pm$  1/8) inches in length and 5 ( $\pm$  1/8) inches in width for all sizes. The pockets shall be edge stitched 1/16 inch from the folded edge along the sides and bottom. The finished pocket flaps shall measure 5-1/4 ( $\pm$  1/8) inches in width, 2-1/2 ( $\pm$  1/8) inches in depth at the center point, and 1-3/4 ( $\pm$  1/8) inches in depth at the sides. The pocket flaps shall be edge stitched 1/16 inch from the folded edge along the sides and pointed bottom edge. After the flap is attached, the flap shall be turned down and stitched 3/16 to 1/4 inch from the folded edge enclosing raw edges. The pencil pocket shall be stitched to the left front of the shirt as indicated on the patterns. The finished pencil pocket shall be 2 ( $\pm$  1/8) inches wide. Two compartments shall be formed with a row of vertical stitching at the center of the pocket.

The collar shall be edge stitched 1/16 inch from the sides and outer edge. The finished collar shall measure 3-1/4 ( $\pm$  1/8) inches wide at the center back and the length shall measure 3-1/4 ( $\pm$  1/8) inches at the collar points. The length between the collar points shall not vary more than 1/16 inch. All raw edges of the shirt shall be overedge stitched.

The back yoke shall be edge stitched 1/16 inch from the edge across the back. The shirt hem shall finish 1/4 ( $\pm$  1/16) inch with the raw edge turned under. The hem on the bottom of the sleeve shall finish 1 ( $\pm$  1/8) inches with the raw edge turned under.

There shall be a combination identification and instruction label centered at the back of neck undercollar and sewn into the collar seam. The shirt shall be pressed completely, and the sleeves shall be creased along the top. All pressing shall be performed with a heated pressing iron or a machine at a suitable temperature for synthetics.

3.1.1 Class 1 (only). The finished shoulder loops shall measure 1/4 to 5/16 inch wide, and shall be double stitched not less than 3/16 inch wide gauge. The shoulder loops shall be inserted into the seam as indicated by pattern marks, or the free end of loop can be turned under and auto-looped tacked or bartacked to the shirt through the yoke and back extending the width of the loop but not beyond. The loop nearest the collar shall have a free opening of 1 ( $\pm$  1/8) inch and the loop nearest the armhole seam shall have a free opening of 1-3/8 ( $\pm$  1/8) inches.

3.2 Material

3.2.1 Basic material. The basic material for the shirt shall be a polyester/cotton poplin cloth. The class 1 and 3 shirts shall be White Shade 3013, and the class 2 shirt shall be Khaki Shade 3729 as defined in the contract.

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3.2.1.1 Cloth requirements. The cloth shall be a plain weave. The yarn shall be a blend of  $65 \pm 5$  percent polyester and  $35 \pm 5$  percent combed cotton. The yarns shall be a blend of polyester and cotton drawn and spun into singles yarns for both the filling and warp (and shall be given a visual test). The cloth shall conform to the requirements specified in Table I.

TABLE I. Physical requirements

Characteristic	Requirements	Test method
Weight (oz./sq. yd.)		
Minimum	4.1	ASTM-D-3776, Opt. C
Maximum	4.6	ASTM-D-3776, Opt. C
Yarns per inch		
Warp	102	ASTM-D-3775
Filling	50	ASTM-D-3775
Breaking strength (lb., min.)		
Warp	120	ASTM-D-5034, Opt. G-T or G-E
Filling	50	ASTM-D-5034, Opt. G-T or G-E
Colorfastness to:		
Light	3 – 4	AATCC 16, Opt. A
Laundering	3 – 4	AATCC 61, Test 3A
Perspiration	3 – 4	AATCC 15
Dimensional change (percent, max.)		
Warp	2.0	AATCC 96, Opt. Vc and D
Filling	2.0	AATCC 96, Opt. Vc and D

3.2.2 Fusible interlining. A nonwoven fusible interlining shall be used to fuse the pocket flaps and topcollar. The fusible for the pocket flaps shall have a thermal bonded nonwoven substrate fabricated from fibers of polyester and nylon. The polyester adhesive shall be evenly applied in a suitable weight. The fusible interlining including adhesive shall weigh a minimum of 1.7 ounces per square yard and a maximum of 2.4 ounces per square yard. The minimum breaking strength shall be 3.0 pounds in the warp direction and 2.0 pounds in the filling direction when tested in accordance with ASTM-D-5034.

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The fusible for the topcollar shall have a plain weave substrate fabricated from fibers of carded or combed cotton. The polyethylene, high-density adhesive shall be evenly applied in a suitable weight. The fusible interlining including adhesive shall weigh a minimum of 4.0 ounces per square yard and a maximum of 5.0 ounces per square yard. The minimum breaking strength shall be 35 pounds in the warp direction and 25 pounds in the filling direction when tested in accordance with ASTM-D-5034. For both the pocket flaps and topcollar, the initial bond strength, after fusing to the shell fabric, shall be a minimum of 32 ounces per inch in the machine direction and a minimum of 24 ounces per inch after 3 launderings. The bond strength shall be considered acceptable if either begins to debond from the outer shell material (polyester/cotton poplin cloth) at a value equivalent to the minimum bond strength or higher, and then splits from itself, or debonds at a minimum of 20 ounces per inch (initial state) or 17 ounces per inch after the laundering state when tested in accordance with ASTM-D-2724. The color of the fusible shall be white, and the fusible cloth shall not shrink or elongate in excess of 3.0 percent in either warp or filling direction after one laundering when tested as specified in AATCC 96. The dyed and finished cloth shall show colorfastness to laundering, rating of "3-4" when tested in accordance with AATCC 61-3A and colorfastness to dry heat, rating of "3-4" when tested in accordance with AATCC 117. The appearance of the fused sample shall show no evidence of bubbling, delamination, or strike through..

3.2.3 Buttons. The buttons for the shirts shall be sewing-hole buttons. The buttons for the class 2 shirts shall be of a melamine formaldehyde composition, size 20-line, 4 lines in thickness, color Khaki A (see 7.2). The buttons for the class 1 and 3 shirts shall be of a pearlescent-polyester composition, size 19-line, 4 lines in thickness, color White BA (see 7.2). The color of the buttons shall be a good match to the standard sample. The buttons shall have a glossy finish. The compressive strength shall be 150 lb., min. for the 20-line buttons and 500 lb., min for the size 19-line buttons.

3.2.4 Buttonholes. The buttonholes shall be straight style with both ends securely barred. The finished cut length shall be  $1/2 \pm 9/16$ .

3.2.5 Collar stays. The collar stays shall be made from polyethylene terephthalate plastic sheet. The thickness shall be  $0.010 \pm 0.001$  inch. The color shall be natural (clear or opaque) and the transparency and optical properties shall not apply. The stays shall measure from 1/4 to 3/8 inch wide and 3 inches long. Both ends shall be either round, pointed, cut on an angle, or any combination thereof. When other than round, points shall be rounded

3.2.6 Thread. The thread shall be cotton-covered, polyester core, Tex 35, 2 ply, with a breaking strength of 2.6 pounds minimum and 26 percent maximum elongation when tested in accordance with ASTM-D-2256. Unless otherwise specified, the direction of the twist for plied thread shall be "Z". The thread shall be White AH for class 1 and 3, and dyed Khaki P-1 for class 2 and shall be a good match to the basic material (see 7.2).

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The dyed and finished thread shall show fastness to laundering (3 cycles; dried after each cycle), dry heat, light (exposure time shall be 40 standard fading hours; and when specified, perspiration, and weathering (exposure time shall be 80 hours) equal to or better than the standard sample when tested according to AATCC 61-3A, AATCC 117, AATCC 16, Opt. A, AATCC 15, and AATCC 111A, respectively. The dyed thread shall be compared to the standard sample under artificial daylight at  $7000 \pm 500\text{K}$  and iridescent lamplight at  $2850 \pm 100\text{K}$ . The thread shall contain only the minimum amount of lubricant to facilitate sewing. The yarn finish shall be non-staining and non-flame propagating.

3.3 Sizes and measurements. Sizes and measurements of the finished shirts shall be as shown in Table II.

TABLE II. Sizes and measurements (inches)

	A	B	C	D	E
Size	Chest	Back Length	Yoke Width	Sleeve Length	Collar
Extra Small	37	30-1/2	16	6-3/8	14
Small	41	31	17	6-3/8	15
Medium	45	31-1/2	18	6-3/8	16
Large	49	32	19	6-3/8	17
Extra Large	53	32-1/2	20	6-3/8	18
Extra Extra Large	57	33	21	6-3/8	19
Extra Extra Extra Large	61	33-1/2	22	6-3/8	20
Tolerance	$\pm 1$	$\pm \frac{1}{2}$	$\pm \frac{1}{2}$	$\pm \frac{1}{4}$	$\pm \frac{1}{4}$

NOTE: Refer to Figure 1 for measurements A-E. Measurements A, B, C, and D shall be taken with the shirt fully buttoned, laid flat, and in a relaxed condition. Measurement E shall be taken with the shirt unbuttoned.

- A. Chest – Twice the measurement taken across the front at base of armholes from folded edge to folded edge.
- B. Back length - Measurement shall be taken along center of back from neckline seam to bottom of shirt.
- C. Yoke width – Measurement shall be taken across the back along the base of the yoke from sleeve seam to sleeve seam.
- D. Sleeve length – Measurement shall be taken from base of armhole (junction of seam) along inseam to bottom of sleeve.

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7.2 Label. Each shirt shall have a commercial size label and a combination identification/instruction label. The labels shall be bleached white. The printing shall be black and consist of suitable non-toxic dyes or pigments in a medium that yields a permanent impression. It shall not show off setting, smearing, bleeding, or discoloration. The combination label shall be legibly stamped or stitched on the outside of the left shirttail. The label shall be positioned with the left edge of printing 3 inches from the left front turned edge, and the top edge of printing not more than 5 inches from bottom hemmed edge. The contents of the labels shall be as follows:

Combination identification/laundrying label:

Size label:

Item description  
Contract number  
Fiber content  
Contractor's name  
Applicable care instructions

Size  
Stock number

#### LAUNDERING INSTRUCTIONS

Machine wash – warm water – no bleach  
Tumble dry – medium heat – remove promptly  
or  
Follow Shipboard Wash Formula II

The size label shall be caught in stitching at center of neck undercollar joining seam. As an alternate, the size label can be stamped on the inside bottom edge of top collar and centered  $\pm 1/2$  inch. There shall be no evidence of the printing visible on outside of finished collar.

NOTE: The use of a steam inflated bag type machine is prohibited for pressing.

3.4.1 Label/tag. Each item shall be individually bar-coded with a paper tag for personal clothing items. The paper tag shall be standard bleached sulfate having a basis weight of 100 pounds. The paper used for the tags shall have a smooth finish to accept thermal transfer and direct printing. The tags shall have a hole and shall be attached to each item by a fastener, clearly legible and readable by a scanner. The bar coding element shall be a 13 digit national stock number (NSN). The bar code type shall be a medium to high code density and shall be located so that it is completely visible on the item when it is folded and/or packaged as specified and so that it causes no damage to the item.

7.2 Patterns. A set of standard patterns to be used to cut working patterns will be furnished by the Government. The working patterns shall be identical to the Government patterns. Neither the Government patterns nor the working patterns shall be altered in any way, except for additional notches used during construction are allowed on the working patterns. Minor modifications are permitted where necessary when using automatic equipment. These modifications shall not alter the dimensional, serviceability, or appearance requirements. The standard patterns provide for a seam allowance of 3/8 inch for all joining seams and 1/4 inch for all other seams.

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4. REGULATORY REQUIREMENTS. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

5. QUALITY ASSURANCE PROVISIONS

5.1 Product conformance. The product offered meets the salient characteristics of this commercial item description, conforms to the producer's own drawings, specifications, standards and quality assurance practices, and be a similar product that is offered for sale in the commercial market. The Government reserves the right to require proof of such conformance.

5.2 Market acceptance criteria. The item offered, or a generic equivalent, must have been sold to the commercial market or to the Government.

5.3 Visual examination. Each shirt shall be examined for the defects listed in 5.3.1.

5.3.1 Defects. Any hole, cut, tear, broken or missing threads or stitches; thread color not as specified; any shaded part or shade variation; any spot, stain, or woven-in waste; any permanent fold, pleat, or crease; any thread ends not trimmed; any component parts not as specified or omitted; any seam puckered, distorted, pleated, irregular, or open; loose or tight stitch tension; seam allowance not as specified; shoulder loop not positioned as specified or attached crookedly; breast pocket or flap not uniform in size or shape; any measurement varying from pocket to pocket or flap to flap by more than 3/8 inch; pocket/flap out of alignment at any point from pocket to pocket or flap to flap by more than 1/4 inch or more; fronts uneven in length at bottom when buttoned by more than 1/2 inch; button missing, broken, misplaced, or not of the specified type or color; buttonhole missing, improper size, misaligned, not clearly cut or formed, or not of the specified type; collar points uneven in length by more than 1/8 inch; collar ends opening less than 5/8 inch or more than 7/8 inch when collar is buttoned; collar stay missing, misplaced, or loose; fusible twisted, causing puckers or pleats; any evidence of bleedthrough; label missing, incorrect, or illegible; measurement of item not as specified; bar code omitted or not readable by scanner; human-readable interpretation (HRI) omitted or illegible; bar code not visible on folded, packaged item; bar code causes damage to the item; any item not packaged in accordance with the contract or purchase order.

5.4 Acceptance criteria. Acceptance criteria shall be as specified in the contract or purchase order.

6. PACKAGING

6.1 Preservation, packing, and marking. The preservation, packing, and marking shall be as specified in the contract or purchase order.

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7. NOTES

7.1 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

7.2 Source of non-Government documents

ASTM-D-2256 -	Tensile Properties of Yarns by the Single-Strand Method
ASTM-D-2724 -	Bonded, Fused, and Apparel Fabrics
ASTM-D-3775 -	Fabric Count of Woven Fabric
ASTM-D-3776 -	Mass Per Unit Area (Weight) of Fabric
ASTM-D-5034 -	Breaking Force and Elongation of Textile Fabrics (Grab Test), G-E or G-T

(Applications for copies should be addressed to American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.)

AATCC 15 -	Colorfastness to Perspiration
AATCC 16 -	Colorfastness to Light
AATCC 61 -	Colorfastness to Laundering, Home and Commercial: Accelerated
AATCC 96 -	Dimensional Changes in Commercial Laundering of Woven And Knitted Fabric Except Wool
AATCC 111 -	Weather Resistance: Sunshine Arc Lamp Exposure with Welting
AATCC 117 -	Colorfastness to Heat: Dry (Excluding Pressing)

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

## COLOR ASSOCIATION OF THE UNITED STATES

## Standard Color Card of America

(Standard shades may be available from the Color Association of the United States, Inc., 589 8<sup>th</sup> Avenue, New York, NY 10018. If standard shade are not available from the Color Association, individual color samples may be obtained from the contracting activity or as directed by the contracting activity.)



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Custodian:  
Navy - NU

Civil Agency Coordinating  
Activity:

GSA - FSS

Preparing Activity:

DLA - CT

Project 8405-0242

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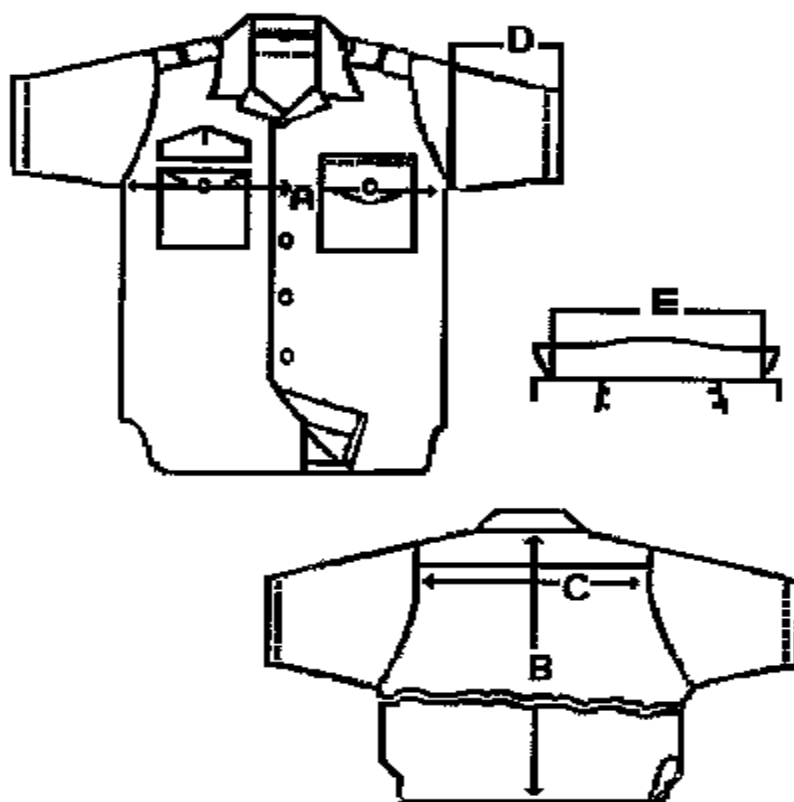


FIGURE 1. Shirt, Man's (Polyester/Cotton, Tropical, Short Sleeve)

NOTE: The left front patch pocket shall contain a pen  
And pencil pocket not visible from the outside