

INCH-POUND

A-A-55234A  
November 7, 1994  
 SUPERSEDING  
 A-A-55234  
 November 2, 1993

## COMMERCIAL ITEM DESCRIPTION

## CLOTH, KNITTED, NYLON, FLEECE

The General Services Administration has authorized the use of this commercial item description as a replacement for MIL-C-17155 for all federal agencies.

1. SCOPE. This commercial item description covers the requirements for a knitted nylon fleece fabric. The cloth is intended for use as a lining material. Type I is used as a lining material for cold weather clothing; Type II is used as a lining material in the enlisted man's and woman's water repellent and wind resistant utility jacket; and Type III is intended for use as a lining material for outerwear.

2. CLASSIFICATION. The fabric shall be one of the following types:

Type I - 9.5 to 11.5 ounces per square yard, Green 3405

Type II - 6.0 to 6.8 ounces per square yard, Blue 3308

Type III - 9.0 to 10.0 ounces per square yard, Black 3234

3. SALIENT CHARACTERISTICS

3.1 Material. The fabric shall be either a warp or circular knit containing continuous filament nylon yarn. The napped side shall be designated as the face of the material. The circular knit cloth shall be slit prior to napping. The cloth shall be evenly napped to form a non-directional pile on the face. The cloth must be preconditioned.

Beneficial comments, recommendations, additions, deletions, clarifications, etc., and any data which may improve this document should be sent to: Defense Personnel Support Center, Clothing and Textiles Directorate, ATTN: DPSC-FQSD, 2800 South 20th Street, Philadelphia, PA 19145-5099.

AMSC N/A

FSC 8305

DISTRIBUTION STATEMENT A:

*Approved for public release;  
 distribution is unlimited.*

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3.2 Physical requirements. The finished cloth shall conform to the following requirements:

Table I

Characteristics	Type I		Type II		Type III	
	Face	Back	Face	Back	Face	Back
Yarn denier <u>1/</u> <u>2/</u>	200	70	70	70	200	100
Weight (oz/sq.yd.)	9.5 to 11.5		6.0 to 6.8		9.0 to 10.0	
Thickness (inches minimum)						
0.1 psi	0.17		0.05		0.11	
1.1 psi	0.11		0.03		0.06	
Yarns per inch (minimum)						
Wales <u>3/</u>	28		31		24	
Courses <u>3/</u>	28		41		31	
Bursting strength (pounds minimum)	100		170		150	
Elongation (percent maximum)						
Course direction	130		75		130	
Dimensional change (percent maximum)						
Circular knit						
Wales	8.0		6.0		6.0	
Courses	5.0		4.0		4.0	
Warp knit						
Wales	8.0		4.0		6.0	
Courses	5.0		6.0		4.0	

1/ alternate denier for Type I Face - 210

2/ alternate deniers for Type II Face - 100  
Back - 140

3/ alternate construction for Type II - 24 wales by 39 courses

3.3 Matching. The finished cloth shall match the standard sample when viewed under filtered tungsten lamps which approximate artificial

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daylight having a correlated color temperature of 7500 K ( $\pm 200$  K) with illumination of 100 feet ( $\pm 20$  feet) candles, and shall be a good match to the standard sample under incandescent lamplight at 2300 K ( $\pm 200$  K).

3.4 Color. The color for type I shall be Green Shade 3405, and shall match standard sample piece number 888. The color for type II shall approximate Blue Shade 3308. The color for type III shall be Black Shade 3234, and shall match standard sample piece number 78277.

3.5 Label/tag. Each roll shall be individually bar-coded with the Type VII or VIII, Class 17 label/tag of DDD-L-20 — Label: For Clothing, Equipage, And Tentage (General Use). This label/tag shall be located so that it is completely visible on each roll and causes no damage to the item.

#### 4. REGULATORY REQUIREMENTS

4.1 Recovered materials. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with Public Law 94-580 and paragraph 23.403 of the Federal Acquisition Regulations (FAR).

4.2 Fiber identification. Each piece shall be labeled, or ticketed for fiber content in accordance with the Rules and Regulations Under the Textile Fiber Products Identification Act.

#### 5. QUALITY ASSURANCE PROVISIONS

5.1 Certification. The contractor shall certify and maintain substantiating evidence, that the product offered meets the salient characteristics and requirements of this commercial item description; conforms to the producer's own drawings, specifications, standards, and quality assurance practices; and is the same product offered for sale in the commercial marketplace. The Government reserves the right to require proof of such conformance prior to the first delivery and thereafter as may be otherwise provided for under the provisions of the contract or purchase order.

5.2 Market acceptability criteria. The cloth offered must have been sold to the commercial market or to the Government, and the contractor shall certify and provide supporting documentation as to its serviceability and the long term (five years) availability of all necessary maintenance and logistics support parts and materials.

5.3 Warranty. The item offered shall include the standard warranty given to the commercial market beginning with the date of delivery of the individual items.

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5.4 Visual examination. The cloth shall be examined for the defects listed below.

5.4.1 Defects. Any hole, cut, or tear; broken or missing yarn; knot or slub; color not as specified; any part shaded; any spot or stain; poor workmanship; label missing, incorrect, or illegible; bar code omitted or not readable by scanner; human-readable interpretation (HRI) omitted or illegible; bar code not visible on roll of cloth; bar code causes damage to the cloth; not packaged in accordance with the contract or purchase order.

5.5 Yard by yard examination. The finished cloth shall conform to the dimensions specified. Any dimension that is not within the established tolerance shall be classified as a defect. The lot size shall be expressed in units of yards. The sample unit is one linear yard. The required yardage of each roll shall be examined on one side only. The side examined; however, shall be alternated so that the alternate rolls are examined on the face and back respectively. The visual defects listed in MIL-STD-1491 shall be classified and scored to the extent that they are clearly visible at normal inspection distance of 3 feet ( $\pm 1$  foot) on the side of the cloth under examination. Defects listed in Table IV, Overall Examination, shall not be scored in the yard by yard examination. All defects found shall be counted regardless of their proximity to each other, except where two or more defects represent a single local condition of the cloth, in which case only the more serious defect shall be counted. A continuous defect shall be counted as one defect for each lengthwise yard or fraction thereof in which it occurs. The sample unit for this examination shall be one linear yard. The lot size shall be expressed in units of one linear yard each.

Table II Sample Size

Lot size in yards	Number of rolls	Maximum number of defects acceptable
Up to 1200 <u>1/</u>	3	0
1201 to 3200	5	0
3201 to 10,000	8	0
10,001 to 35,000	13	0
35,001 to 150,000	20	1
150,000 and over	32	2

1/ If lot is fewer than three rolls, each roll in the lot shall be examined.

5.6 Overall examination. Each defect listed below shall be counted not more than once in each roll examined. The sample unit shall be

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one roll. The sample size (number of rolls selected to sample) and the acceptance number (maximum number of defects acceptable) shall be as shown in Table III. The rolls selected for the yard by yard examination shall be included in this examination.

5.7 Testing of end item. Prior to testing the cloth shall be preconditioned in accordance with 5.5. The methods of testing are specified in Table III.

<u>Lot size (yards)</u>	<u>Sample size</u>
800 or less	2
801 up to and including 22,000	3
22,001 and over	5

The physical requirements specified in Table I apply to the average of the determinations made on a sample unit for the test purposes specified in the applicable test methods except for thickness. For thickness characteristics, the lot average of all sample units in the sample shall apply and the lot shall be unacceptable if the lot average fails to meet the minimum thickness requirements specified. All test reports shall contain the individual values utilized in expressing the final result. The sample unit for testing shall be 3-1/2 yards, full width of the finished cloth. The lot size shall be expressed in units of one yard each. The lot shall be unacceptable, except for thickness, if one or more units fail to meet any test requirements specified. The sample size (number of sample units to be tested) shall be in accordance with the following:

Table III Test Methods

<u>Characteristic</u>	<u>Test method</u>
Fiber identification .....	AATCC 20 <u>1/</u>
Yarn denier .....	<u>1/</u>
Yarn filament .....	Visual <u>1/</u>
Knit .....	Visual <u>1/</u>
Color .....	Visual <u>2/</u>
Weight oz/sq.yd. ....	ASTM-D 3776 (Option C)
Thickness (inches) .....	ASTM-D 1777 <u>3/</u>
Yarns per inch .....	ASTM-D 3887
Bursting strength (lbs.) .....	ASTM-D 3787 <u>4/</u>
Shrinkage (%) .....	FED STD 191 - Method 5556 <u>5/</u>
Colorfastness to:	
Laundering (after 3 cycles) .....	AATCC 61-4A <u>6/</u>
Dry cleaning .....	AATCC 132
Crocking .....	AATCC 8
Perspiration .....	AATCC 15
Preconditioning .....	(See 5.6)
Elongation (%) .....	(See 5.7)
pH	<u>7/</u>

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- 1/ A contractor's certificate of compliance (COC) shall be accepted for this characteristic.
- 2/ One determination per sample unit with result reported as "Pass" or "Fail."
- 3/ Five, 4 inch by 4 inch specimens for each load shall be cleanly cut from the fabric. No two specimens shall contain the same walewise or coursewise yarns. The nap shall be facing up and the results shall be the average of 5 readings for each load.
- 4/ Tests shall be performed with nap facing down.
- 5/ The cotton laundering procedure shall be used.
- 6/ The temperature shall be 140°F ( $\pm$  2 degrees) for Type II cloth. The specimen must be dried after each complete laundering cycle. Only the stain on the nylon fibers of the color transfer cloth shall be evaluated. Type III does not require colorfastness to laundering testing.
- 7/ The pH value of the water extract of the finished cloth shall be not less than 4.0 and not greater than 8.5.

5.8 Preconditioning. The fleece shall be preconditioned by placing the sample in a tumble-type rotary dryer, having a cylindrical basket approximately 30 inches in diameter, 24 inches in length and rotating at approximately 35 RPM. The dryer shall be provided with a means of maintaining a stack temperature of 140° - 160°F. The sample shall be tumbled at this temperature range 30 or 40 minutes with a twenty to twenty-five pound ballast load. The sample shall be conditioned for 24 hours at 70°F and 65 percent relative humidity.

5.9 Elongation. The cloth in the course direction shall be measured on an inclined plane tester of the IP-4 type or equivalent. A suitable autographic recording device shall be provided. Five specimens, each containing different wales and courses, shall be cut 4 by 6 inches with the long dimension parallel to the course direction. The specimen shall be fastened, without tension or slack, between one inch wide flat-type clamps set 3 inches apart. The machine shall be run through 10 complete cycles under a maximum test load of 15 pounds. An individual elongation graph shall be used for each specimen. The elongation shall be the average of the results obtained from the five specimens tested, when measured at the peak of the last recorded cycle, in a line perpendicular to the horizontal zero axis. The results shall be reported to the nearest 1.0 percent.

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5.10 Sampling. Each lot shall be examined visually for shade match and finish appearance in accordance with the table listed below and the provisions contained in the contract. If one or more pieces fail to meet the requirements for shade match or finish appearance, a rescreening shall be performed. The lot shall be unacceptable if one or more pieces fail the rescreening. The sample unit shall be a 4 inch by 20 inch swatch of the cloth. The sample unit shall be drawn from each piece in the sample size.

	<u>Lot size</u>	<u>Pieces to be sampled</u>
1	- 8 pieces	each piece
9	- 25 pieces	8 pieces
26	- 90 pieces	20 pieces
91	- 160 pieces	32 pieces
	over 160 pieces	1 of 5 pieces

5.11 Visual examination. The cloth shall be examined for the defects listed below.

5.11.1 Defects. Any hole, cut, or tear; color not as specified; any shaded areas, spots, or stains; any raw edges; any material defects, or poor workmanship; bar code omitted or not readable by scanner, Human-Readable Interpretation (HRI) omitted or illegible. Bar coded type not as specified, code density not as specified.

6. PRESERVATION, PACKING, AND MARKING. The packaging, packing, and marking shall be in accordance with the contract or purchase order.

## 7. NOTES

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

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

7.2 Sources of non-Government documents. Rules and regulations under the Textile Fiber Products Identification Act is available from:

Federal Trade Commission  
 Washington, DC 20580-0001

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ANSI/ASQC Z1.4 - Sampling Procedures and Tables for Inspection By Attributes is available from:

American National Standards Institute  
11 West 42nd Street  
New York, NY 10036

AATCC Chromatic Transference Scale is available from:

American Association of Textile Chemists and Colorists (AATCC)  
P.O. Box 12215  
Research Triangle Park, NC 27709-2215

ASTM Test Methods (and ASTM-D 3951 - Standard Practices for Commercial Packaging) is available from:

American Society for Testing and Materials (ASTM)  
1916 Race Street  
Philadelphia., PA 19103-1187

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

MILITARY INTERESTS:

Custodians

Navy - NU  
Army - GL

Review Activity

Army - EA

CIVIL AGENCY COORDINATING  
ACTIVITY:

GSA - FSS

PREPARING ACTIVITY:

DLA - CT

Project 8305-0544