

INCH-POUND

A-A-52107
June 28, 1991

COMMERCIAL ITEM DESCRIPTION

CLOTH, PILE, SYNTHETIC FIBER PILE

The General Services Administration has authorized the use of this commercial item description in preference to Military Specification MIL-C-43251.

1. ABSTRACT

1.1 Abstract. This commercial item description covers knitted fiber pile cloth. The class 1 cloth is intended for use in the fabrication of the lining component in canteen covers, class 2 cloth in removable raincoat liners, and class 3 cloth in the fiberpile shirt of the Extended Cold Weather Clothing System (ECWCS).

1.2 Classification. The cloth shall be of the following classes as specified (see 5.1).

- Class 1 - Green 252, acrylic pile with knitted acrylic or polyester backing
- Class 2 - Black 410, acrylic pile with knitted acrylic, polyester, or polypropylene backing
- Class 3 - Brown 463, polyester pile with knitted polyester backing

2. SALIENT CHARACTERISTICS

2.1 General description. The pile of the cloth shall match the standard sample and shall be made from the following fiber:

- Classes 1 and 2 - acrylic fiber staple
- Class 3 - polyester fiber staple

Beneficial comments, recommendations, additions, deletions, clarifications, etc., and any other data which may improve this document should be sent to: Commander, U.S. Army Natick Research, Development, and Engineering Center, ATTN: STRNC-IRT, Natick, MA 01760-5019.

AMSC N/A

FSC 8305

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

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The backing shall be a cloth knitted in accordance with the following:

- Class 1 - Knitted from undyed spun acrylic or polyester yarn.
- Class 2 - Knitted from dyed spun acrylic or polyester yarn, or fibrillated filament polypropylene yarn. The color of the yarn shall be oxford grey or black. When fibrillated polypropylene yarn is used, it shall be "doped" dyed black.
- Class 3 - Knitted from dyed brown polyester yarn.

The minimum level relaxed width shall be as specified (see 5.1). The class 3 cloth shall have an acrylic type resin applied to the non-pile side of the cloth as a bonding or anti-curl agent. For classes 1 and 2 cloth an acrylic type resin application shall be permitted. The color of the finished cloth shall match the standard sample when viewed under filtered tungsten lamps that approximate artificial daylight and that have a correlated color temperature of $7500 \pm 200\text{K}$, with illumination of 100 ± 20 foot candles, and shall be a good match to the standard sample under incandescent lamplight at $2300 \pm 200\text{K}$. Because of the directional effects, the standard sample to be compared shall be brushed and viewed in the same direction relative to construction and to angle of lighting.

2.2 Physical requirements. The finished cloth shall conform to the requirements listed in table I.

TABLE I. Physical requirements

Characteristic	Class 1	Class 2	Class 3	Test method <u>1/</u>
Colorfastness to:				
Laundering	Good	Good	Good	5610
Perspiration	Good	Good	Good	5680
Drycleaning	Good	Good	Good	5622
Crocking (min)	3.5 <u>2/</u>	3.5 <u>2/</u>	3.5 <u>2/</u>	5651
Weight, oz./sq.yd.:				
Minimum	11.5	13.0	11.0	5041
Maximum	13.5	-	-	5041
Backing texture (min):				
Wales per inch	10	10	15	5070
Courses per inch	20	20	22	5070
Shearable pile weight oz./sq.yd. (min)	4.2	4.0	4.0	5041 <u>3/</u>
Pile height, inches:				
Minimum	12/32	8/32	14/32	Scale
Maximum	14/32	10/32	-	measurement

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TABLE I. Physical requirements (cont'd)

Characteristic	Class 1	Class 2	Class 3	Test method <u>1/</u>
Bursting strength, lbs. (min):	-	60	170	5120 <u>4/</u>
Dimensional stability:				
Shrinkage, percent (max), wale or course direction	-	5.0 <u>5/</u>	5.0	5580 or 5556
Elongation, percent (max), course direction	-	1.0	1.0 <u>6/</u>	5580 or 5556

- 1/ The test methods indicated, from FED-STD-191 Textile Test Methods, have been found acceptable to determine if the cloth meets the stated requirements. If the Government requires proof that the cloth meets the stated requirements, the test methods indicated shall be used.
- 2/ Refers to AATCC Chromatic Transference Scale rating.
- 3/ The original (total) weight of the specimen shall be determined by Method 5041 using a specimen not less than 4 square inches in area. The weighed specimen shall then be placed on a flat surface with the pile side up, and the pile shall then be sheared off with an electric clipper. Shearing shall be done in the direction of the wales and in the direction of the courses, with the base of the cutting head parallel to the plane of the specimen. Following the shearing, the specimen shall be shaken to remove the shearings and shall be weighed. This procedure shall be repeated until the sheared backing attains a constant weight with 0.05 gram tolerance. The sheared backing shall be examined for damage to the backing yarns. The weight of the shearable pile shall be determined by subtracting the weight of the sheared backing from the original weight. Reporting shall be in accordance with Method 5041.
- 4/ For class 3 cloth, the pile side of the cloth shall face the ball when testing for bursting strength.
- 5/ Determination for the class 2 cloth shall be made in accordance with Method 5580, except that the specimen shall not be steamed or pressed.
- 6/ Determination for the class 3 cloth shall be made in accordance with Method 5556, wool laundering procedure.

2.3 Length and put-up. For Government procurements only, unless otherwise specified (see 5.1), the cloth shall be furnished in continuous lengths, each not less than 10 yards in the relaxed condition. Each length shall be put-up full width on rolls as specified in 4.1.

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3. QUALITY ASSURANCE

3.1 Certification. The contractor shall certify, and maintain substantiating evidence, that the product offered meets the salient characteristics and requirements of this Commercial Item Description, and that the product conforms to the producer's own drawings, specifications, standards, and quality assurance practices. The Government reserves the right to require proof of such conformance prior to first delivery and thereafter as may be otherwise provided for under the provisions of the contract.

3.2 Visual examination. Lots of cloth shall be inspected in accordance with MIL-STD-105. The inspection level shall be I and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 2.5. The lot size shall be expressed in units of yards. The sample unit shall be one linear yard. The cloth shall be examined for the following defects: hole, cut, tear, matted or glazed pile, area of abnormal pile height or density, permanent crease, streaks, spots, or stains.

3.3 Length examination. During the visual examination, each roll in the sample shall be examined for length. Any length found to be less than the minimum specified or more than 2 yards less than the length marked on the roll ticket shall be considered a length defect. If two or more rolls in the sample are defective with respect to length or if the total of the actual lengths of rolls in the sample is less than the total of lengths marked on the roll tickets, the lot shall be rejected.

3.4 Regulatory requirements. The offeror/contractor is encouraged to use recovered material in accordance with Public Law 94-580 to the maximum extent practicable.

4. PACKAGING

4.1 Packaging. The cloth shall be rolled on a convolute or spiral-wound chipboard tube. The tube shall have a smooth finish surface that will prevent the fibers of the chipboard from transferring to the cloth. Each roll of cloth, put-up as specified, shall be wrapped with 60-pound minimum basis weight kraft paper in such a way that the paper will encircle the roll at least once with a minimum overlap of 3 inches, and the width of the paper will be sufficient to fold over and protect the ends of the roll. Gummed paper tape, with a minimum width of 2-1/2 inches shall be applied to the overlap seam full length of the roll and across each end. Alternatively, each roll of cloth shall be enclosed in a polyethylene film tube secured at both ends by heat sealing or mechanical ties.

4.2 Packing. Each wrapped roll shall be enclosed in a bias-sewn tubing made from woven polypropylene cloth. The tube shall be secured by heat-sealing, by means of a mechanical tie, or by plastic ties with lock-ends.

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Alternately, a maximum of 325 pounds of rolls of kraft-wrapped cloth shall be packed in a snug-fitting double-walled fiberboard container known as a double cover, and shall consist of a body or joined liner and two covers.

Corrugated fiberboard with a minimum bursting strength of 500 pounds shall be used. The container shall be strapped with metallic straps not less than 1/2 by 0.020 inch or non-metallic straps not less than 7/16 by 0.030 inch.

4.3 Marking. In addition to any special marking required by the contract or purchase order, rolls and shipping containers shall be marked in accordance with MIL-STD-129. Each roll shall have a piece ticket (identification tag) affixed with a 5-ply minimum cotton string or a plastic tag hanger. The tag shall have a reinforced eyelet and shall be legibly printed, using water insoluble ink, with the following information:

Procurement Agency	Contract or Purchase Order Number
National Stock Number	Finish or Greige Mill
Item Description	Roll Number
Contractor	Lot Number
Width	Piece Number
Fiber Content	Yardage

5. NOTES

5.1 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of this document.
- b. Class required (see 1.1).
- c. Width of cloth required (see 2.1).
- d. Length and put-up if other than specified (see 2.3).

5.2 Sources of documents.

5.2.1 Sources of non-Government association documents.

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

5.2.2 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

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5.3 Replacement data. The types of cloth covered by this commercial item description replace types covered by MIL-C-43251C as follows:

<u>This CID</u>	replaces	<u>MIL-C-43251C</u>
Class 1		Class 1
Class 2		Class 2
<u>Class 3</u>		Class 3
		Class 4

MILITARY INTERESTS:

Custodians:

Army - GL
Navy - NU
Air Force - 99

Review activities:

Army - MD
Air Force - 82
DLA - CT

User activity:

Navy - MC

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FSS

PREPARING ACTIVITY:

Army - GL

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