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INCH-POUND
A-A-59591A
September 18, 2020
SUPERSEDING
A-A-59591
May 24, 2000

COMMERCIAL ITEM DESCRIPTION

CLOTH, BUNTING, COTTON, MERCERIZED

The General Services Administration has authorized the use of this Commercial Item Description (CID) by all Federal Agencies.

1. SCOPE. This Commercial Item Description covers cotton bunting cloth, used primarily in the manufacture of signal, semaphore, ensign (excluding U.S. flag), and other types of flags.

2. CLASSIFICATION. The cloth shall be a 100 percent cotton bunting.

3. SALIENT CHARACTERISTICS.

3.1 Material description. The yarn shall be made from cotton which has been carded, drawn, spun and twisted into a two (2) ply yarn for both warp and filling directions.

3.1.1 Weave. The weave shall be plain.

3.2 Color. The color of the finished cloth shall be as specified in the purchase order and shall meet the colorfastness requirements as specified in Table I. The use of dyes and compounds containing elementary sulfur capable of oxidation to sulfuric acid is prohibited. The dyed cloth shall be "Free" of labile sulfur when tested as specified in 3.3.1.

3.2.1 Visual shade matching. The color and appearance of the material shall match the standard sample when viewed using the AATCC EP9, Evaluation Procedure for Visual Assessment of Color Difference of Textiles, Option C (see 7.6), with sources simulating artificial daylight D_{75} illuminant with a color temperature of 7500 (± 200)K illumination of 100 (± 20) foot candles, and shall be a good match to the standard sample under incandescent lamplight at 2856 (± 200)K.

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data that may improve this document should be sent to: Attn: DLA Troop Support, 700 Robbins Avenue, Philadelphia, PA 19111-5096. Since contact information can change, verify the currency of the address information using Acquisition Streamlining and Standardization Information System (ASSIST) online database https://assist.dla.mil.

AMSC NA FSC 8305

3.3 Physical requirements. The finished cloth shall conform to the physical requirements specified in Table I when tested in accordance with the methods cited in Table I. The finished cloth shall match the standard sample for shade and appearance and shall be equal to or better than the standard sample with respect to all characteristics for which the standard sample is referenced.

TABLE I. Physical requirements.

Characteristic	Requirement	Test Method
Cotton fiber content	3.1	AATCC TM20 (see7.4)
Yarn ply Warp Filling	 2 ply 2-ply	 Visual 1/ Visual 1/
Weave	Plain	Visual 1/
Weight, oz./sq.yd. (min.)	4.5	ASTM D3776/D3776M, Opt C
Yarns per inch (min.) Warp Filling	 31 30	 ASTM D3775 ASTM D3775
Breaking strength, pounds (min.) Warp Filling	 50 50	 ASTM D5034
Colorfastness (min.): Water Color Change Sea water Color Change Lightfastness (after 40 AFU or 170 kJ/(m^2nm)@420 nm) Crocking (Wet, Dry)	 3-4 3-4 3-4 3.5	 AATCC TM107 2/, 3/ AATCC TM106 3/ AATCC TM16.3 Opt 3 AATCC TM8 4/
Mercerization	Swelling of cotton fibers compared to nonmercerized	Microscopic (see 7.4)
pH	5.0 - 8.5	AATCC TM81
Labile sulfur	"Free"	3.3.2
Toxicity	3.4	5.6

1/ One determination shall be made from each sample and results reported as "pass" or "fail".
2/ Except the sample immersion time in the solution shall be one (1) hour.
3/ Rated using the AATCC EP1, Evaluation Procedure for Gray Scale for Color Change
4/ Rated using the AATCC EP8, Evaluation Procedure for AATCC 9-Step Chromatic Transference Scale.

3.3.1 Finish. The cloth shall be mercerized.

3.3.2 Presence of labile sulfur. In the determination of labile sulfur in textile materials with lead acetate, two (2) 1.50 (± 0.01) gram samples from each material submitted for evaluation shall be tested. Each of the two (2) samples shall be cut into very small pieces and placed into separate test tubes. The samples shall be submersed in a stannous chloride solution that contains 100 grams of stannous chloride crystals ACS in 100 millimeters of hydrochloric acid ACS (35 percent concentration) and 50 milliliters of distilled water. A filter paper wet out with a 5.0 percent lead acetate solution shall be placed over the top of the test tube. The lead acetate solution contains 5.0 grams of lead acetate CP reagent grade and enough distilled water to make up a 100 milliliter solution; if the solution is not clear, add a few drops (one at a time) of glacial acetic acid until the solution is clear. The test tube containing the textile sample, stannous chloride and wet filter paper shall be heated over a low flame until the solution is boiling. The solution should not be heated for more than 15 seconds. A brown to black stain on the filter paper should be evaluated as follows.

Free	- The filter paper shows no discoloration of staining of any kind.
Slight	- The filter paper shows a light tan to light brown discoloration stain.
Moderate	- The filter paper shows a dark brown discoloration stain.
Severe	- The filter paper shows a black color stain.

The rating shall be recorded. The results shall be recorded as “pass” or “fail”.

3.4 Toxicity. The finished cloth shall not present a health hazard and shall show compatibility with prolonged, direct skin contact when tested as specified in 5.6. Chemicals recognized by the Environmental Protection Agency (EPA) as human carcinogens shall not be used.

3.5 Labels. Each roll of finished cloth shall be labeled or ticked for fiber content in accordance with the Rules and Regulations under the Textile Fiber Products Identification Act.

3.6 Workmanship. The finished cloth shall conform to the quality of product established by this document. The occurrence of defects shall not exceed the contractor’s own quality assurance standards and the quality assurance standards defined by the technical data in the bid package.

4. REGULATORY REQUIREMENTS. Unless otherwise specified the offer/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. PRODUCT CONFORMANCE PROVISIONS.

5.1 Product conformance. The finished cloth provided shall meet the salient characteristics of this CID, conform to the producer’s own specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial marketplace. The Government reserves the right to require proof of such conformance.

5.2 Market acceptance. This finished cloth must have been sold to the commercial market or the Government.

5.3 End item inspection procedures. Sampling for inspection shall be conducted in accordance with ASQ/ANSI Z1.4 - Sampling Procedures and Tables for Inspection by Attributes (see 7.2.3).

5.4 Visual examination. Each roll in the sample shall be examined yard by yard on the face side for defects in listed in Table II as defined in ASTM D3990.

TABLE II. Visual examination defects.

Material defects: Any hole, cut, or tear. Puckered, wrinkled or creased/pleated material.
Labels: Label missing, incorrect, or illegible. Required information missing from the label.
Packaging: Not packaged in accordance with the contract or purchase order.

5.5 Acceptance criteria. Acceptance criteria shall be as specified in the contract or purchase order (see 7.5).

5.6 Toxicity test. When required, (see 7.5), an acute dermal irritation study and a skin sensitization study shall be conducted. When the results of these studies indicate the finish is not a sensitizer or irritant, a Repeat Insult Patch Test shall be performed in accordance with the Modified Draize Procedure (see 7.2.5). If the toxicity requirement (see 3.4) can be demonstrated with historical use data on the finishing treatments used, toxicity testing may not be required (see 7.5).

6. PACKAGING. Preservation, packing, and marking shall be as specified in the contract or purchase order (see 7.5).

7. NOTES.

7.1 Sources of Government documents.

7.1.1 Copies of Government documents are available online at https://quicksearch.dla.mil.

7.1.2 Rules and Regulations under the Textile Fiber Products Identification Act are available online at https://www.ftc.gov.

7.2 Sources for Non-Government documents.

7.2.1 AATCC test methods are available online at https://www.aatcc.org.

7.2.3 ASQ/ANSI Z1.4 – Sampling Procedures are available online at https://www.asq.org.

7.2.4 ASTM Standards are available online at https://www.astm.org.

7.2.5 Modified Draize Procedure (Repeat Insult Patch Test): Principles and Methods of Toxicology, A Wallace Hayes (editor) is available online at https://www.crcpress.com.

7.3 Intended use. This cloth is intended to be used in signals, semaphore, and other types of flags.

7.4 Certificate of compliance. The contracting activity may select to accept a certificate of compliance for stated requirement.

7.5 Ordering data. The contract or order should specify the following:

a. Title, number, and date of this commercial item description
b. Color required (see 3.2)
c. When toxicity testing is required (see 3.4 and 5.6)
d. Product conformance provisions (see 5.1)
e. Acceptance criterial provisions (see 5.5)
f. Packaging requirement (see 6.)

7.6 Visual shade matching. In 2019, Option A of AATCC Evaluation Procedure 9, Visual Assessment of Color Difference of Textiles was changed to Option C. NOTE: In case of confusion, the viewing geometry should be such that the specimen plane and illumination source are parallel to each other and aligned so that the light flux is incident at the center of the specimen plane, which is set at a 35 (± 5°) angle relative to the horizontal. The observer will view the specimens at a 90° angle, relative to the plane of the specimens.

7.7 Key words.
Flags
Semaphore
Signal

MILITARY INTERESTS

CIVIL COORDINATING AGENCY ACTIVITY

GSA-FSA

Custodian:
Army - GL
Navy - NU
Air Force - 11

Preparing Activity:

DLA - CT

(Project: 8305-2020-026)

Review activity:
Army - IH, MD
Navy - MC

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