

INCH-POUND

A-A-50195B

June 8, 2007

SUPERSEDING

A-A-50195A

21 June 2000

COMMERCIAL ITEM DESCRIPTION

THREAD, ARAMID

The General Services Administration has authorized the use of this commercial item description as a replacement for MIL-T-43636 for all federal agencies.

1. **SCOPE.** This commercial item description covers nine sizes of aramid thread. The thread is intended for sewing heat and flame resistant uniforms, equipment, or supportive end items.
2. **CLASSIFICATION.** The thread may be soft or bonded. The following sizes of thread are specified in this document:

2.1 Sizes:

Tex	Denier
40	400d
60	600d
80	800d
120	1200d
180	1800d
240	2400d
300	3000d
350	3500d
450	4200d

Comments, suggestions, or questions on this document should be addressed to: Defense Supply Center Philadelphia, Clothing and Textiles Directorate, Attn: DSCP Standardization Team, 700 Robbins Avenue, Philadelphia, PA 19111-5096. Since contact information can change, you may want to verify the currency of this address information using Acquisition Streamlining and Standardization Information System (ASSIST) online database at http://assist.daps.dla.mil .

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3. SALIENT CHARACTERISTICS.

3.1 General description. The thread shall be made of continuous multifilament aramid yarn and shall have a soft or bonded finish as specified in the contract or purchase order (see 7.4). The finished thread in Table I shall have a minimal amount of non-flame propagating, non-staining finish commonly used to facilitate sewing. Unless otherwise specified, the direction of the twist for singles shall be “S”, and the plied thread shall be “Z”. Tex sizes 120 and finer shall average not more than one thread knot per 2 ounces, and Tex sizes 180 and heavier shall average not more than one thread knot per 4 ounces.

3.2 Physical characteristics and requirements. The thread shall conform to the physical characteristics and requirements specified in Table I and breaking strength and elongation requirements specified in Table II.

TABLE I. Physical characteristics and requirements

Characteristic	Requirement	Test method
Fiber identification	Aramid	AATCC-20 or ASTM D-276
Size	See 2.1	ASTM D-3823
Twist: single plied	“S” “Z”	ASTM D-204 Procedure 22 ASTM D-204 Procedure 22
Yarn	Multifilament	Visual
Breaking strength	Table II	ASTM D-204 Procedure 19.1.1 <u>1/ 2/</u>
After aging (min.)	85% of initial breaking strength	See 3.3 ASTM D-204 Procedure 19.1.1 <u>1/ 2/</u>
Elongation (%)	Table II	ASTM D-204 Procedure 19.4
Colorfastness (min.) Laundering (after 3 cycles)	3-4	AATCC61, 1A <u>3/ 4/</u> see 3.5

1/ Testing speed shall be 12 (± 0.5) inch minimum, and a 10 inch gauge length unless otherwise specified, shall be used. (see 7.4)

2/ Five determinations per sample unit.

3/ AATCC Evaluation Procedure 1, Gray Scale for Color Change.

4/ The color transfer cloth evaluation shall not apply

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TABLE II. Breaking strength and elongation

Tex <u>1/</u> (sizes)	Breaking strength, lbs. (min.)	Elongation % (max.)
40	3.0	38
60	5.0	38
80	6.0	38
120	10.0	38
180	15.0	42
240	20.0	42
300	25.0	42
350	30.0	42
450	35.0	42

1/ Tex size based on weight in grams/ 1,000 meters thread.

3.3 Aging resistance test. Five specimens each, of all sizes, shall be used for the aging test. The specimens shall be exposed for 15 minutes to 500° ($\pm 10^\circ$) F using an air circulating oven. Upon removal, the specimens shall be conditioned at standard atmospheric conditions for 4 hours and then tested for breaking strength as specified in Table I.

3.4 Color. The color shall be as specified in the applicable end item specification or in the contract order. The dyed thread shall conform to the applicable approved shade standard.

3.5 Finish removal procedure. Before evaluation for shade matching and testing for colorfastness, except colorfastness to wet dry cleaning, the thread shall be wet dry cleaned in accordance with AATCC-132. Excess solvent shall be removed by centrifuging or wringing. The sample shall then be rinsed in distilled water at 120° to 160° F and dried at a temperature not exceeding 180°F. The dried sample shall then be conditioned for a minimum of 4 hours prior to evaluation for shade matching or colorfastness.

3.6 Visual shade matching. The color and appearance of the finished thread, after removal of finish (see 3.5), shall match the standard sample when viewed using AATCC Evaluation Procedure 9, Option A, with sources simulating artificial daylight D75 illuminant with a color temperature of 7500K ± 200 , with illumination of 100 ± 20 foot candles, and shall be a good match to the standard sample under incandescent lamplight at 2856K ± 200 . If no thread standard is available the sample should be a good match to the standard end item base cloth when viewed under the same lighting conditions specified above.

3.7 Finishing materials. The finished thread shall have no chemical finishes or treatments which have demonstrated harmful effects on the fiber, including effects of prolonged storage. No finish shall be used that will diminish flame resistance. No finish or treatment shall be applied for the purpose of increasing breaking strength. There shall be no noticeable wicking of the treatment on the thread to adjacent material when sewn.

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3.8 Put-up. Unless otherwise specified, the thread shall be put-up on holders such as commercial spools, cones, or tubes as specified in the contract. The thread shall be wound around the specified holder in one continuous piece, so each turn and layer is free of entanglement. The outside ending of the thread shall be secured to prevent unwinding, loosening, or slippage during handling, shipping, or storage.

3.9 Labeling. Each holder shall have a label, adhered securely so as to remain in place and be clearly legible until all thread has been removed. The label shall be printed and include information related to length in yards, direction of twist, color, size (Tex or denier), name of thread manufacturer, and nomenclature specifying type (soft or bonded).

3.10 Workmanship. The finished thread 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**. 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. **PRODUCT CONFORMANCE PROVISIONS**.

5.1 Product conformance. The products provided shall meet the salient characteristics of this Commercial Item Description, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered in the commercial marketplace. The government reserves the right to require proof of such conformance.

6. **PACKAGING**.

6.1 Packaging. Preservation, packing, and marking shall be specified in the contract or order.

7. **NOTES**.

7.1 Intended use. The thread is intended for sewing heat and flame resistant type uniforms, equipment, or supportive end items.

7.2 Source of documents.

7.2.1 Copies of government documents are available online at <http://assist.daps.dla.mil/quicksearch/> from the Standardization Document Order Desk, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

7.2.2 AATCC Standards are available online at www.aatcc.org or from the American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, NC 27709-2215.

7.2.3 ASTM Standards are available online at www.astm.org or from ASTM INTERNATIONAL, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

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7.2.4 Federal Acquisition Regulations (FAR) are available online at <http://acquisition.gov/far/index.html> or by contacting the Superintendent of Documents at 202-512-1800.

7.3 Standard samples, patterns and drawings.

7.3.1 Standard samples and pattern drawings, address the contracting activity issuing the invitation for bids or request for proposal. Standard samples are also available at DSCP through <http://warfighter.dla.mil> under tab “Vendor Info” then “Specifications/Pattern Request” under “Special Instructions” provide color shade, roll number, and solicitation/contract number.

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

- a. CID document number and revision.
- b. Type, size, finish, and ply of thread required.
- c. Gauge length for breaking strength (if otherwise specified see 3.2)
- d. Color required (see 3.4).
- e. Put-up required (see 3.8).
- f. Labeling (See 3.9)
- g. Quality assurance standards (see 3.10)
- h. Product conformance provisions (see 5.1).
- i. Packaging requirement (see 6.1).

7.5 Key words.

Anti G garment
Coveralls
Gloves
Jackets
Trousers
Wrist seal

7.6 Suppression data: The size designations of threads used in MIL-T 43636 are shown below with the correspondence tex and denier designations.

Size	Tex	Denier
B	40	400
E	60	600
F	80	800
FF	120	1200
3	180	1800
4	240	2400
5	300	3000
6	350	3500
7	450	4200

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MILITARY INTERESTS:

Custodians:

Army – GL

Navy – NU

Air Force –99

Review activities:

Army-MD

Navy-AS

Air Force-11

CIVIL AGENCY COORDINATING ACTIVITY:

GSA-FSS

Preparing Activity:

DLA - CT

Project No. 8310-2006-001

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST online database at <http://assist.daps.dla.mil>.