

INCH-POUND

A-A-52094

March 15, 1991

COMMERCIAL ITEM DESCRIPTION

THREAD, COTTON

The General Services Administration has authorized the use of this commercial item description in preference to V-T-276.

Abstract. This commercial item description covers cotton thread for sewing machine fabrication of various cloth, clothing, and equipage items.

1. CLASSIFICATION

1.1 Classification. This commercial item description covers the following types and finishes of thread as specified (see 5.1).

- Type I - Machine thread, soft finish
- Type II - Machine thread, glazed finish
- Type III - Machine thread, mercerized finish
- Type IV - Shoe thread, soft finish
- Type V - Shoe thread, glazed finish

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any 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 8310

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

A-A-52094

TABLE I. Types I and II (machine thread)

Ticket number	Tex (approximate)	Ply	Yards per pound		Breaking strength pounds (minimum)
			minimum <u>1/</u>	maximum	
140	19	2	23,000	28,750	1.0
90	25	2	17,946	21,840	0.9
70	30	2	14,173	16,535	1.2
70	30	3	14,173	16,535	1.5
50	40	3	11,023	12,400	1.8
40	50	3	8,267	9,920	2.2
30	60	3	7,087	8,266	3.0
30	60	3	7,087	8,266	3.2
24	80	4	5,512	6,200	3.8
16	105	4	4,134	4,724	5.3
12	150	4	3,307	3,674	6.8
10	187	3	2,501	2,815	6.5
10	225	4	1,901	2,500	9.5
10	292	5	1,501	1,900	12.5
10	358	6	1,275	1,500	15.5
9	255	4	1,831	2,060	10.0
8	233	3	2,001	2,250	7.0
8	283	4	1,501	2,000	11.0

1/ For the type II glazed finish thread, the minimum yards per pound shall be 90 percent of the applicable value specified in this column.

TABLE II. Type III (mercerized machine thread)

Ticket number	Tex (approximate)	Ply	Yards per pound		Breaking strength pounds (minimum)
			minimum	maximum	
30	39	2	11,001	14,400	1.6
36	32	2	14,401	16,800	1.3
C	72	3	6,010	7,760	4.0
B	58	3	7,761	9,215	3.2
A	50	3	8,268	9,921	2.8
0	40	3	9,920	11,023	2.6
00	35	3	12,401	14,172	2.1
000	27	3	15,521	21,340	1.7

A-A-52094

TABLE III. Types IV and V (shoe thread)

Ticket number	Tex (approximate)	Ply	Yards per pound		Breaking strength pounds (minimum)
			minimum <u>1/</u>	maximum	
8	270	4	1,654	1,837	13.0
8	350	5	1,241	1,417	17.5
8	400	6	1,103	1,235	21.0
8	450	7	993	1,103	24.5
8	500	8	827	992	28.0
8	600	9	709	826	31.5
8	700	10	621	708	35.0
8	700	11	621	708	38.5
8	800	12	552	620	42.0

1/ For the type V glazed finish thread, the minimum yards per pound shall be 90 percent of the applicable value specified in this column.

2. SALIENT CHARACTERISTICS

2.1 Description. The thread shall be spun from combed cotton and shall have either a soft, glazed or mercerized finish as specified in contract or purchase order. The finished thread shall have no chemical finishes or treatments other than those commonly used on commercial threads. Those finishes or treatments shall have been demonstrated to have no deleterious effect on the fiber, including effects in prolonged storage. The glazing compound may be any commercially available agent intended for this purpose. No finish or treatment shall be applied for the purpose of increasing breaking strength. The final direction of the final twist shall be "Z" twist. Types I, II, and III thread shall average not more than one full thread knot or splice per 1,000 yards. Types IV and V thread shall average not more than one full thread knot or splice per 600 yards.

2.2 Color. The color of the dyed thread shall be as specified in the applicable end item specification or as set forth in the contract or purchase order. The color shall be natural, bleached, or dyed as specified (see 5.1). The use of dyes and compounds containing elementary sulfur capable of oxidation to sulfuric acid is prohibited.

2.2.1 Colorfastness. Unless otherwise specified, the thread shall show good colorfastness to laundering (after three cycles), light, perspiration, wet dry cleaning, and weathering.

A-A-52094

2.2.2 Color matching. The color of the dyed thread shall match the standard sample when viewed under filtered tungsten lamps which approximate artificial daylight having a correlated color temperature of $7500 \pm 200K$, with illumination of 100 ± 20 foot candles, and shall be a good match to the standard sample under incandescent lamplight at $2300 \pm 200K$.

2.3 Put-up. The thread shall be wound on tubes, cones, spools, or bobbins, as specified (see 5.1). The thread shall be wound so that each turn and layer is free from entanglement. The outside end of the thread shall be secured in such a manner to prevent unwinding, loosening, or slipping during handling, shipment, and storage.

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 Quality conformance inspection. Unless otherwise specified, sampling for inspection shall be performed in accordance with MIL-STD-105.

3.3 End item visual examination. Each lot of thread shall be examined for consumer type defects, defined as follows:

Defects in design, construction, or workmanship; holder type other than specified; loose ply, cut, tear, chafe, or slip affecting strength of thread or interfering with easy location of end and initial unwinding; color other than specified; dirt, spot, or stain clearly noticeable; finish other than specified.

The lot size shall be expressed in units of one holder, except for ready made bobbins which shall be expressed in units of one gross. The sample unit shall be one holder, except for ready made bobbins which shall be expressed in units of one gross. The inspection level shall be S-3, and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 4.0.

3.4 End item testing. The methods of testing specified in FED-STD-191, wherever applicable, and as listed in table IV shall be followed. The lot size shall be expressed in units of one holder, except for ready made bobbins which shall be expressed in units of one gross. The sample unit shall be one holder, except for ready made bobbins which shall be expressed in units of one gross. The inspection level shall be S-1, and the AQL, expressed in terms of defects per hundred units, shall be 6.5.

A-A-52094

TABLE IV. End item tests

Characteristic	Test method
Combed cotton fiber identification	1200 <u>1/</u>
Shade match	Visual
Colorfastness to:	
Laundering (after 3 cycles)	5610 <u>2/</u>
Light	5660
Wet dry cleaning	5622
Perspiration	5680
Weathering	5671
Finish type	<u>1/</u>
Twist direction	4050
Number of plies	Visual <u>3/</u>
Length per pound	4010 <u>4/</u>
Breaking strength	4100 <u>5/</u>

- 1/ Unless otherwise specified, a certificate of compliance shall be submitted and will be acceptable for the stated requirement.
- 2/ The specimens must be dried after each of the three laundering cycles.
- 3/ On the color transfer cloth evaluation, only the stain on the cotton fibers of the color transfer cloth shall be evaluated. One determination and the result reported as "pass" or "fail".
- 4/ In case of dispute, the length per pound of the thread may be determined on the thread after removal of finish.
- 5/ Except that the five determinations shall be made on each sample unit.

4. PACKAGING

4.1 Packaging. Each tube, cone or spool shall be packaged in a plastic bag. The bag shall be closed by tying or by tucking the open end into the tube, cone, or spool. Bobbins shall be packaged in a commercially acceptable package.

4.2 Packing. Thread, packaged as specified, shall be packed in a snug-fitting fiberboard shipping container conforming to style RSC-L, type CF (variety SW) or SF, class domestic, grade 275 of PPP-B-636. The fiberboard liner is not required when the thread is packaged in paperboard boxes. The

A-A-52094

shipping container shall be of a size that can be palletized in accordance with MIL-STD-147. The weight of the shipping container and contents shall not exceed 50 pounds. Shipping containers shall be closed in accordance with the appendix of PPP-B-636.

4.3 Palletization. When specified (see 5.1), thread, packed as specified, shall be palletized on a 4-way entry pallet in accordance with load type Ia of MIL-STD-147. Pallet types shall be type I (4-way entry), type IV or type V. Each prepared load shall be bonded with primary and secondary straps in accordance with bonding means C and D or film bonding means F or G.

4.4 Marking. In addition to any special marking required by the contract or purchase order, unit packs, shipping containers, and unit loads shall be marked in accordance with MIL-STD-129.

5. NOTES

5.1 Ordering data. Acquisition documents must specify the following:

- a. Title, number, and date of this document.
- b. Type required (see 1.1).
- c. Color required (see 2.2).
- d. Colorfastness required, when other than specified (see 2.2.1).
- e. Put-up required (see 2.3).
- f. When palletization is required (see 4.3).

5.2 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

5.3 Replacement data. The types of thread covered by this Commercial Item Description replace types covered by V-T-276 as follows:

<u>A-A-</u>	<u>V-T-276</u>
Type I	Types IA1, IA2, and IA3
Type II	Types IB1, IB2, and IB3
Type III	Types IC1 and IC2
Type IV	Type IVA
Type V	Type IVB

A-A-52094

MILITARY INTERESTS:

Custodians

Army - GL
Navy - NU
Air Force - 11

Review Activities

Army - MD, EA, AR
Air Force - 99, 82
DLA - CT

User Activity

Navy - MC

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FSS

PREPARING ACTIVITY:

Army - GL

Project 8310-0175