

INCH-POUND

A-A-59770
 7 April 2005
 SUPERSEDING
 MIL-I-15126F
 24 April 1961

COMMERCIAL ITEM DESCRIPTION

INSULATION TAPE, ELECTRICAL, PRESSURE SENSITIVE ADHESIVE AND PRESSURE SENSITIVE THERMOSETTING ADHESIVE

The General Services Administration has authorized the use of this commercial item description for all federal agencies.

1. **SCOPE.** This commercial item description (CID) covers pressure sensitive adhesive (PSA) and pressure sensitive thermosetting adhesive (PSTA) electrical insulation tape.
2. **CLASSIFICATION.** The electrical insulation tape shall be of the following types, colors, lengths, widths, thicknesses, and adhesives:
 - 2.1 Type. The electrical insulation tape shall be one of the types listed in table I (see 7.4(b)).

TABLE I. Electrical insulation tape types.

Type	Material	Designator
I	Acetate cloth	ACT
II	Cotton cloth	CFT
III	Polyethylene	EF
IV	Glass cloth	GFT
V	Polyester film	MF
VI	Polyester film	MFT
VII	Paper, crepe	PCT
VIII	Paper, flat	PFT
IX	Polyimide film	PF

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data that may improve this document should be sent to: STDZNMGT@dla.mil or Defense Supply Center Richmond (DSCR), ATTN: DSCR-VEB, 8000 Jefferson Davis Highway, Richmond, VA 23297-5616.

AMSC N/A

FSC 5970

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2.2 Color. The tape color shall be one of the coded options listed in table II (see 7.4(c)).

TABLE II. Tape color.

Color code	Color	Color code	Color
A	Black	H	Violet
B	Brown	J	Gray
C	Red	K	White
D	Orange	L	Amber
E	Yellow	M	Clear
F	Green	X	Other (specify in acquisition order)
G	Blue		

2.3 Length. The tape length shall be one of the coded options listed in table III (see 7.4(d)).

TABLE III. Tape length.

Length code	Length (in feet)	Length code	Length (in feet)
1	54	5	180
2	60	6	216
3	66	X	Other (specify in acquisition order)
4	108		

2.4 Width. The tape width shall be one of the coded options listed in table IV (see 7.4(e)).

TABLE IV. Tape width.

Width code	Width (in inches)	Width code	Width (in inches)
A	0.125	H	1.000
B	0.250	J	1.250
C	0.375	K	1.500
D	0.500	L	1.750
E	0.625	M	2.000
F	0.750	X	Other (specify in acquisition order)
G	0.875		

2.5 Thickness. The tape thickness shall be one of the coded options listed in table V (see 7.4(f)).

TABLE V. Tape thickness.

Thickness code	Thickness (in inches)	Thickness code	Thickness (in inches)
1	0.0025	5	0.0080
2	0.0035	6	0.0090
3	0.0060	7	0.0105
4	0.0070	X	Other (specify in acquisition order)

2.6 Adhesive. The tape adhesive shall be one of the coded options listed in table VI (see 7.4(g)).

TABLE VI. Tape adhesive.

Adhesive code	Adhesive	Adhesive code	Adhesive
A	Acrylic	E	Silicone
B	Acrylic thermosetting	F	Silicone thermosetting
C	Rubber	X	Other (specify in acquisition order)
D	Rubber thermosetting		

3. SALIENT CHARACTERISTICS

3.1 Components.

3.1.1 Material. The tape shall be of the manufacturer's standard product so long as it meets the applicable requirements of ASTM D 1000, "Standard Test Method for Pressure-Sensitive Adhesive-Coated Tapes Used for Electrical and Electronic Applications", or Underwriters Laboratories Incorporated (UL) 510, "Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape".

3.1.2 Backing. The backing shall be of a material free from defects, dirt, lumps, and irregularities, and shall conform to table VII.

3.1.3 Adhesive. The adhesive used shall be PSA or PSTA heat-curing as specified (see 2.6).

3.2 Length. The tape shall be furnished in the standard roll lengths ± 1.0 foot per roll as specified (see 2.3).

3.3 Width. The tape shall be furnished in the standard widths ± 0.03 inch (see 2.4).

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TABLE VII. Tape backing material and thickness.

Backing material	Backing thickness (± 0.0001)
Acetate cloth	0.0010
Cotton cloth	0.0015
Glass cloth	0.0010
Paper, flat	0.0010
Paper, crepe	0.0010
Polyester film	0.0005
Polyethylene	0.0005
Polyimide film	0.0005

3.4 Thickness. The tape shall be furnished in the standard thicknesses ± 0.03 inch (see 2.5).

4. REGULATORY REQUIREMENTS

4.1 Recovered materials. 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 CID, conform to the producer's own drawings, 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.

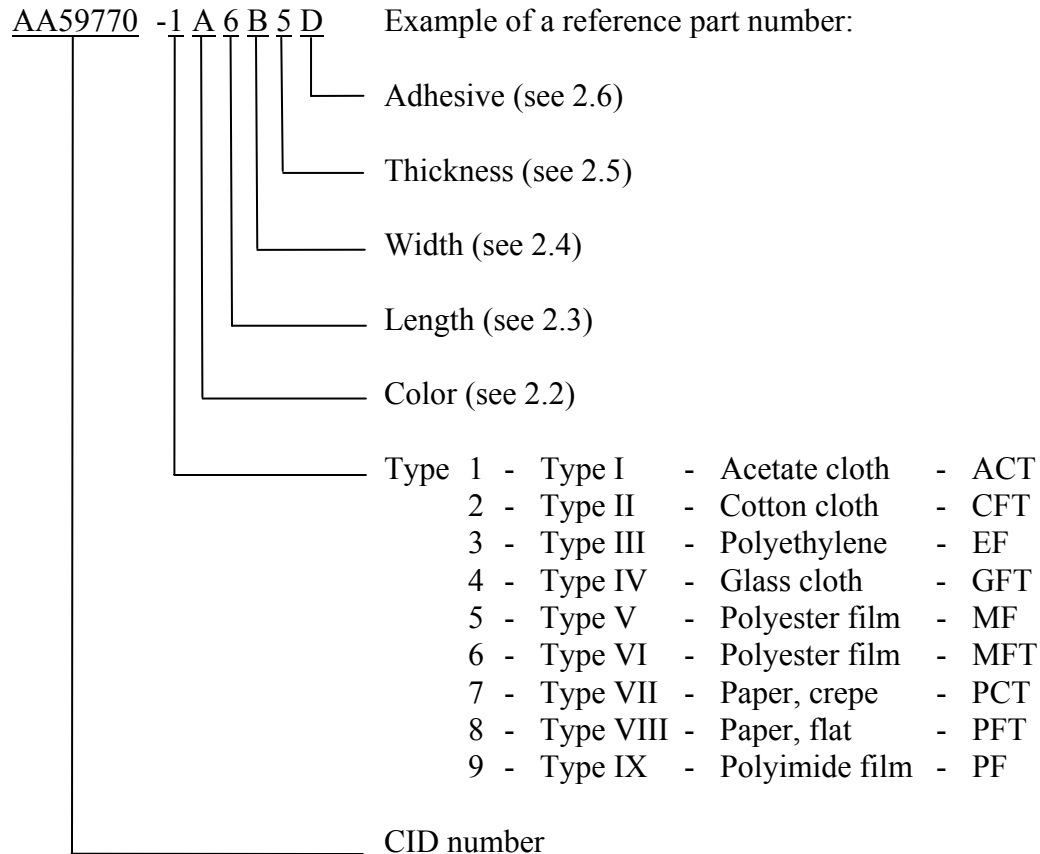
5.2 Market acceptability. The product offered must have been previously sold either to the government or on the commercial market.

6. PACKAGING

6.1 Preservation, packing, and marking. Preservation, packing, and marking shall be as specified in the acquisition order (see 7.4(h)).

7. NOTES

7.1 Part or identification number (PIN). The following PIN procedure is for government purposes and does not constitute a requirement for the contractor.



AA59770-1A6B5D identifies acetate cloth, black, 216 feet long, 0.250 inch wide, 0.0080 inch thick, rubber thermosetting adhesive.

7.2 Sources of documents.

7.2.1 ASTM standards. Copies of ASTM standards may be obtained from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Electronic copies of ASTM standards may be obtained from <http://www.astm.org/>.

7.2.2 UL standards. Copies of UL standards may be obtained from Underwriter Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096. Electronic copies of UL standards may be obtained from <http://www.ul.com/>.

7.2.3 FAR. The FAR may be obtained from the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Electronic copies of FAR documents may be obtained from <http://www.arnet.gov/far/>.

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7.3 Intended use. PSA and PSTA electrical insulation tape is intended for use in the construction and repair of electrical and electronic equipment. All tape identified in this CID can be used as general purpose PSA electrical insulation tape. However, some of the tape requires thermosetting when used in its intended application. The following is a list of all tapes covered by this CID and their intended use or application:

7.3.1 ACT tape. This thermosetting tape is used in fine and ultra-fine wire applications such as coils, motors, and transformers where good strength characteristics, fine electrical properties, and non-corrosiveness are desired.

7.3.2 CFT tape. This thermosetting tape is used for hook-up wire, spot bundling, and as armor wrap for harnesses. CFT tape is also used for small motors, dynamotor armatures, generators, and transformer coils where good varnish penetration and high tensile strength are desired.

7.3.3 EF tape. This tape can be used in cold or warm weather, is solvent and moisture resistant, is ideal for electrical maintenance and waterproofing harnesses, and where high dielectric strength and non-corrosiveness are desired.

7.3.4 GFT tape. This thermosetting tape is used on heavy-gauge wire motor wrappings, in high temperature locations where other adhesive tapes cannot be used, and for general industrial applications.

7.3.5 MF tape. This tape is resistant to oils, greases, strong acids, organic solvents, and moisture. It provides high dielectric strength. MF tape is used on very fine wire for insulating connections, as crossover and barrier insulation on small bobbin-wound coils, as a holding layer on stick-wound coils, as an outer wrap on coils, and for transformer and capacitor wrapping.

7.3.6 MFT tape. This thermosetting tape is resistant to moisture, is highly tear resistant, non-corrosive, and provides high dielectric strength. It is used on very fine wire for insulating connections, as crossover and barrier insulation on small bobbin-wound coils, as a holding layer on stick-wound coils, as an outer wrap on coils, for transformer and capacitor wrapping, for insulating brazed or welded connections, and for hi-low barrier insulation in large size stick-wound and small form-wound coils. It is also used for terminal board pads, anchoring winding tap breakouts, and as an outer protective wrap on transformer coils using medium-gauge magnet wire.

7.3.7 PCT tape. This thermosetting tape is solvent and high-temperature resistant. PCT tape provides puncture protection from solder burrs and weld spikes. PCT tape is ideal for insulating connections in fractional horsepower and shaded pole motors, as barrier insulation between windings of small bobbin-wound motor and transformer coils, as an outer protective wrap on coils, and for bundling end-turns on small motors wound with fine magnet wire.

7.3.8 PFT tape. This thermosetting tape is abrasion resistant and has high dielectric strength. PFT tape is used for random wound fractional and sub-fractional horsepower motors, end turn bundling, insulating magnet wire to lead wire connections, anchoring leads and phase insulation. PFT tape is ideal for insulating and holding functions in all types of small dry type transformer,

choke, reactor, and solenoid coils. PFT tape is used for ground and barrier insulation, anchoring terminal boards and leads, coil end cover insulation, and as an outer protective insulation wrap.

7.3.9 PF tape. This tape is suitable for continuous high temperature operating conditions. It is solvent resistant, flame retardant, exhibits high dielectric strength, and provides outstanding puncture, tear, and abrasion resistance. Its applications include electrical insulation, capacitor, transformer, and coil wrapping, electronic assembly, and wave solder protection. PF tape is recommended for use as a ground, barrier, and phase insulation in small high-performance toroidal coils and high frequency motors, and for end turn bundling and connection insulation in small motors. PF tape thicker than 2.5 mil is used for heavy duty high temperature applications, such as primary insulation in high-performance flexible wiring boards and heater blanket assemblies, in the pick-up and holding of ferrite cores during wiring into computer memories, and for anchoring leads and terminal boards. Its physical and electrical properties are retained at higher temperatures than any other flexible insulation. This tape can also be thermoset but very little additional insulation resistance is gained.

7.4 Ordering data. The acquisition order should specify the following:

- a. CID document number, revision, and CID PIN.
- b. Type of tape (see 2.1).
- c. Color of tape (see 2.2).
- d. Length of tape (see 2.3).
- e. Width of tape (see 2.4).
- f. Thickness of tape (see 2.5).
- g. Adhesive type (see 2.6).
- h. Preservation, packing, and marking (see 6.1).

7.5 Subject term (key word) listing.

acetate
crepe
cotton
glass
polyester
polyethylene
polyimide

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7.6 Cross-reference data. Table VIII contains the part number cross-reference data from MIL-I-15126 to this CID.

TABLE VIII. Cross-reference data.

MIL-I-15126 PIN	A-A-59770 PIN	MIL-I-15126	A-A-59770 PIN
M15126-01-02	AA59770-1A6B5D	M15126-04-04	AA59770-4K5E4D
M15126-01-04	AA59770-4K5B4D	M15126-04-10	AA59770-6M6E1D
M15126-01-06	AA59770-8A5B3D	M15126-05-02	AA59770-1K6F5D
M15126-01-11	AA59770-5X6C1A	M15126-05-04	AA59770-4K5F4D
M15126-01-12	AA59770-6X6B2D	M12126-05-11	AA59770-5X6F1A
M15126-02-02	AA59770-1K6C5D	M15126-05-12	AA59770-6E6F2D
M15126-02-04	AA59770-4X5C4D	M15126-07-03	AA59770-2M5H7D
M15126-02-11	AA59770-5X6C1A	M15126-07-10	AA59770-6M6H1D
M15126-03-02	AA59770-1X6D5D	M12126-07-11	AA59770-5X6H1A
M15126-03-03	AA59770-2M5D7D	M15126-07-12	AA59770-6E6H2D
M15126-03-04	AA59770-4X5K4D	M15126-08-12	AA59770-6M3X6D
M15126-03-06	AA59770-8X5D3D	M15126-09-10	AA59770-6X6J1D
M15126-03-11	AA59770-5M6D1A	M15126-11-10	AA59770-6M6K1D
M15126-03-12	AA59770-6D6D2D	M15126-11-11	AA59770-6M6K1D

MILITARY INTERESTS:

Custodians:

Army - CR

Navy - SH

Air Force - 11

Review Activity:

DoD - DS

CIVIL AGENCY
COORDINATING ACTIVITY:

GSA - FSS

Preparing Activity:

DLA - GS2

(Project 5970-1269)

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>.