

MIL-HDBK-228A(AS)

23 July 1982

SUPERSEDING
MIL-HDBK-228 (AS)
21 JULY 1970

MILITARY STANDARDIZATION HANDBOOK

PRESSURE-SENSITIVE

ADHESIVE, SOLVENT ACTIVATED

AND MISCELLANEOUS TAPES



FSC 7690

MIL-HDBK-228A(AS)
23 July 1982

DEPARTMENT OF THE NAVY
NAVAL AIR SYSTEMS COMMAND
Washington, D.C. 20360

MIL-HDBK-228A (AS)
Pressure-Sensitive Adhesive, Solvent Activated and Miscellaneous Tapes

1. This standardization handbook was developed by the Naval Air Systems Command, Department of the Navy.
2. This publication was approved for printing and inclusion in the military standardization handbook series.
3. This document provides basic and fundamental information on pressure-sensitive adhesive, solvent activated, miscellaneous tapes and their uses. It will provide valuable information and guidance to personnel concerned with the preparation of specifications and the procurement of tape products. The handbook is not intended to be referenced in purchase specifications except for informational purposes, nor shall it supersede any specification requirements.
4. Every effort has been made to reflect the latest information on tape products. It is the intent to review this handbook periodically to insure its completeness and currency. Users of this document are encouraged to report any errors discovered and any recommendations for changes or inclusions to the Commanding Officer, Naval Air Engineering Center, Engineering Specifications and Standards Department (Code 93), Lakehurst, NJ 08733.

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1. SCOPE

1.1 Scope. This handbook contains the intended use, description, method of application, and national stock numbers of active items, of limited and fully coordinated federal and military specifications covering pressure-sensitive, solvent activated, and miscellaneous tapes. These specification tapes are used by the majority of Naval activities and have been found to be satisfactory. The use of these materials, for the operations discussed in the text and appendices, is recommended in the interest of efficiency, economy, safety, and ease of procurement.

1.2 Purpose. The purpose of this handbook is to provide the user with the capability to quickly determine the existence of a specification item with the physical and functional capability to meet his present requirement. The recommended use of the materials covered by this handbook is not intended to prohibit the use of other tapes which station materials engineering divisions or other duly appointed engineering authorities have approved for certain specific use. However, it is recommended that the Naval Air Systems Command be advised of such use of other tapes in order that they may be tested and, if found suitable, be made available to other activities. If a specification item is available, future purchases of the item should be made under the specification in order that the Naval Air Systems Command may be safeguarded against buying tapes which may be harmful to personnel or equipment, as well as overpricing due to the direct purchase method of procurement instead of competitive bidding when purchased under definite specifications.

1.3 Application. The various tapes are initially categorized into the following three groups:

Appendix A - Pressure sensitive tapes.

Appendix B - Solvent activated tapes.

Appendix C - Miscellaneous tapes.

Each applicable specification is then described in detail, to include description, intended use, method of application, sizes, types, and classes. Specifications are arranged in the following sequence: "Federal" and "Military".

2. QUALIFICATION OF TAPES

2.1 Qualification tests are those tests accomplished on samples submitted for qualification under a specification to determine its acceptance as a satisfactory product. When required in a specification, qualification tests on the particular materials are conducted at a qualified Government laboratory designated in the specification. In the event that material furnished in the field is found to deviate from the composition, structure or performance aspects as specified in the specification, qualification approval of such material may be subject to immediate withdrawal. Communications concerning such deviations or failure in service should be directed to the Materials and Processes Branch (AIR-5304), Naval Air Systems Command,

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Department of the Navy, Washington, DC 20360. This publication lists only specifications which are used by the Naval Air Systems Command. National Stock Numbers exist only for those materials which have a continuing demand. Other materials can, however, be procured on a local basis from qualified producers. If a large enough demand for a tape exists, the particular item should be given a stock number by requesting same from the Aviation Supply Office, 700 Robbins Ave., Philadelphia, PA 19111.

3. INVESTIGATION OF PROBLEMS ENCOUNTERED IN USE

3.1 Attention is directed to the fact that the Naval Air Systems Command is always interested in problems that Naval activities encounter in the use of any materials listed in this handbook. It is recommended that Naval activities refer their material problems to the Naval Air Systems Command for investigation. Comments relative to the contents of this handbook should be referred to: Commanding Officer, Naval Air Engineering Center, Engineering Specifications and Standards Department (Code 93), Lakehurst, NJ 08733.

If warranted, the Command will assign a project to a qualified government laboratory for test and development evaluations, with the aim of obtaining carefully analyzed recommendations for field use. It is requested that Naval activities include, along with their problems, ambient and equipment temperatures and humidity, at application; describe the type of surface to which the materials has been applied; the length of useful life of the material after application, if any; and the conditions the materials encountered during useful life. Also submit any other information that would be of help for proper evaluation of the problem, to include storage data, such as the conditions where the material has been stored, and the length of time stored before use.

4. REQUESTS FOR USE OF EMERGENCY ALTERNATIVES

4.1 It is recognized that under specific unique service conditions, such as atmosphere conditions of extreme temperatures and humidities, activities may require tapes with special properties. Such special cases should be brought to the attention of the Naval Air Systems Command and adequate permissible emergency alternate materials will be suggested.

5. STORAGE INSTRUCTIONS

5.1 Tapes should be stored in the original container, preferably in a cool, dry, dark location. Ordinarily, recommended storage conditions are 70 degrees Fahrenheit or lower, and 40 to 60 percent relative humidity. However, pressure-sensitive tapes can be stored at temperatures below 32 degrees Fahrenheit with no deleterious effects. Freezing temperatures will retard the natural aging of tapes. After cold storage, the material must be conditioned to optimum application temperatures (60 to 80 degrees Fahrenheit) before use.

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It should not be stored in close proximity to steam pipes, radiators, or other heated surfaces. Since certain adhesives lose some of their initial quality with increasing age, and since these tapes are generally semiperishable, supplies and purchases should be adjusted, if possible, to avoid storage for more than 6 months. Stocks must be rotated. These instructions apply to the tapes discussed in this handbook.

Preparing activity:
Navy - AS
(Project No. 7690-N059)

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APPENDIX A

PRESSURE SENSITIVE TAPES

10. DESCRIPTION.

10.1 This appendix covers pressure sensitive tapes. The appendix is subdivided by typical uses.

10.2 Individual specifications are described in detail in subparagraphs of 60.

20. ELECTRICAL INSULATORS AND INSULATING MATERIALS.

20.1 Insulation tapes.

20.1.1 This group consists of pressure-sensitive tapes designed to provide electrical insulation of wires and cables, with varying dielectric strengths and operating temperatures.

<u>Federal</u>		<u>Paragraph</u>
HH-I-510	Insulation Tape, Electrical, Friction	60.5
HH-I-533	Insulation Tape, Electrical (Rubber Natural and Synthetic)	60.6
HH-I-595	Insulation Tape, Electrical, Pressure-Sensitive Adhesive, Plastic for Low-Temperature Application	60.7
<u>Military</u>		
MIL-I-3374	Insulation Cloth and Tape, Electrical, Varnished Cambric	60.21
MIL-I-3825	Insulation Tape, Electrical, Self-Fusing, for use in Electronic Communications and Allied Equipment	60.22
MIL-I-15126	Insulation Tape, Electrical, Pressure-Sensitive Adhesive and Pressure-Sensitive Thermosetting Adhesive	60.25
MIL-I-19166	Insulation Tape, Electrical, High Temperature, Glass Fiber, Pressure-Sensitive	60.26
MIL-I-22444	Insulation Tape, Electrical, Self-Bonding	60.29
MIL-I-23594	Insulation Tape, Adhesive, Electrical, High Temperature Polytetrafluoroethylene, Pressure-Sensitive	60.32
MIL-I-24331	Insulation Tape, Electrical, Plastic, Pressure-sensitive	60.33

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30. PHOTOGRAPHIC SUPPLIES.

30.1 Photographic use. This group consists of pressure-sensitive tapes for photographic use such as film splicing.

<u>Federal</u>		<u>Paragraph</u>
UU-T-123	Tape, Pressure-Sensitive Adhesive, Paper, Photographic	60.13
 <u>Military</u>		
MIL-T-26317	Tape, Pressure-Sensitive Adhesive, Transparent, Film Splicing	60.34
MIL-T-40620	Tape, Pressure-Sensitive, Lithograph	60.37

40. GENERAL SUPPLIES.

40.1 This group covers pressure-sensitive tapes with a wide variety of uses. Examples are cited below.

- a. Drafting operations.
- b. Permanent mending of paper books.
- c. General office use.
- d. Covering identification tapes and labels.
- e. Use where two-sided adhesion is required.
- f. Holding.

<u>Federal</u>		<u>Paragraph</u>
L-T-80	Tape, Pressure-Sensitive Adhesive (Aluminum Backed)	60.1
L-T-90	Tape, Pressure-Sensitive Adhesive (Cellophane and Cellulose Acetate)	60.2
L-T-99	Tape, Pressure-Sensitive Identification	60.3
L-T-100	Tape, Pressure-Sensitive, Polyester Film	60.4
HH-T-25	Tape, Pressure-Sensitive Adhesive, Plastic (For Electroplating)	60.8
HH-T-29	Tape, Adhesive, Lead Foil	60.9
UU-T-91	Tape, Pressure-Sensitive Adhesive, Double Coated	60.10
UU-T-93	Tape, Pressure-Sensitive, Paper, Drafting	60.11
PPP-T-66	Tape, Pressure-Sensitive Adhesive, Vinyl Plastic Film	60.16

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<u>Military</u>		<u>Paragraph</u>
MIL-T-27730	Tape, Antiseize, Polytetrafluoroethylene, With Dispenser	60.35
MIL-T-60394	Tape, Pressure-Sensitive Adhesive Film, Double Coated (For Use With Ammunition)	60.39
MIL-T-83284	Tape, Thermal Radiation Resistant, Pressure-Sensitive Aluminum Coated Fiber- glass Cloth	60.40

50. PRESERVATION; PACKAGING AND SEALING TAPES.

50.1 This group consists of pressure-sensitive tapes designed for preservation, packaging and sealing operations, with varying properties and uses, such as:

- a. High temperature application.
- b. Masking for painting operations.
- c. Dissimilar metal separation.
- d. Sealing joints.
- e. Packaging of supplies which will be overpacked in exterior containers.
- f. Protection of aircraft, missiles, and rockets during handling, shipment, and storage.
- g. Closing and sealing fiberboard containers.
- h. Reinforcing bundles and containers.
- i. Attaching, covering, and protecting labels.

<u>Federal</u>		<u>Paragraph</u>
PPP-T-42	Tape, Packaging, Masking, Paper	60.14
PPP-T-60	Tape, Pressure-Sensitive, Waterproof for Packaging	60.15
PPP-T-70	Tape, Packaging, Plastic Film	60.17
PPP-T-75	Tape, Preservation and Sealing	60.18
PPP-T-76	Tape, Preservation, Adhesive Paper (For Carton Sealing)	60.19
PPP-T-97	Tape, Pressure-Sensitive Adhesive, Filament Reinforced	60.20

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<u>Military</u>		<u>Paragraph</u>
MIL-T-4053	Tape, Pressure-Sensitive, Adhesion (Corrosion-Resistant)	60.23
MIL-T-21595	Tape, Pressure-Sensitive Adhesive, Paper, Masking, Nonstaining	60.27
MIL-P-22085	Paper, Pressure-Sensitive, Adhesive, Preservation and Sealing	60.28
MIL-T-23142	Tape, Pressure-Sensitive Adhesive, for Dissimilar Metal Separation	60.30
MIL-T-23397	Tape, Pressure-Sensitive Adhesive for Masking During Paint Stripping Operations	60.31
MIL-T-38727	Tape, Adhesive Coated, Protective	60.36
MIL-T-43036	Tape, Pressure-Sensitive Adhesive, Plastic Film Filament Reinforced (For Sealing Fiber Containers and Cans)	60.38

60. DETAIL INFORMATION ON SPECIFICATIONS IN APPENDIX A.

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60.1 TAPE, PRESSURE-SENSITIVE ADHESIVE (ALUMINUM BACKED).

60.1.1 Description. An aluminum foil backed tape coated on one side with pressure sensitive adhesive.

60.1.2 intended use. This tape is intended for use in sealing applications where the properties of good weather resistance, reflectivity and vapor transmission resistance are required.

60.1.3 Method of application. Apply to clean, dry surface, press on firmly, making sure that it makes good contact.

<u>Width</u>	<u>Length</u>	<u>Core Diameter</u>	<u>Stock Number</u>
.5	60 yd	3"	7510-00-806-4669
1	60 yd	3"	7510-00-720-7516
1.5	60 yd	3"	7510-00-754-2522
2	60 yd	3"	7510-00-684-8803
2	60 yd	3"	7510-01-043-5026
3	60 yd	3"	7510-00-816-8077
3	46 in	3.062"	7510-01-042-2538
6	60 yd	3"	7510-00-235-0745

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60.2 TAPE, PRESSURE-SENSITIVE, ADHESIVE, (CELLOPHANE AND CELLULOSE ACETATE)
L-T-90

60.2.1 Description. A cellophane or cellulose acetate film base coated on one side with a pressure-sensitive adhesive. Colors are resistant to bleeding. Available in two types.

Type I - Cellophane:
Class A - transparent
Class B - colored

Type II - Cellulose acetate:
Class A - transparent, low reflectance
Class B - transparent, glossy backed

Colors for Type I, Class B: Red, white, black, medium green, yellow, medium blue, light green, light blue, orange-yellow, orange, dark blue.

60.2.2 Intended use. Type I, Class A: Non-permanent applications such as holding, covering, light packaging, sealing, shielding, and general office use.

Type I, Class B: Non-permanent applications such as identification, charting, decorating, holding, light packaging, and sealing. Available in colors specified in table below.

Type II, Class A: Permanent mending of paper, documents, books, maps, etc. Will accept typing and writing in pencil, pen, or other common marking devices, and appears invisible when copied.

Type II, Class B: Permanent application such as light holding, covering, shielding, sealing, and protection of labels.

60.2.3 Method of application. Apply to clean, dry surface, press on firmly, making sure that it makes good contact.

TYPE I, CLASS A

TRANSPARENT CELLOPHANE TAPE

<u>Color</u>	<u>Width (inches)</u>	<u>Core (inches)</u>	<u>Length (yds)</u>	<u>Stock Number</u>
Clear	1/2	1	400 in.	7510-00-551-9822
Clear	1/2	1	36	7510-00-551-9821
Clear	1/2	3	72	7510-00-551-9820
Clear	3/4	1	36	7510-00-551-9818
Clear	3/4	3	72	7510-00-551-9816
Clear	1	3	72	7510-00-551-9817
Clear	1 1/2	3	72	7510-00-551-9826
Clear	2	3	72	7510-00-234-7960
Opaque	2	-	-	7510-00-680-0151
Aluminum	2	-	60	7510-00-234-7960

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TYPE I, CLASS B

COLORED CELLOPHANE TAPE

<u>Color</u>	<u>Width (inches)</u>	<u>Core (inches)</u>	<u>Length (yds)</u>	<u>Stock Number</u>
Yellow	1/8	3	72	7510-00-558-1520
White	1/8	3	72	7510-00-558-1530
Dark Blue	1/8	3	72	7510-00-558-1537
Med Green	1/8	3	72	7510-00-558-1542
Orange Yellow	1/8	3	72	7510-00-558-1516
Blue	1/8	3	72	7510-00-550-7721
Green	1/8	3	72	7510-00-550-7725
Orange	1/8	3	72	7510-00-558-1512
Black	1/8	3	72	7510-00-558-1555
Med Blue	1/8	3	72	7510-00-577-4877
Red	1/8	3	72	7510-00-634-3253
Red	.25	3	72	7510-00-634-3264
Lt Blue	.25	3	72	7510-00-550-7722
Lt Green	.25	3	72	7510-00-550-7726
White	.25	3	72	7510-00-558-1529
Black	.25	3	72	7510-00-504-5640
Lt Green	.25	3	72	7510-00-504-5639
Orange	.25	3	72	7510-00-504-5638
Blue	.25	3	72	7510-00-504-5637
White	.25	3	72	7510-00-502-6578
Drk Blue	.25	3	72	7510-00-478-3588
Yellow	.25	3	72	7510-00-558-1519
Black	1/2	3	72	7510-00-551-8474
Drk Blue	1/2	3	72	7510-00-550-7124
Med Green	1/2	3	72	7510-00-550-7129
Orange Yellow	1/2	3	72	7510-00-550-7128
Red	1/2	3	72	7510-00-550-7126
White	1/2	3	72	7510-00-550-7127
Yellow	1/2	3	72	7510-00-550-7125
Black	1/2	3	36	7510-00-558-1543
Med Blue	1/2	3	72	7510-00-577-4881
Lt Green	1/2	3	72	7510-00-558-1521
Lt Blue	1/2	3	72	7510-00-634-3267
White	.719-.731	1	60	7510-00-835-1247
White	3/4	1	324"	7510-00-551-9819
Med Blue	3/4	3	72	7510-00-577-4883
Black	3/4	3	72	7510-00-558-1304
White	3/4	3	72	7510-00-558-1314
Lt Green	3/4	3	72	7510-00-558-1321
Red	3/4	3	72	7510-00-634-3252
White	3/4	1	60	7510-00-835-1247
Med Green	1	3	72	7510-00-558-1526
Lt Green	1	3	72	7510-00-558-1320
Red	1	3	72	7510-00-634-3260
Med Blue	1	3	72	7510-00-577-4884
Blue	1	3	72	7510-00-558-1323
Med Green	1	3	72	7510-00-558-1526
White	1	3	72	7510-00-559-1755
Med Blue	1	3	72	7510-00-577-4884

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TYPE I, CLASS B (continued)

COLORED TRANSPARENT TAPE

<u>Color</u>	<u>width (inches)</u>	<u>Core (inches)</u>	<u>Length (yds)</u>	<u>Stock Number</u>
Brown	1	3	72	7510-00-558-1297
Dk Blue	1	3	72	7510-00-558-1312
Yellow	1	3	72	7510-00-558-1317
Lt Green	1	3	72	7510-00-558-1320
Black	1	3	72	7510-00-558-1305
Red	1 1/2	3	72	7510-00-634-3261
Black	2	3	72	7510-00-558-1527
Med Blue	2	3	72	7510-00-577-4886
Lt Green	2	2	72	7510-00-559-4502
Red	2	3	72	7510-00-634-3262
White	2	3	72	7510-00-634-0293
Pink	7	3	72	7510-01-057-3612

TYPE II, CLASS A

TRANSPARENT, LOW REFLECTANCE CELLULOSE ACETATE

<u>Color</u>	<u>Width (inches)</u>	<u>Core (inches)</u>	<u>Length (yds)</u>	<u>Stock Number</u>
Clear	1/2	1	400"	7510-00-082-2521
Clear	1/2	3	72	7510-00-813-4951
Clear	1/2	1	36	7510-00-551-9825
Clear	3/4	1	300"	7510-00-082-2520
Clear	3/4	1	36	7510-00-551-9825
Clear	3/4	1	180"	7510-00-721-9680
Clear	3/4	3	72	7510-00-551-9824
Clear	1	3	72	7510-00-551-9823
Clear	1.5	3	72	7510-00-868-4713
Clear	4	3	72	7510-00-576-9762
Clear	8	2.875	72	7510-00-724-7002

TYPE II, CLASS B

TRANSPARENT, GLOSSY BACKED CELLULOSE ACETATE

<u>Color</u>	<u>Width (inches)</u>	<u>Core (inches)</u>	<u>Length (yds)</u>	<u>Stock Number</u>
Clear	1/4	3	72	7510-00-728-5754
Clear	1/2	3	72	7510-00-181-8239
Clear	1/2	3	72	7510-00-634-3029
Clear	1	3	72	7510-00-663-9043

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60.3 TAPE, PRESSURE SENSITIVE ADHESIVE, IDENTIFICATION

L-T-99

60.3.1 Description. This tape is a printable pressure-sensitive adhesive tape. The backing for tapes I and II is either polyester film or a cellulose acetate plastic film laminated to paper (reinforcing tissue) with a continuous film of water insoluble pigmented or unpigmented pressure-sensitive adhesive. The functional (exterior) adhesive is on the paper side. For Type III, the backing material consists of an unplasticized polyvinyl chloride film. The tape backing is coated on one side with a pressure sensitive pigmented or unpigmented adhesive which requires no moisture, heat, or other preparation prior to application.

60.3.2 Intended use.

Type I. Type I tape is intended for interior use as an identification medium. In the printed form it may be used for labeling applications, including files, containers of all types, charts, etc. Colored tape, with or without printing can be used for identifying the metal in metal shapes, color coding, etc. It is not recommended for edging purposes.

Type II. Type II tape is suited for edging of documents, maps, charts, etc., to protect the edges from tearing or other damage during handling and storage.

Type III. Type III tape is intended for both interior and exterior identification applications such as air mail tape and other special markings required in packaging. Office use and similar applications. It is not recommended for edging purposes.

60.3.3 Method of application. Tape is applied to clean, dry surface, preferably at 60 to 80 degrees Fahrenheit. Press on firmly, making sure the entire surface of the tape makes good contact.

TYPE I

<u>Color</u>	<u>Width (inches)</u>	<u>Core (inches)</u>	<u>Length (yds)</u>	<u>Stock Number</u>
Transparent	2	3	72	7510-00-501-6919

TYPE II

<u>Color</u>	<u>Width (inches)</u>	<u>Core (inches)</u>	<u>Length (yuds)</u>	<u>Stock Number</u>
White	.375	3	72	7510-00-273-9837
Lt Blue	1/2	3	72	7510-00-634-2940
White	1	3	72	7510-00-269-8962
Orange Yellow	1	3	72	7510-00-234-7973
Black	1	3	72	7510-00-093-4798
Gray	1	3	72	7510-00-272-9441
Clear	1	3	72	7510-00-634-3050
Orange	2	3	72	7510-00-273-9835
Blue	2	3	72	7510-00-264-3699
Clear	3	3	72	7510-00-634-0284

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60.4 TAPE, PRESSURE-SENSITIVE ADHESIVE, POLYESTER FILM

L-T-100

60.4.1 Description. A nonhygroscopic solvent-resistant polyester film coated on one side with a solvent resistant water insoluble pressure-sensitive adhesive. Available in two types:

- Type I - Transparent
- Type II - Colored (gold, silver, or as specified)

60.4.2 Intended use. Type I is to be used where a high degree of resistance to solvents, oils and hydraulic fluids is required. Examples of such applications are in dissimilar metal separation on aircraft and covering of pressure-sensitive identification tapes on fluid lines and wiring harnesses in aircraft and vehicles. It is also recommended for covering of labels on shipping containers where exterior exposure is anticipated. When printed on the adhesive side, this type is intended for use where the printed message must be protected from weathering, solvents and abrasion.

Type II is to be used where a weather resistant, long aging label or decorative striping or color coding is required. For a solvent resistant printed label, Type II, printed and overlaid with Type I, should be used.

60.4.3 Method of application. Apply to a clean, dry surface, press tape firmly, making sure of complete contact.

TYPE I

<u>Color</u>	<u>Width (inches)</u>	<u>Core (inches)</u>	<u>Length (yds)</u>	<u>Stock number</u>
Clear	1/2	3	72	7510-00-105-3092
Clear	1/2	3	72	7510-01-011-2484
Clear	3/4	3	72	7510-00-987-6661
Clear	1	3	72	7510-00-149-0732
Clear	1	3	72	7510-00-049-8608
Clear	1	3	72	7510-01-038-1045
Clear	1 1/2	3	72	7510-00-721-9756
Clear	1 1/2	3	72	7510-00-105-3091
Clear	2	3	72	7510-00-846-8674
Clear	3	3	72	7510-00-105-3090

TYPE II

<u>Color</u>	<u>Width (inches)</u>	<u>Core (inches)</u>	<u>Length (yds)</u>	<u>Stock Number</u>
Silver	.375	3	72	7510-00-838-5222
Silver	.5	3	72	7510-00-827-5700
Silver	3/4	3	72	7510-00-941-0671
Silver	1	3	72	7510-01-040-5784
Silver	1	3	72	7510-01-039-4091
Silver	1	3	72	7510-00-816-1020
Gold	1	3	72	7510-00-262-1677

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60.5 INSULATION TAPE, ELECTRICAL, FRICTION

HH-1-510

60.5.1 Description. The tape consists of cotton sheeting impregnated with a tacky adhesive insulating compound which covers both sides evenly. The tape has a dielectric strength of at least 1000 volts.

60.5.2 Intended use. The tape is used for protecting and binding in place insulation applied to joints of electrical wires and cables and for other similar purposes.

60.5.3 Method of application. Press onto a clean, dry surface, then continue to lap onto itself.

<u>Color</u>	<u>Length (feet)</u>	<u>Width (inches)</u>	<u>Stock Number</u>
Black	85	3/4	5970-00-644-3167
Black	85	1	5970-00-185-8531
Black	85	1-1/2	5970-00-198-8621
Black	85	2	5970-00-230-5124

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60.6 INSULATION TAPE, ELECTRICAL (RUBBER, NATURAL AND SYNTHETIC)

HH-1-553

60.6.1 Description.

Grade A. This grade consists of an unvulcanized self-amalgamating compound of natural rubber, synthetic rubber or a mixture of the two.

Grade B. This grade consists of an unvulcanized or partially vulcanized compound of natural rubber, synthetic rubber or a mixture of the two.

60.6.2 Intended use.

Grade A. This grade is ozone resistant, designed primarily for splicing electrical wires and cables operating at high voltages.

Grade B. This grade is not ozone resistant and is used for splicing wires and cables operating at voltages of 600 volts maximum.

GRADE A

<u>Color</u>	<u>Width (inches)</u>	<u>Length (feet)</u>	<u>Stock Number</u>
Black	3/4	30	5970-00-184-2002
	3/4	30	5970-00-644-3166
AA	3/4	30	5970-00-995-2313
Black	2	15	5970-00-681-8236
AA	2	30	5970-01-070-9444

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60.7 INSULATION TAPE, ELECTRICAL, PRESSURE-SENSITIVE ADHESIVE, PLASTIC, FOR
LOW-TEMPERATURE APPLICATION

HH-I-595

60.7.1 Description. The tape is made of a pigmented plastic film backing, coated on one side with a pressure-sensitive, water insoluble adhesive, which requires no solvent, heat, or other preparation prior to application.

60.7.2 Intended use. Insulating electrical conductors and splices in electrical wiring, in low-temperature applications (10°F, -12.2°C).

60.7.3 Length, thickness and core size. Unless otherwise specified, the roll contains 36 linear yards of black tape on a 1 inch I.D. core, from 0.006 to 0.011 inch thick, in the widths specified below.

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yards)</u>	<u>Stock Number</u>
Black	1/2	36	5970-00-644-2636
Black	1/2	36	5970-00-926-7219
Black	3/4	22	5970-00-816-7218
Black	3/4	36	5970-00-816-6056
Black	1	36	5970-00-926-7220

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60.8 TAPE, PRESSURE-SENSITIVE ADHESIVE, PLASTIC (FOR ELECTROPLATING)

HH-T-25

60.8.1 Description. The tape backing is a transparent plastic that is resistant to water and most chemicals used in electroplating operations. One side is completely coated with a pressure-sensitive water resistant homogeneous adhesive applied in a smooth layer. The tape is capable of performing satisfactorily in plating baths up to 170°F.

60.8.2 Intended use. The tape is primarily intended for stop off masking during electroplating operations, including both flat strip and overlapping masks. It may also be used to give abrasion resistance to protect parts during rough handling.

60.8.3 Method of application. Tape is applied to clean, dry surfaced, preferably at 60 to 80 degrees Fahrenheit. Press on firmly, making sure the entire surface of the tape makes good contact.

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Natural	1/2	36	3	7510-00-636-0871
Natural	3/4	36	3	7510-00-685-5566
Natural	1	36	3	7510-00-833-7311
Natural	2	36	3	7510-00-833-7310
Yellow	1 1/2	36	3	7510-01-030-6800
Yellow	1 1/2	36	3	7510-01-058-1126

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60.9 TAPE, ADHESIVE, LEAD FOIL

HH-T-29

60.9.1 Description. Oil and moisture-resistant, easily molded. Seals out moisture in double-pane windows and in the construction of moisture-proof rooms and buildings. Unaffected by extreme humidity and natural weathering.

60.9.2 Intended use. Effective for hard chromeplating work. Forms tight seal, eliminates "thieving action."

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Natural	1/4	36	3	7510-00-584-5953
Natural	1/2	36	3	7510-00-530-5511
Natural	3/4	36	3	7510-00-530-5512
Natural	1	36	3	7510-00-530-5514
Natural	1-1/2	36	3	7510-00-841-5394
Natural	2	36	3	7510-00-664-0001

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60.10 TAPE, PRESSURE-SENSITIVE ADHESIVE, DOUBLE COATED

UU-T-91

60.10.1 Description. Available in three types. The tape backing is a transparent film for Type I, an opaque flat stock paper sheeting for Type II and a translucent, porous paper tissue for Type III. The backing is coated on both sides with a water insoluble pressure-sensitive adhesive. Type I, Class 1 and Type II and Type III have an easily removable liner. Type I, Class 2 does not have a liner.

60.10.2 Intended use. Mounting work for photographic reproduction; mounting drawings, plastic, rubber or metal plates, and other uses where two sided adhesion is required.

60.10.3 Method of application. Apply, adhesive side down, to dry, clean surface, preferably at 60 to 80 degrees Fahrenheit. Press tape down firmly, making sure that the entire surface makes contact. Remove liner, to bare opposite side.

TYPE I, CLASS 1

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Clear	1/4	26	3	7510-00-935-4096
Clear	1/2	250 in.	1	7510-01-017-1509
Clear	1/2	36	3	7510-00-634-1547
Clear	1/2	36	3	7510-01-058-8037
Clear	3/4	36	3	7510-00-634-1548
Clear	1	36	3	7510-00-634-1549
Clear	2	36	3	7510-00-634-1536
Clear	2	36	3	7510-01-058-8038
Clear	3	36	3	7510-00-687-8185
Clear	4	36	3	7510-01-058-8039

TYPE I, CLASS 2

<u>Color</u>	<u>width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Clear	1/2	36	3	7510-00-550-7815
Clear	3/4	36	3	7510-00-904-2663
Clear	1	36	3	7510-00-550-7814

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TYPE II

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Natural	1/4	36	3	7510-00-061-1110
Natural	1/2	36	3	7510-00-634-1563
Natural	3/4	36	3	7510-00-634-1564
Natural	1	36	3	7510-00-634-1565
Natural	1-1/2	36	3	7510-00-634-3254
Natural	2	36	3	7510-00-634-1566

TYPE III, CLASS 2

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
A/A	1-1/2	36	3	7510-00-965-5848

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60.11 TAPE, PRESSURE-SENSITIVE ADHESIVE, PAPER, DRAFTING

UU-T-93

60.11.1 Description. The tape is an opaque creped paper backing coated on one side with a pressure-sensitive adhesive. It is easily removed from drafting and tracing papers.

60.11.2 Intended use. Securing of drawings or tracing paper in drafting operations.

60.11.3 Method of application. Apply to a clean, dry surface, preferably at 60 to 80 degrees Fahrenheit. Press on firmly, making sure that the entire surface of tape makes good contact.

<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
3	60	3	7510-01-093-3732
1	60	3	7510-00-198-5831

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60.12 TAPE, PRESSURE-SENSITIVE ADHESIVE, MASKING, PAPER

UU-T-106

60.12.1 Description. Available in two types. Type I is a creped paper backing which is coated on one side with a pressure-sensitive adhesive. Type II is a flat paper backing which is coated on one side with a pressure-sensitive adhesive.

60.12.2 Intended use. Use with paint, varnish, or other finishing materials to protect surface areas not to be covered by the finishing material. Type I is for use where curved areas are to be masked. Type II is for straight line masking.

60.12.3 Method of application. Apply to clean surface, preferably at 60 to 90 degrees Fahrenheit. Press on firmly, making sure that the entire surface of tape makes good contact.

TYPE II

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Natural	1/2	60	3	7510-01-026-4661
Natural	1	60	3	7510-01-027-3936
Natural	2	60	3	7510-01-027-3937

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60.13 TAPE, PRESSURE-SENSITIVE ADHESIVE, PAPER, PHOTOGRAPHIC

UU-T-123

60.13.1 Description. A dull, black creped paper coated on one side with a pressure-sensitive adhesive.

60.13.2 Intended use. Photographic work such as edging and blocking out in the development and printing of negatives, sealing cans of photographic film and sealing and repairing camera bellows, darkroom walls, cracks and holes against unwanted light. Also used for binding lantern slides.

60.13.3 Method of application. Apply to a clean, dry surface, preferable at 60 to 80 degrees Fahrenheit. Press firmly, making sure that the entire surface of tape makes good contact.

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Black	1/2	60	3	7510-00-285-2930
Black	3/4	60	3	7510-00-272-9458
Black	1	60	3	7510-00-285-2931
Black	2	60	3	7510-00-728-5755

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60.14 TAPE, PACKAGING/MASKING PAPER

PPP-T-42

60.14.1 Description. This tape consists of paper backing covered on one side with an adhesive that requires no moisture, heat, or other preparation prior to application.

60.14.2 Intended use. Type I tape is primarily intended for light-duty bundling, holding, and packaging applications such as bundling small parts to be overpacked, holding small parts to larger assemblies, and for temporary closing of chipboard boxes and fiberboard boxes that are not to be shipped between bases. This tape is not intended to be a substitute for PPP-T-76, carton sealing tape. Type I tape is also for use in temporarily masking surfaces from being covered by paint, varnish, or other finishing materials. For masking applications, type I is for use on contoured or rounded surfaces. Type II tape is only for use in temporarily masking surfaces from being covered by paint, varnish, or other finishing materials. Type II is for use where straight line color separation is desired.

60.14.3 Method of application. Tape is applied to clean, dry surfaces, preferably at 60 to 80 degrees Fahrenheit. Press on firmly, making sure the entire surface of the tape makes good contact.

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Natural	1/2	60	3	7510-00-266-6714
Natural	1/2	60	3	7510-00-290-2023
Natural	1	60	3	7510-00-283-0612
Natural	1	60	3	7510-00-266-6712
Natural	1-1/2	60	3	7510-00-290-2027
Opaque	1-1/2	60	3	7510-00-266-6709
Natural	2	60	3	7510-00-266-6710
Opaque	3	60	3	7510-00-266-6694
Natural	3	60	3	7510-00-266-6707

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60.15 TAPE: PRESSURE-SENSITIVE ADHESIVE, WATERPROOF, FOR PACKAGING

PPP-T-60

60.15.1 Description. The materials used in the construction of this tape are such as to insure performance in the temperature range from minus 65 degrees to plus 160 degrees Fahrenheit. The tape is coated on one side with a pressure-sensitive, water insoluble adhesive. Two types and two classes are available:

Type III - Film (polyethylene terephthalate) backings
Class 1 - Colored
Class 2 - Transparent

Type IV - Woven (cotton) cloth backings
Class 1 - Colored

Type III, Class 1 and Type IV, Class 1, colors correspond to color card numbers as specified in Federal Standard 595. Type III, Class 2 tape is sufficiently clear and transparent to allow easy reading of 5 point type when tape is applied directly over it.

60.15.2 Intended use. Packaging and sealing applications, for waterproofing operations where protection to water penetration, and performance at extremely low temperature, are desired.

Type III, Class 1 - Packaging applications where water vaporproofness, high strength, and resistance to exposure to rain, sunlight, and other deteriorating elements are required.

Type III, Class 2 - Attaching, covering, and protecting labels on both interior and exterior containers. May be used for closing and sealing containers where a transparent packaging tape is desired.

Type IV, Class 1 - Less critical packaging uses where a cloth tape may be desired.

60.15.3 Method of application. Apply to a clean, dry surface at any temperature from minus 65 to plus 160 degrees Fahrenheit. Press on firmly, making sure the entire surface of the tape makes good contact.

TYPE III, CLASS 1

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Numbers</u>
Black	3/8	60	3	7510-00-282-7902
Black	1/2	60	3	7510-00-282-7901
Olive	1/2	60	3	7510-00-975-1186
White	1	60	3	7510-00-663-0198
Black	1	72	3	7510-00-118-1213
Black	1	60	3	7510-00-680-2133
Gray	1	60	3	7510-00-663-9052
Dk Green	1	60	3	7510-00-269-8088

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TYPE III, CLASS 1 (continued)

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Olive	1	60	3	7510-00-663-0199
Red	1	60	3	7510-00-266-5008W
White	1-1/2	60	3	7510-00-838-8810
Black	1-1/2	60	3	7510-00-454-9384
Black	1-1/2	60	3	7510-00-680-2134
Black	2	60	3	7510-00-663-0197
Dk Green	2	60	3	7510-00-269-8090
Olive	2	60	3	7510-00-663-0196
Red	2	60	3	7510-00-579-8492
White	2	60	3	7510-00-663-0195
Brown	2	60	3	7510-01-017-6140
Tan	2	60	3	7510-00-079-7906
Olive	2-1/2	60	3	7510-00-266-5026
Red	2-1/2	60	3	7510-00-663-3739
Black	3	60	3	7510-00-663-0194
Olive	3	60	3	7510-00-663-3738
Red	3	60	3	7510-00-663-0193
White	3	60	3	7510-00-266-5039
Tan	3	60	3	7510-00-079-7905
Black	3	60	3	7510-00-931-2017
Green	4	60	3	7510-00-269-8092
Olive	4	60	3	7510-00-551-1245
Tan	4	60	3	7510-00-079-7907
Dk Green	4	60	3	7510-00-269-8091
Green	6	60	3	7510-00-269-8094
Olive	6	60	3	7510-00-559-1531
Red	6	60	3	7510-00-514-3082

TYPE III, CLASS 2

<u>Color</u>	<u>Width (inches)</u>	<u>Length (inches)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Clear	1/2	60	3	7510-00-266-6716
Clear	1	60	3	7510-00-663-3732
Clear	2	60	3	7510-00-266-6715
Clear	3	60	3	7510-00-281-2700
Black	4	60	3	7510-00-221-3476
Black	5	60	3	7510-00-216-5311
Black	6	60	3	7510-00-221-3478

TYPE IV, CLASS 1

<u>Color</u>	<u>Width (inches)</u>	<u>Length (inches)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
O.D.	1/2	60	3	7510-00-501-6384
Lt Blue	1	60	3	7510-00-836-0810
Black	1	60	3	7510-00-074-4960
Gray	1	60	3	7510-00-789-3368
Green	1	60	3	7510-00-074-5122
O.D.	1	60	3	7510-00-890-9872

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TYPE IV CLASS 1 (continued)

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Red	1	60	3	7510-00-074-4966
White	1	60	3	7510-00-074-4946
White	1-1/2	60	3	7510-01-043-2297
O.D.	1-1/2	60	3	7510-00-501-6383
O.D.	2	10	1.062	7510-00-104-9741
O.D.	2	10	1.062	7510-00-926-9186
Gray	2	60	3	7510-00-501-6373
O.D.	2	60	3	7510-01-266-5016
Red	2	60	3	7510-00-026-1690
Black	2	60	3	7510-00-074-4961
Green	2	60	3	7510-00-074-5124
Red	2	60	3	7510-00-074-4969
White	2	60	3	7510-00-074-4952
O.D.	2-1/2	60	3	7510-00-074-5100
Black	2-1/2	60	3	7510-00-074-4962
Dk Green	2-1/2	60	3	7510-00-074-5157
Red	2-1/2	60	3	7510-00-074-4978
White	2-1/2	60	3	7510-00-074-4953
Olive	3	60	3	7510-00-890-9874
Black	3	60	3	7510-00-074-4963
Dk Green	3	60	3	7510-00-074-5160
Red	3	60	3	7510-00-074-4996
White	3	60	3	7510-00-074-4954
Black	4	60	3	7510-00-074-4964
Green	4	60	3	7510-00-074-5174
O.D.	4	60	3	7510-00-890-9875
Red	4	60	3	7510-00-074-5029
White	4	60	3	7510-00-074-4955
Black	6	60	3	7510-00-074-4965
Green	6	60	3	7510-00-074-5178
O.D.	6	60	3	7510-00-074-9876
Red	6	60	3	7510-00-074-5058
White	6	60	3	7510-00-074-4957

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60.16 TAPE: PRESSURE-SENSITIVE ADHESIVE, VINYL PLASTIC FILM

PPP-T-66

60.16.1 Description. A plastic film pressure-sensitive adhesive tape. The backing materials consists of modified polyvinyl chloride or polyvinyl chloride-vinyl acetate film. The backing is coated on one side with a water insoluble pressure-sensitive adhesive. The following classes and types are furnished.

Type I - General purpose
 Class 1 - Transparent
 Class 2 - Colored (Blue, green, yellow, orange, red, brown, black, white or other commercially available colors)

Type II - Printable (white or yellow)

60.16.2 Intended use. Both Type I and Type II tapes can be used for sealing out moisture and applications requiring the flexibility, toughness, conformability, and resistance to sunlight, salts, water, oil, solvents, acids, alkalis, abrasives, and other properties normally possessed by a plasticized vinyl film. Some typical applications are as follows:

a. Sealing screw caps, stoppers, or slip cover closures of plastic, metal, glass, or combinations thereof. The tape widths recommended are 3/4 and 1 inch.

b. Lane marking stripping materials for designating traffic aisles, loading and storage areas, etc. The tape widths recommended are 2 and 3 inches.

c. Sealing openings such as examination ports in dehydrated containers or openings on mechanical equipment.

d. Protection of pipe not buried underground from corrosion by moisture, acids, alkalis, and salts.

e. Color code identification of pipelines, e.g., steam lines and water lines.

f. For sealing photographic film cans and magazines, use Type I, class 2, black.

g. Printed Type II tape is suitable for use on the applications mentioned in a, c, e, and other similar applications where a printed legend and the properties of a vinyl plastic tape are required.

60.16.3 Method of application. Apply to clean, dry surface. Press firmly, making sure that the entire surface of tape makes good contact.

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TYPE I, CLASS 1

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Clear	3/4	36	3	7510-00-634-2951
Clear	1	36	3	7510-00-515-2856
Clear	1	36	3	7510-00-246-9934
Clear	1-1/2	36	3	7510-00-634-3285
Clear	2	83 1/3	3	7510-00-142-9813
Clear	3	36	3	7510-00-634-3211

TYPE I, CLASS 2

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Black	1/4	36	3	7510-00-634-1334
Blue	1/4	36	3	7510-00-634-2786
Brown	1/4	36	3	7510-00-634-2787
Canary yellow	1/4	36	3	7510-00-634-2788
Green	1/4	36	3	7510-00-634-1341
Orange	1/4	36	3	7510-00-634-2789
Red	1/4	36	3	7510-00-634-2790
White	1/4	36	3	7510-00-634-2791
Blue	1/2	36	3	7510-00-474-7023
Yellow	1/2	36	3	7510-00-926-2033
Red	1/2	36	3	7510-00-105-0645
White	1/2	36	1	7510-00-836-9899
Yellow	1/2	36	1	7510-00-836-9903
Orange	1/2	36	3	7510-01-045-5866
Black	3/4	36	3	7510-00-634-2802
Red	3/4	36	3	7510-00-634-2951
Yellow	3/4	36	3	7510-00-664-0472
Red	1/2	36	3	7510-00-149-1951
Brown	1/2	36	3	7510-00-079-7873
Blue	1/2	36	3	7510-00-079-7871
Yellow	1	36	1	7510-00-664-0473
Brown	1	36	3	7510-00-836-9901
Brown	1	36	3	7510-01-020-8769
Blue	1	36	3	7510-00-634-2943
Black	1	36	3	7510-00-634-2946
Yellow	1	36	1	7510-00-634-0828
Blue	1	36	3	7510-00-634-2943
Black	1	36	3	7510-00-634-2946
Red	1	36	3	7510-00-664-2941
White	1	36	3	7510-00-043-5024
Yellow	1-1/4	36	3	7510-00-664-0474
Green	1-1/2	60	3	7510-00-839-0904
Yellow	1-1/2	36	3	7510-00-634-3292
Red	1-1/2	36	3	7510-00-634-3293
Orange	1-1/2	36	3	7510-00-634-3286
Brown	1-1/2	36	3	7510-00-634-3287
Green	1-1/2	36	3	7510-00-634-3288
Blue	1-1/2	36	3	7510-00-634-3289

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TYPE I, CLASS 2 (continued)

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Black	1-1/2	36	3	7510-00-634-3290
Green	1-1/2	60 in.	3	7510-00-839-0899
Brown	2	36	3	7510-00-355-7154
Olive	2	36	3	7510-00-145-0002
Black	2	34	3	7510-00-880-7351
Green	2	36	3	7510-00-220-3803
White	2	36	3	7510-00-181-7398
Orange	2	36	3	7510-00-634-3331
Green	2	36	3	7510-00-634-3332
Blue	3	36	3	7510-00-850-5079
Green	3	36	3	7510-00-778-6383
White	3	36	3	7510-01-017-7880
Brown	3	36	3	7510-00-850-5078
Yellow	3	36	3	7510-00-850-5077
Orange	3	36	3	7510-00-634-3215
White	3	36	3	7510-00-634-3210
Green	3	36	3	7510-00-634-3216
Black	3	36	3	7510-00-634-3226
Yellow	4	36	3	7510-00-134-8830

TYPE II

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Yellow	1-1/2	36	3	7510-00-472-3268
White	2	36	3	7510-00-829-1239
Yellow	6	36	3	7510-00-066-8555

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60.17 TAPE, PACKAGING, PLASTIC FILM

PPP-T-70

60.17.1 Description. This is a plastic film backed adhesive tape.

60.17.2 Intended use. The tape is intended for the closure and sealing of interior and exterior domestic containers. Printed on the adhesive side in an appropriate manner and supplier on a liner, it may be used as a packing list enclosure. It also is intended for label attaching and as a label covering material to protect labels from moisture and weathering. It is ideal for miscellaneous holding and sealing applications where a transparent, water-resistant, weather-resistant material is desired.

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Clear	1/2	72	3	7510-00-995-0453
Clear	3/4	72	3	7510-00-995-0454
Clear	1	72	3	7510-00-995-0455
Clear	4	72	3	7510-00-073-6094
Clear	5	72	3	7510-00-073-6095
Clear	6	72	3	7510-00-073-6096

MIL-HDBK-228A(AS)
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60.18 TAPE, PRESERVATION AND SEALING

PPP-T-75

60.18.1 Description. The adhesive for both Types I and II is pressure-sensitive, water insoluble and requires no solvent, moisture, heat, or other preparation prior to or after application to clean, dry surfaces. The backing for Type II is a single ply of plastic film.

60.18.2 Intended use. Type I tape is intended primarily for use in the preservation and sealing of military vehicles, aircraft, missiles, and other related equipment where a water vapor proof seal, excellent conformability to irregular surfaces, oil resistance, and clean removability after short, medium and long term outdoor aging is required. Type II tape is intended for use in the preservation and sealing of the same type of military equipment as type I tape. It is intended for use in less critical applications which require a water vapor resistant seal, good conformability to irregular surfaces, and clean removability after short, medium, or long term aging.

60.18.3 Method of application. When applying type I tape, it is recommended that a plastic squeegee applicator be used to obtain an optimum bond between the type and the applied surface. Type I tape can be applied in a temperature range of 0°C (+32°F) to +50°C (122°F) and will perform in a temperature range of -54°C (-65.2°F) +60°C (+140°F). Due to its elastic characteristics, type II tape should always be applied in its released state to eliminate any unnecessary shear forces caused by stretching of the backing. Type II tape can be applied and will perform in the same temperature range as type I tape.

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Black	1	60	3	7510-00-926-8738
Black	2	60	3	7510-00-914-1614
Black	3	60	3	7510-00-926-8939
Black	6	60	3	7510-00-926-8941

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60.19 TAPE, PRESSURE-SENSITIVE ADHESIVE PAPER (FOR CARTON SEALING)

PPP-T-76

60.19.1 Description. The tape consists of 100 percent sulphate kraft paper, treated to resist water, coated on one side with a pressure-sensitive, water resistant homogeneous adhesive. The tape performs adequately over the temperature range of -54° to 71° centigrade (-65° to 160° Fahrenheit). Unless otherwise specified, the color of the tape is that of unbleached kraft paper.

60.19.2 Intended use. To be used in packaging and packing and is adapted for closing and sealing fiberboard containers.

60.19.3 Method of application. Apply to a clean, dry surface, preferably at 50 to 80 degrees Fahrenheit, press on firmly, making sure that the entire surface of tape makes good contact.

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Tan	3/4	120	3	7510-00-656-0467
Natural	1	120	3	7510-00-810-0468
Natural	2	120	3	7510-00-297-6655
Natural	3	120	3	7510-00-297-6656

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60.20 TAPE, PRESSURE-SENSITIVE ADHESIVE, FILAMENT REINFORCED (FSC 8135)

PPP-T-97

60.20.1 Description. A backing material, reinforcing filaments, and a pressure-sensitive adhesive. Available in four types and two classes.

Type I - Low tensile strength

Type II - Medium tensile strength
Class A - Opaque
Class B - Transparent

Type III - High tensile strength

Type IV - High tensile strength, weather resistant

The color of Types I, II Class A, and III is as manufactured except that in no case shall the color be black. Type II, Class B is sufficiently transparent to allow reading of 10 point type when tape is applied over it. Type IV is black.

60.20.2 Intended use. For closing and reinforcing containers, for bundling, for holding, for unitizing, and for other applications requiring a strong, flexible pressure-sensitive adhesive tape. Type II is intended for carton closure, shortstrip reinforcing, holding, and bundling. The Type II, Class B which is transparent should be used where there is a possibility that the tape will cover identification markings. Type III is intended for applications where high strength is required such as for bundling, palletizing, unitizing, and closing of triple wall containers. Type I should be used in place of Type II when severe abrasion of the tape may be encountered. Type IV is recommended for all uses where extensive exterior exposure is anticipated.

60.20.3 Method of application. Press tape firmly making sure it makes complete contact.

TYPE I

<u>Color</u>	<u>width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
AA	1/2	60	3	7510-00-290-8034
Natural	1	60	3	7510-00-290-8036

TYPE II, CLASS B

<u>Color</u>	<u>width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
AA	1/2	60	3	7510-00-582-4771
AA	1	60	3	7510-00-582-4772
AA	3/4	60	3	7510-00-802-8311
AA	2	60	3	7510-00-228-0535
AA	2	60	3	7510-00-159-4450
AA	2	60	3	7510-01-026-1649
AA	3	60	3	7510-01-023-8545

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TYPE III

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
AA	1/2	60	3	7510-00-526-6658
AA	1	72	3	7510-00-285-2021

TYPE IV

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Black	1/2	60	3	7510-00-584-5838
AA	1	60	3	7510-00-053-0942
AA	1-1/4	60	3	7510-00-952-7212
Black	2	60	3	7510-00-427-2568

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60.21 TAPES FROM INSULATION CLOTH AND TAPE, ELECTRICAL, VARNISHED CAMBRIC

MIL-I-3374

60.21.1 Description. The base material is a closely and uniformly woven cotton material with a varnish coating.

60.21.2 Intended use. This insulation tape is intended for repair and maintenance.

TYPE II, CLASS 1

<u>Color</u>	<u>Width (inches)</u>	<u>Thickness</u>	<u>Length (ft)</u>	<u>Stock Number</u>
Yellow	1/2	6 mil	25	5970-00-889-4079
Yellow	1/2	7 mil	106	5970-00-238-4621
Black	1/2	6 mil	25	5970-00-681-9605
Yellow	3/4	7 mil	216	5970-00-222-6383
Yellow	3/4	10 mil	106	5970-00-238-4624
-	3/4	7 mil	106	5970-00-188-4615
Yellow	1	7 mil	216	5970-00-222-6384
-	1	10 mil	106	5970-00-222-6375
Yellow	1	10 mil	216	5970-00-199-2997
Yellow	1 1/4	7 mil	216	5970-00-222-6385
-	1 1/4	10 mil	106	5970-00-222-6377
Yellow	1 1/2	10 mil	216	5970-00-199-2999

MIL-HDBK-228A(AS)
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60.22 INSULATION TAPE, ELECTRICAL, SELF-FUSING; FOR USE IN ELECTRONIC,
COMMUNICATIONS, AND ALLIED EQUIPMENT

MIL-I-3825

60.22.1 Description. The tape is a soft, self-fusing, hand-splicing, ozone resistant electrical insulating tape with an average dielectric strength of 800 volts per mil. The tape is suitable for use at temperatures from -67 degrees to 140 degrees Fahrenheit. Self-fusion is accomplished without the addition of an adhesive to any surface of the tape. It may require protection by wrapping a more abrasion-resistant tape over the self-fusing tape. Available in black, white, or non-pigmented.

60.22.2 Intended use. Used for repairing and splicing wire and cable, including polyethylene-insulated wire and cable, in electronic, communications and allied equipment. Will provide a tight, form-fitting, high-grade insulation for bare wires and irregular shapes.

60.22.3 Method of application. Stretch a piece of the tape to double its original length and, using a steady pull, apply to dry surfaces to be repaired or spliced.

<u>Color</u>	<u>Thickness (inches)</u>	<u>Width (inches)</u>	<u>Length (ft)</u>	<u>Stock Number</u>
Black	.02	3/4	30	5970-00-685-9059
White	.02	3/4	30	5970-00-240-0620
Black	.02	3/4	30	5970-00-240-0617
Black	.02	1	30	5970-00-547-0966

MIL-HDBK-228A(AS)

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60.23 TAPE, PRESSURE-SENSITIVE, ADHESIVE (CORROSION RESISTANT)

MIL-T-4053

60.23.1 Description. A high grade, plain weave glass cloth coated on one side with a pressure-sensitive, thermosetting adhesive. The tape does not cause corrosion.

60.23.2 Intended use. Sealing joints in low pressure, hot-air ducts where the temperature does not exceed 350 degrees Fahrenheit.

60.23.3 Method of application. Apply to clean, dry surface, preferably at 60 to 80 degrees Fahrenheit. Press on firmly, making sure that the entire surface of the tape makes good contact.

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Natural	1	60	3	7510-00-530-6375
Natural	2	60	3	7510-00-515-0319

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60.24 INSULATION TAPE, ELECTRICAL, PRESSURE-SENSITIVE ADHESIVE, PLASTIC

MIL-I-7798 (see also MIL-I-24391)
(Use MIL-I-24391 when supplies are exhausted)

60.24.1 Description. An elastomeric film backing of plastic such as polyvinyl chloride or its copolymers, coated on one side with a pressure-sensitive adhesive. Available in black, yellow with transparent backing or yellow with opaque backing.

60.24.2 Intended use. Suitable for use in applications requiring high electrical resistance, such as the insulation of electrical conductors and splices in electrical wiring. Available for either hand taping or machine application.

60.24.3 Method of application. Start on outer electrical insulating portion of the wire or cable and wrap the tape circumferentially with an approximate 50 percent overlap until all the bare conductor is safely covered. A slight tension should be exerted on the tape during the wrapping while bringing a force toward the center of the wire or cable. Make sur that the entire surface of the tape makes good contact.

<u>Color</u>	<u>Thickness</u>	<u>Width (inches)</u>	<u>Length (feet)</u>	<u>Stock Number</u>
Black	7 mil	.375	108	5970-00-802-6893
Black	7 mil	.75	108	5970-00-644-3169
Black	10 mil	.75	108	5970-00-188-5477
Yellow Opaque	7 mil	1	108	5970-00-660-91790

MIL-PRC-228A(AS)
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60.2 INSULATION TAPE, ELECTRICAL, PRESSURE-SENSITIVE ADHESIVE AND PRESSURE SENSITIVE THERMOSETTING ADHESIVE

MIL-I-15126

60.25.1 Description. Pressure-sensitive adhesive and pressure-sensitive thermosetting adhesive electrical insulation tapes. Available in the following types:

- Type AFT - Acetate film backing, thermosetting adhesive.
- Type ACT - Acetate cloth backing, thermosetting adhesive.
- Type CFT - Cotton fabric backing, thermosetting adhesive.
- Type GFT - Glass fabric backing, thermosetting adhesive.
- Type PCT - Paper backing-crepe, thermosetting adhesive.
- Type PFT - Paper backing-flat, thermosetting adhesive.
- Type EF-7 - Polyethylene backing, pressure-sensitive adhesive.
- Type EF-9 - Polyethylene backing, pressure-sensitive adhesive.
- Type EF-20 - Polyethylene backing, pressure-sensitive adhesive.
- Type MFT-2.5 - Polyethylene terephthalate film backing, thermosetting adhesive.
- Type MF-2.5 - Polyethylene terephthalate film backing, pressure-sensitive adhesive.
- Type MFT-3.5 - Polyethylene terephthalate film backing, thermosetting adhesive.

60.25.2 Intended use. Construction and repair of electrical and electronic equipment.

Type AFT is used for internal coil applications and other uses requiring high dielectric strength, good insulation resistance and good moisture resistance.

Type ACT is used in all types of fine wire coils and transformers where good strength characteristics, fine electrical properties and non-corrosiveness are desired.

Type CFT is used for small motors, dynamotor armatures, generators and transformer coils where good varnish penetration and high tensile strength are desired.

Type GFT is used in high heat locations where other adhesive tapes cannot be used.

Types PCT and PFT are used for motor insulation, coil winding, repair of electrical coils and reinforcing slot insulation.

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Types EF-7, EF-9, and EF-20 are used where high dielectric strength and non-corrosiveness are desired.

Types MFT-2.5, MF-2.5, and MFT-3.5 are suitable for internal coil applications and other uses requiring high dielectric strength, good insulation and moisture resistance. They are suitable for use at higher temperatures than Type AFT.

60.24.3 Method of application. Tape is applied to clean, dry surface, preferably at 60 to 80 degrees Fahrenheit. Press on firmly, making sure the entire surface of the tape makes good contact.

TYPE CFT

<u>Color</u>	<u>Length (ft)</u>	<u>Nominal Thickness</u>	<u>Width (inches)</u>	<u>Stock Number</u>
-	180	10.5 mil	.5	5970-00-246-5310
White	180	10.5 mil	.75	5970-00-538-5843
-	180	10.0 mil	1	5970-00-257-2973

TYPE GFT

<u>Color</u>	<u>Length (ft)</u>	<u>Nominal Thickness</u>	<u>Width (inches)</u>	<u>Stock Number</u>
-	180	7 mil	.5	5970-00-840-6695
AA	180	7 mil	.625	5970-00-403-8225
White	180	7 mil	.75	5970-00-284-8565
White	180	7 mil	1	5970-00-686-9151
-	180	7 mil	1	5970-00-840-6697
White	180	7 mil	2	5970-00-568-0543
White	180	7 mil	6	5970-00-113-0913

TYPE PFT

<u>Color</u>	<u>Length (ft)</u>	<u>Nominal Thickness</u>	<u>Width (inches)</u>	<u>Stock Number</u>
Yellow	180	6 mil	.5	5970-00-825-8971
AA	180	6 mil	.5	5970-00-503-2423

TYPE ACT

<u>Color</u>	<u>Length (ft)</u>	<u>Nominal Thickness</u>	<u>Width (inches)</u>	<u>Stock Number</u>
Black	216	8 mil	.625	5970-00-137-9501

TYPE EF7

<u>Color</u>	<u>Length (ft)</u>	<u>Nominal Thickness</u>	<u>Width (inches)</u>	<u>Stock Number</u>
Black	216	8 mil	.5	5970-00-306-9483
-	216	8 mil	.5	5970-00-538-5844
White	216	8 mil	.75	5970-00-295-8161

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TYPE EF9 mil

<u>Color</u>	<u>Length (ft)</u>	<u>Nominal Thickness</u>	<u>Width (inches)</u>	<u>Stock Number</u>
Black	108	9 mil	.75	5970-00-636-2549
Black	54	9 mil	1	5970-00-583-6097

TYPE MF2.5

<u>Color</u>	<u>Length (ft)</u>	<u>Nominal Thickness</u>	<u>Width (inches)</u>	<u>Stock Number</u>
Natural	216	2.5 mil	.625	5970-00-070-1187
Orange	216	2.5 mil	.625	5970-01-044-4181
AA	216	2.5 mil	.75	5970-00-837-3765
Yellow	216	2.5 mil	.937	5970-00-116-3957
-	216	2.5 mil	1	5970-00-739-7842
AA	216	2.5 mil	1	5970-00-837-3764
Yellow	216	2.5 mil	1.188	5970-00-080-9524
AA	216	2.5 mil	1.25	5970-00-007-5272
Yellow	216	2.5 mil	1.5	5970-00-606-4892
-	216	2.5 mil	2	5970-00-344-2489
AA	216	2.5 mil	3	5970-00-881-3657
AA	216	2.5 mil	5	5970-00-897-8983

TYPE MFT 3.5

<u>Color</u>	<u>Length (ft)</u>	<u>Nominal Thickness</u>	<u>Width (inches)</u>	<u>Stock Number</u>
Clear	216	3.5 mil	.75	5970-00-478-0045
Orange	216	3.5 mil	.75	5970-00-439-8844
AA	216	3.5 mil	1	5970-00-754-9362
Unpigmented	216	3.5 mil	1	5970-00-139-5205
Yellow	216	3.5 mil	1	5970-00-926-2510
AA	216	3.5 mil	1.125	5970-00-969-6337
-	216	3.5 mil	1.5	5970-00-930-0224
AA	216	3.5 mil	2.5	5970-00-480-1328

Other

<u>Color</u>	<u>Length (ft)</u>	<u>Nominal Thickness</u>	<u>Width (inches)</u>	<u>Stock Number</u>
Black	216	4 mil	1	5970-00-930-0225
-	216	3 mil	1.5	5970-00-232-6333
-	216	3 mil	1.5	5970-00-495-1196

MIL-HDBK-228A(AS)
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60.26 INSULATION TAPE, ELECTRICAL, HIGH TEMPERATURE, GLASS FIBER, PRESSURE SENSITIVE

MIL-I-19166

60.26.1 Description. This specification covers glass fiber, silicone adhesive, pressure-sensitive tape for construction and repair of electrical equipment operating at high temperatures. The tape consists of glass fiber textile fabricated from continuous filament yarn, and is coated on one side with a silicone pressure-sensitive adhesive. It is natural in color.

60.26.2 Intended use. Principally for securing coils and electric windings where tape having good high-temperature-resistant adhesive and backing is required.

<u>Width (inches)</u>	<u>Length (feet)</u>	<u>Thickness</u>	<u>Stock Number</u>
.25	108	7 mil	5970-00-933-1406
.375	108	10 mil	5970-00-880-9942
.5	108	7 mil	5970-00-180-6087
.5	108	10 mil	5970-00-231-8456
.625	108	7 mil	5970-00-709-0045
.75	108	7 mil	5970-00-543-1597
.75	108	10 mil	5970-00-877-8591
1	108	7 mil	5970-01-049-9571
1	108	10 mil	5970-00-612-8492
1.5	108	10 mil	5970-00-583-9528
3	108	10 mil	5970-00-814-9606

MIL-HDBK-228A(AS)
23 July 1982

60.27 TAPE, PRESSURE SENSITIVE ADHESIVE, PAPER, MASKING, NONSTAINING

MIL-T-21595

60.27.1 Description. A green paper backing, coated on one side with a water insoluble, pressure sensitive adhesive. Available in two types.

Type I - Creped

Type II - Flat

60.27.2 Intended use. Masking surfaced where a nonstaining character is desired for use in the protection of aircraft surfaces from acrylic-nitro-cellulose lacquer, acrylic lacquer, and epoxy-polyamide coating finishing materials.

60.27.3 Method of application. Apply to clean, dry surface, press tape firmly making sure it makes complete contact preferably at temperatures of 60 to 80 degrees Fahrenheit.

TYPE I

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Green	1/2	60	3	7510-00-680-2450
Green	3/4	60	3	7510-00-680-2470
Green	1	60	3	7510-00-685-4963
Green	1-1/2	60	3	7510-00-684-8784
Green	2	60	3	7510-00-680-2395
Green	3	60	3	7510-00-680-2471

MIL-HDBK-228A(AS)
23 July 1982

60.28 TAPES, PRESSURE-SENSITIVE ADHESIVE, PRESERVATION AND SEALING

MIL-T-22085

60.28.1 Description. A backing coated on one side with a water insoluble pressure-sensitive adhesive. Available in two types.

Type I - Oil and weather resistant (for application to irregular and flat surfaces)

Type II - Weather resistant (for application to non-oil contaminated flat surfaces)

This tape will perform in a temperature range of minus 65 to plus 125 degrees Fahrenheit. The color is black or natural.

60.28.2 Intended use. The protection of aircraft, missiles and rockets during storage, handling and shipment. It is suitable for application at 32 degrees Fahrenheit. Also to be used for exterior preservation and sealing. Type II tape should not be used on surfaces which are or may become oil contaminated. Type I may be used as a Type II; however, Type II may not be used as a Type I tape.

60.28.3 Method of application. Press tape firmly making sure it makes complete contact.

TYPE I

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock number</u>
Black	AA	36	3	7510-01-019-9491
Black	1	60	3	7510-00-926-8938
Black	2	60	3	7510-00-914-1613
Black	3	60	3	7510-00-926-8939
Black	4	60	3	7510-00-926-8940
Black	6	60	3	7510-00-926-8941

TYPE II

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock number</u>
AA Opaque	1	36	3	7510-00-852-8179
Black or Yellow	1	36	3	7510-00-117-5519
Opaque	2	36	3	7510-00-852-8180
Black	2	36	3-1/4	7510-00-117-5520
Opaque	3	36	3	7510-00-059-9062
Black	3	36	3-1/4	7510-00-117-5523
Aluminum	4	36	3	7510-00-916-9659

MIL-HDBK-228A(AS)
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60.29 INSULATION TAPE, ELECTRICAL, SELF-BONDING

MIL-I-22444

60.29.1 Description. Tape consists of bias sinusoidal woven glass cloth backing, the weave of which has been filled and coated uniformly on both sides.

60.29.2 Intended use. Tape is suitable as an insulation and binder in making splices in shipboard power and control cables.

<u>width (inches)</u>	<u>Thickness</u>	<u>Length (yds)</u>	<u>Stock Number</u>
.5	18 mil	20	5970-00-446-8928
1	18 mil	20	5970-00-841-1172

MIL-HDBK-228A(AS)
23 July 1982

60.30 TAPE, PRESSURE-SENSITIVE ADHESIVE, FOR DISSIMILAR METAL SEPARATION

MIL-T-23142

60.30.1 Description. A non-corrosive material coated on one side with a water insoluble, pressure-sensitive adhesive.

60.30.2 Intended use. Used as a separator for the prevention of galvanic attack between dissimilar metals.

60.30.3 Method of application. Press tape firmly making sure that it makes good contact preferably at 60 to 80 degrees Fahrenheit.

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Any	1/2	72	3	7510-01-060-8518
Any	1	72	3	7510-00-474-4021

MIL-HDBK-228A(AS)
23 July 1982

60.31 TAPE, PRESSURE-SENSITIVE ADHESIVE, FOR MASKING DURING PAINT STRIPPING OPERATIONS

MIL-T-23397

60.31.1 Description. A pressure-sensitive adhesive tape, with water insoluble adhesive on one side; wound in rolls, adhesive side in, on cores.

60.31.2 Intended use. This is one type of tape that is suitable for use for masking during paint stripping operations. It is designed to effectively protect aircraft surfaces and parts, and be capable of resisting paint remover without any infiltration through or seepage under it. The tape will have no deleterious effect on materials used in aircraft construction.

60.31.3 Method of application. Apply the tape to clean, dry surfaces between 60 and 80 degrees Fahrenheit. The edges should be carefully and firmly smoothed after application of the tape.

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
AA	1/2	60	3	7510-00-476-8841
AA	1	60	3	7510-00-473-9855
AA	1 1/2	60	3	7510-00-476-8842
AA	2	60	3	7510-00-473-9513

MIL-HDBK-228A(AS)
23 July 1982

60.32 INSULATION TAPE, ELECTRICAL; HIGH TEMPERATURE,
POLYTETRAFLUOROETHYLENE, PRESSURE-SENSITIVE

MIL-I-23594

60.32.1 Description. A virgin, fused, polytetrafluoroethylene resin backing, coated on one side with a pressure-sensitive adhesive. The adhesive shall be a pressure-sensitive silicone polymer capable of maintenance of adhesion for continuous operation at 500 degrees Fahrenheit.

Type I - Smooth backing, for splicing insulation on polytetrafluoroethylene coated electrical wire

Type II - Treated backing, capable of receiving impregnation with insulation varnish

60.32.2 Intended use. General underwater demolition use such as watertight seals around blasting caps and detonating cord, leg splicing of firing cable to prevent shorting out of firing circuit, watertight seals around junction of non-electric caps and safety fuses. Also suitable for electrical systems of aircraft, missile and other weapons systems within the limitations of performance requirements.

60.32.3 Method of application. Press tape firmly making sure that it makes complete contact.

TYPE I

<u>Color</u>	<u>Length (feet)</u>	<u>Width (inches)</u>	<u>Thickness (mils)</u>	<u>Stock Number</u>
White	108	.25	3.5	5970-00-816-7164
White	108	.25	4.6	5970-00-144-7420
-	108	.312	6	5970-00-144-7725
AA	108	.5	-	5970-01-052-4941
AA	216	.5	3.5	5970-00-812-7387
AA	216	.5	6	5970-00-833-1703
White	216	.5	6	5970-00-117-3704
-	216	.5	6.9	5970-00-950-7400
AA	216	.5	7	5970-01-012-1054
-	216	.75	3.5	5970-00-139-5157
-	54	.75	6.5	5970-00-051-4041
-	180	1	4.8	5970-00-069-2730
AA	108	1	6	5970-00-833-1702
AA	108	1	6	5970-00-848-8683
Unpigmented	108	1	6.5	5970-01-012-4280
AA	108	1.375	6.5	5970-00-067-6527
AA	108	1.5	2	5970-00-477-8353
AA	108	1.5	4.8	5970-00-089-1881
AA	108	1.5	6.6	5970-01-067-2916
AA	108	2	6	5970-00-761-3655
AA	108	2	6.5	5970-00-019-5620
AA	108	2	-	5970-01-083-3739
AA	108	3.156	5	5970-00-755-8982

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60.33 INSULATION TAPE, ELECTRICAL, PLASTIC PRESSURE-SENSITIVE

MIL-I-24391

60.33.1 Description. The tape backing is a plastic film. The adhesive is pressure-sensitive, homogeneous, and coated on one side of the backing.

60.33.2 Intended use. This tape is suitable for the insulation of electrical conductors and splices in electrical wiring within an application temperature range of 100°F to 150°F and is intended for use where self-extinguishing tape is required.

60.33.3 Method of application. Tape is applied to clean, dry surfaces, preferably at 60 to 80 degrees Fahrenheit. Press on firmly, making sure the entire surface of the tape makes good contact.

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Thickness (mils)</u>	<u>Stock Number</u>
Yellow	1/2	36	8.5	5970-00-147-5674
Black	1/2	36	8.0	5970-00-419-4290
Yellow	3/4	36	8.5	5970-00-163-5122
Black	3/4	36	8.0	5970-00-419-4291
Yellow	1	36	8.5	5970-01-047-4340
Black	1	36	8.5	5970-00-419-3164
Silver	1	36	8.5	5970-01-062-3651
Black	1	36	10	5970-00-188-5478
Black	1-1/4	36	10	5970-00-518-3991
Black	1-1/2	36	8.5	5970-00-150-2009

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60.34 TAPE, PRESSURE SENSITIVE ADHESIVE, TRANSPARENT, FILM SPLICING
MIL-T-23617

60.34.1 Description. The tape is a nonhygroscopic, solvent resistant polyester film coated on one side with a pressure-sensitive, water-insoluble and sulfur-free adhesive. The tape is transparent and colorless.

60.34.2 Intended use. The tape is designed for the splicing of photographic film, paper and leader during and after processing through high speed, high temperature, automatic film developing equipment. The tape may also be used for repairing processed film, splicing leader to film, connecting film to spools and similar holding applications. It is not intended for sealing cans of photographic film.

60.34.3 Method of application. When splicing film, paper, etc., the tape should be applied completely around the film so there is tape on both sides of the splice. The film should be dry when making splices, and should be applied with a firm pressure. Avoid wrinkles.

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Clear	1	72	3	7510-00-687-4383

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60.35 TAPE, ANTISEIZE, POLYTETRAFLUORETHYLENE, WITH DISPENSER

MIL-T-27730

60.35.1 Description. Antiseize product is at least 99% polytetrafluoroethylene and contains no materials that are combustible in the presence of oxygen or that produce toxic vapors at temperatures up to 260°F. Dispenser is as small in size and as light in weight as practical. Is designed to prevent contamination with oils, greases, dirt and any other contaminants. Dispenser also has provision for cutting tape to desired length.

60.35.2 Intended use. The tape is used as an antiseize and sealant of pipe threads of liquid and gaseous oxygen systems of 2000 psi and less.

60.35.3 Method of application.

1. Thoroughly clean male and female threads assuring the removal of all previously applied antiseize compound or tape.
2. Wrap tape in direction of thread spiral of male pipe thread beginning with first thread. In no case will the tape be permitted to extend beyond the first thread.
3. Using care not to contaminate the tape, encircle the threads and join together with a very slight overlap.
4. Size I tape, 1/4 inch wide shall be used on 1/8, 1/4, and 3/8 inch pipe threads. Size II tape, 1/2 inch wide shall be used on 1/2 inch and larger pipe threads.
5. The tape shall not be used on fittings which have flared or coned ends.

<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
1/4	7		8030-00-889-3534
1/4	36		8030-01-070-6279
1/2	7		8030-00-889-3535
1	7		8030-00-398-4130

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60.36 TAPE, ADHESIVE COATED, PROTECTIVE

MIL-T-38727

60.36.1 Description. The backing for this tape is paper coated on one side with pressure-sensitive adhesive, wound in rolls on cords adhesive side in.

60.36.2 Intended use. These tapes are intended for use in protecting polished or finished surfaces of stainless steel, aluminum (non-anodized), all nonferrous metals (except copper and copper alloys), and methyl methacrylate plastic against scratching, marring, or other abrasive type damage during fabrication, handling, storage, item assembly, repair, maintenance, and shop work. Type I tape is intended to provide protection during interior storage up to 9 months for metals and up to 6 months for plastic. Type I and type II tapes will provide protection during interior storage up to 12 months. Type I tape is intended to provide protection in areas subject to high abrasion such as surfaces of aircraft where workmen might walk during overhaul and repair.

60.36.3 Method of application. Tape is applied to clean, dry surfaces, preferably at 60 to 80 degrees Fahrenheit. Press on firmly, making sure the entire surface of the tape makes good contact.

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
White	As specified	As specified	3	7510-01-010-0118
White	12	30	3	7510-01-054-4067

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60.37 TAPE, PRESSURE-SENSITIVE ADHESIVE, LITHOGRAPH

MIL-T-40620

60.37.1 Description. The tape is a ruby red tinted translucent plastic film, free of pinholes and coated on one side with a pressure-sensitive adhesive.

60.37.2 Intended use. The tape is intended for masking, edging, and stripping photographic and lithographic negatives.

60.37.3 Method of application. Apply to clean, dry surfaces, preferably at 60 to 80 degrees Fahrenheit. The tape should be firmly pressed in place and care should be taken that there is no air entrapped under the tape.

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Ruby	1/4	72	3	7510-00-902-3566
Clear	1/2	72	3	7510-00-285-6403

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60.38 TAPE, PRESSURE SENSITIVE ADHESIVE, PLASTIC FILM, FILAMENT REINFORCED
(FOR SEALING FIBER CONTAINERS AND CANS)

MIL-T-43036

60.38.1 Description. The tape consists of a polyester film, coated on one side with a pressure-sensitive, water insoluble adhesive containing longitudinal reinforcing filaments. The adhesive is not affected by asphaltic coatings found on some fiber tubes. It can be removed from fiber tubes or cans without breaking over a temperature range of -54.3° centigrade to 68.3° centigrade (-66° to 155° Fahrenheit). The tape is furnished in gray, black, or light green.

60.38.2 Intended use. The tape is intended for waterproof, water vaporproof sealing of fiber containers and cans meeting MIL-C-2439 and MIL-C-3955 and metal slip cover cans. Because of its high stretch for a filament reinforced tape, it is suitable for sealing any type of container where the tape can be wrapped around the container. It is particularly suited for applications where the tape must be removable at low temperature.

60.38.3 Method of application. The tape should be applied to clean, dry surfaces. When applied around a tube of similar type container, the tape should be lapped on itself one-fourth of a turn.

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Black	1	60	3	7510-00-823-8071
Black	1-1/2	60	3	7510-00-823-8073
Black	2	60	3	7510-00-823-8072

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60.39 TAPE, PRESSURE-SENSITIVE ADHESIVE FILM FOAM, DOUBLE-COATED (FOR
(USE WITH AMMUNITION)

MIL-T-60394

60.39.1 Description. This tape consists of a non-rigid foam coated on both sides with a pressure-sensitive adhesive that is suitable for adhering two similar or dissimilar materials together. The tape is salt water resistant.

60.39.2 Intended use. This tape is intended for use with the M112 demolition charge, M118 demolition charge, and M186 demolition charge. It is also used for holding and mounting objects, and in aluminum applications.

60.39.3 Method of application. The tape can be applied to clean, dry surfaces above freezing and does not require any solvent, heat or other preparation prior to or after application.

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock number</u>
Natural	3/4	36	3	7510-01-005-5489
Natural	1	36	3	7510-00-181-7551
Natural	2	36	3	7510-01-003-9353
Natural	2	72	3	7510-01-003-9352
Natural	3	72	3	7510-01-057-0096
				7510-01-068-5660

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60.40 TAPE, THERMAL RADIATION RESISTANT, PRESSURE SENSITIVE ALUMINUM COATED FIBERGLASS CLOTH

MIL-T-83284

60.40.1 Description.

60.40.2 Intended use. This tape is intended primarily for repair of thermal curtains conforming to MIL-C-27347.

60.40.3 Method of application. Tape is applied to clean dry surfaces, preferably at 60 to 80 degrees Fahrenheit. Press on firmly, making sure the entire surface of the tape makes good contact.

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Aluminum	1/2	36	3	7510-00-502-9147
Silver	1-1/2	36	3	7510-00-996-6097
Silver	2	36	1	7510-00-403-5544
Aluminum	2	36	3	7510-00-502-9143
Silver	3	36	3	7510-00-106-9842
Aluminum	4	36	3	7510-00-007-4551
Silver	4-1/2	36	3	7510-00-996-6102

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APPENDIX B

SOLVENT ACTIVATED TAPES

10. DESCRIPTION

10.1 This appendix covers solvent activated tapes. The appendix is subdivided by typical uses.

10.2 All specifications included in Appendix B are listed in paragraph 40.

10.3 Individual specifications are described in detail in subparagraphs of 40.

20. SUPPLIES

20.1 Mending and reinforcing tapes.

20.1.1 This group consists of water soluble, gummed paper and cloth tape for mending and reinforcing applications.

Federal

Paragraph

UU-T-101	Tape, Gummed; Mending and Reinforcing (Paper and Cloth)	40.1
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30. PACKAGING AND PACKING BULK MATERIALS

30.1 Sealing and securing tapes.

30.1.1 This group consists of water soluble, gummed paper tape for sealing, securing and banding of paper and paper products.

Federal

Paragraph

PPP-T-45	Tape, Gummed, Paper Reinforced and Plain for Sealing and Securing	40.2
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40. DETAILED INFORMATION ON SPECIFICATIONS LISTED IN APPENDIX B

See subparagraphs of 40. on the following pages. Specification descriptions are arranged in the sequence listed in 20.1.1 and 30.1.1 above.

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40.1 TAPE, GUMMED; MENDING AND REINFORCING, (PAPER AND CLOTH)

UU-T-101

40.1.1 Description. A water-soluble gummed paper or cloth tape. Available in three types.

Type I - A transparent glassine paper backing

Type III - A transparent, lightweight cloth backing

Type IV - A non-transparent, lightweight cloth backing

40.1.2 Intended use. Mending, reinforcing, and securing papers such as maps, books, and drawings. Type III has a surface satisfactory for writing on with ink.

40.1.3 Method of application. Gum is thoroughly wet with water and evenly applied.

TYPE I

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Clear	5/8	12	1	7510-00-222-3436
Clear	1	12	1	7510-00-893-6188
Clear	1	100	1	7510-00-272-9661

TYPE II

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Clear	3/4	36	1	7510-00-253-2520
Clear	1	72	3	7510-00-273-9836
Clear	2	72	3	7510-00-223-3590

TYPE III

<u>Color</u>	<u>Width (inches)</u>	<u>Length (yds)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
Clear	3/4	10	1	7510-00-292-9612

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40.2 TAPE, GUMMED, PAPER, REINFORCED AND PLAIN, FOR SEALING AND SECURING

PPP-1-45

40.2.1 Description. Types I and II tapes consist of a laminate of two strips of 100 percent unbleached or semi-bleached chemical wood pulp paper reinforced with glass, sisal or rayon. The two strips are laminated with a layer of asphalt in Type I tapes, and nonasphaltic, water resistant, flexible, and nonstaining material in Type II tapes. Type III tapes consist of one strip of paper. All types of tape are coated on one side with a water activated adhesive. Available in the types, classes, and grades specified below.

Type I - Reinforced, asphalt laminated

Type II - Reinforced, nonasphalt laminated

Class 1 - Strippable

Class 2 - Nonstrippable

Type III - Plain, single ply

Grade A - Light duty, for light-weight packages

Grade B - Medium duty, for medium-sized packages

Grade C - Heavy duty, for heavy, bulky packages

40.2.2 Intended use.

Type I (Asphaltic). Sealing fiberboard boxes for domestic shipment and storage, securing wrappers of packages and other uses such as: Securing wrappings of textile bolt packages on porcelain enamel products as protection against abrasion, and banding of tubing, wire, pipe, hose, etc.

Type II (Non-Asphaltic). As above, and where the presence of asphalt would have a deleterious effect on the product, such as food products. Class 1 is intended for use where ease of opening containers and removal of tape are required. Class 2 is intended for use where it is not necessary to remove tape from boxes for reuse.

Type III (Plain, single ply). General sealing of cartons and fiberboard boxes, wrapping of packages and banding of paper and paper products.

40.2.3 Method of application. Adhesive must be thoroughly wet with water and evenly applied.

TYPE I, CLASS 2

<u>Width (inches)</u>	<u>Length (feet)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
1-1/2	450		8135-00-926-4858
3	450		8135-00-598-6097

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TYPE II, CLASS 1

<u>Width (inches)</u>	<u>Length (feet)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
2	375	1/2	8135-00-926-8989
3	375	1/2	8135-00-155-5473

TYPE II, CLASS 2

<u>Width (inches)</u>	<u>Length (feet)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
3	375		8135-01-023-1235

TYPE III, CLASS 2, GRADE A

<u>Width (inches)</u>	<u>Length (feet)</u>	<u>Core (inches)</u>	<u>Stock Number</u>
1	800	.625	8135-00-271-1444
1	500	1/2	8135-00-272-2503
1-1/2	800	.438	8135-00-270-8726
2	800	.438	8135-00-271-1445

TYPE III, CLASS 2, GRADE B

<u>Width (inches)</u>	<u>Length (feet)</u>	<u>Core (inches)</u>	<u>Stock number</u>
1	600		8135-00-579-8558
1-1/2	600	.438	8135-00-664-0080
2	450		8135-00-854-4052
2	600	.438	8135-00-272-9346
2-1/2	600	.625	8135-00-271-1446
3	600	1/2	8135-00-270-8717
4	600	1/2	8135-00-290-0354

TYPE III, CLASS 2, GRADE C

<u>Width (inches)</u>	<u>Length (feet)</u>	<u>Core (inches)</u>	<u>Stock number</u>
3	375	.438	8135-00-272-9347

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APPENDIX C

MISCELLANEOUS TAPES

10. DESCRIPTION

10.1 This appendix covers miscellaneous tapes which cannot be classified as "pressure-sensitive," or "solvent-activated."

20. ELECTRICAL INSULATORS AND INSULATING MATERIALS

20.1 Insulation tapes. (Also see Appendix A.)

20.1.1 This group consists of tapes designed to provide electrical insulation of wires and cables, with varying dielectric strengths and operating temperatures. (See 10.1 above.)

<u>Military</u>		<u>Paragraph</u>
MIL-I-631	Insulation, Electrical Synthetic Resin Composition, Non-rigid	30.1
MIL-I-3158	Insulation Tape, Electrical Glass-Fiber (Resin-Filled) and Cord, Fibrous Glass	30.2
MIL-I-17205	Insulation Cloth and Tape, Electrical, Glass Fiber, Varnished	30.3
MIL-I-18746	Insulation Tape, Glass Polytetrafluoroethylene Coated	30.4

30. DETAILED INFORMATION ON SPECIFICATIONS LISTED IN APPENDIX C

See subparagraphs of 30. on the following pages. Specification descriptions are arranged in the sequence as listed in 20.1.1 above.

MIL-HDBK-228A(AS)
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30.1 INSULATION, ELECTRICAL, SYNTHETIC-RESIN COMPOSITION, NON-RIGID
MIL-I-631

30.1.1 Description. The tape is made of synthetic insulation material.

- Type A - Polyethylene.
- Type B - Cellulose acetate butyrate.
- Type C - Cellulose acetate or cellulose triacetate.
- Type D - Ethylcellulose.
- Type E - Vinylidene chloride copolymer.
- Type F - Polyvinyl chloride and its copolymers.
- Type G - Polyethylene terephthalate.

Form T - Tape.

30.1.2 Intended use.

Type A. This type of materials is intended for ultra high frequency applications. It possesses excellent electrical properties which remain practically constant over a wide range of frequencies, temperatures, and humidities, and has a very low loss factor.

Type B. This type of materials is intended for applications requiring a good dielectric strength, fairly low loss factor, good moisture resistance, and good insulation resistance.

Type C. This type of materials is intended for applications requiring good dielectric strength, fairly low loss factor, and a relatively high degree of heat resistance with some sacrifice in moisture resistance.

Type D. This type of material is intended for radio-frequency applications requiring very good dry dielectric strength, fairly low loss factor, and fair moisture resistance.

Type E. This type of material is intended for applications having excellent mechanical strength and excellent bursting strength. It is intended for general-purpose electrical applications but is more rigid than type F.

Type F, grade a. This type of material is intended as a high-elongation, elastic material with good electrical properties, suitable as an alternate for rubber insulating tape in cable or other applications.

Type F, grade b. This type of material is intended as a high-elongation, elastic material similar to type F, grade a, with less rigidity at low temperatures and other characteristics required for aeronautical applications.

Type F, grade c. This type of material is intended as a high-elongation, elastic material similar to type F, grade a, but suitable for operation at higher temperatures (105°C).

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Type G. This type of material is intended for applications requiring good dielectric strength, fairly low loss factor, excellent mechanical strength and heat resistance.

<u>Color</u>	<u>Width (in)</u>	<u>Thickness (mils)</u>	<u>Length (in)</u>	<u>Type</u>	<u>Stock Number</u>
Black	1/2	12	1800	F	5970-00-296-3294
Unpigmented	1/2	20	1080	G	5970-00-768-9188
Unpigmented	1/2	20	1080	F	5970-00-198-8638
Unpigmented	5/8	5	600	G	5970-00-177-1653
Unpigmented	3/4	8	AA	F	5970-00-818-5248
Black	3/4	10	2160	F	5970-00-300-9001
Black	3/4	12	1800	F	5970-00-296-3293
Black	3/4	20	1080	F	5970-00-198-8639
Unpigmented	1	4	7200	F	5970-00-245-1880
Unpigmented	1	5	AA	G	5970-01-042-3543
Black	1	10	1800	F	5970-00-296-3292
-	1	20	AA		5970-00-222-2017
-	1	40	1200	F	5970-01-067-6823
Clear	1-1/4	2	11,160	A	5970-00-465-6161
Unpigmented	1-1/2	8	3000	F	5970-00-284-8715
	2	5	3984	Polyester	5970-00-007-9596

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30.2 INSULATION TAPE, ELECTRICAL GLASS-FIBER (RESIN FILLED) AND CORD,
FIBROUS-GLASS

MIL-I-3158

30.2.1 Description. This tape is resin treated glass-fiber electrical insulation for use on electric cables. Available in the following types.

Tape: Type SR-1 - Coated, frayproof (for cable sealing).

30.2.1 Intended use. Type SR-1 - This tape is intended for general use in the installation of electric cables, but particularly for cable sealing to prevent fraying.

30.2.3 Method of application. Wrap around item to be insulated.

<u>Tape</u>	<u>Width (in)</u>	<u>Core Diameter (in)</u>	<u>Length (yds)</u>	<u>Stock Number</u>
Type SR-1	6	1-1/2	25	5970-00-290-8303

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30.3 INSULATION CLOTH AND TAPE, ELECTRICAL, GLASS FIBER, VARNISHED

MIL-I-17205

30.3.1 Description. Varnished glass fiber cloth and tape for electrical insulation. Tape and cloth in the following forms and grades:

FORM C - Cloth

Grade O - Varnished with organic varnish - yellow

Grade S - Varnished with silicone varnish for use in motors, generators, and transformers

FORM T - Tape

Grade O - Varnished with organic varnish - yellow

Grade S - Varnished with silicone varnish for use in motors, generators and transformers

30.3.2 Intended use. This insulation cloth and tape is intended for use in coils of electrical and electronic equipment such as motors, generators, and transformers. The 0.002 inch thick Grade S material shall be limited to applications where a considerable effect of high humidity on electrical properties and a low dielectric strength at elevated temperatures can be tolerated.

<u>Color</u>	<u>Width (inches)</u>	<u>Thickness (mils)</u>	<u>Length (yds)</u>	<u>Stock Number</u>
	1/2	4	36	5970-00-188-4597
Yellow	1/2	5	36	5970-00-188-4606
	1/2	7	36	5970-00-188-5472
Yellow	1/2	7	36	5970-00-188-4616
Clear	3/4	4	36	5970-00-188-5475
	3/4	7	36	5970-00-188-5471
Yellow	1	5	36	5970-00-188-4608
	1	7	36	5970-00-188-5470
Yellow	1	7	36	5970-00-198-8744

MIL-HDBK-228A(AS)

23 July 1982

30.4 INSULATION TAPE, GLASS FABRIC, POLYTETRAFLUOROETHYLENE COATED

MIL-I-18746

30.4 Description. Electrical insulation tape effective at temperatures up to 260°C (400°F). The tape is of woven glass fabric, coated on both sides with polytetrafluorethylene resin.

30.4.2 Intended use. Electrical insulation, where temperatures exceeding 150°C (300°F), are prevalent.

30.4.3 Method of application. Wrap around item to be insulated.

<u>Color</u>	<u>Width (inches)</u>	<u>Thickness (mils)</u>	<u>Length (yds)</u>	<u>Stock Number</u>
AA	1/2	5	36	5970-00-226-9722
AA	3/4	5.5	36	5970-00-082-4273
AA	1	5	36	5970-00-181-0306
AA	1	10	36	5970-00-542-7025
AA	1	15	36	5970-00-935-0098
AA	1-1/2	10	100	5970-00-138-8825

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