

MIL-T-27730A(ASG)

15 APRIL 1964

Superseding  
MIL-T-27730(USAF)  
20 April 1962

## MILITARY SPECIFICATION

### TAPE, ANTISKI, POLYTETRAFLUOROETHYLENE, WITH DISPENSER

This specification has been approved by the Department of the Air Force and by the Bureau of Naval Weapons.

#### 1. SCOPE

1.1 Scope.— This specification covers polytetrafluoroethylene tape, with dispenser, for use on liquid and gaseous oxygen systems.

1.2 Classification.— The tape shall be furnished in the following sizes, as specified (see 6.2):

Size I - 1/4 inch wide

Size II - 1/2 inch wide

#### 2. APPLICABLE DOCUMENTS

2.1 The following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein:

#### SPECIFICATIONS

##### Federal

CCC-T-191  
PPP-T-680

Textile Test Methods  
Tape, Pressure Sensitive Adhesive: Packaging and  
Packing of

#### STANDARDS

##### Military

MIL-STD-105  
MIL-STD-130  
MIL-STD-143  
MS33586

Sampling Procedures and Tables for Inspection  
by Attributes  
Identification Marking of US Military Property  
Specifications and Standards, Order of Precedence  
for the Selection of  
Metals, Definition of Dissimilar

FSC 8030

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(Copies of specifications, standards, drawings, and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

### 3. REQUIREMENTS

3.1 Preproduction testing.- This specification makes provision for preproduction testing.

3.2 Data.- Unless otherwise specified in the contract or order, no data (other than reports and drawings accompanying preproduction samples, (see 4.3.2)) are required by this specification or any of the documents referenced in section 2 herein (see 6.1).

3.3 Selection of specifications and standards.- Specifications and standards for necessary commodities and services not specified herein shall be selected in accordance with MIL-STD-143.

#### 3.4 Materials.-

3.4.1 Dissimilar metals.- Unless suitably protected against electrolytic corrosion, dissimilar metals shall not be used in intimate contact with each other. Dissimilar metals are defined in MS33586.

3.4.2 Dispenser.- The dispenser shall be fabricated from anodized aluminum, corrosion-resistant steel, or a plastic material that is entirely suitable for the purpose.

3.5 Design and construction.- The tape shall be contained on a spool within a dispenser. The dispenser shall be as small in size and as light in weight as practical. The dispenser shall be so designed that the tape may be applied to male pipe threads with a minimum of contact with the tape by personnel. The dispenser shall also be designed to prevent inadvertent contamination of the tape with oils, greases, dirt, and any other contaminant. The dispenser shall contain provisions for cutting the tape to the desired length.

3.5.1 Configuration of the tape.- The tape shall be a minimum of 260 inches in length and shall be 0.0035 inch,  $\pm 0.001$  or  $-0.0005$  inch, in thickness.

3.6 Tape elongation.- The elongation of the tape shall be at least 50 percent when tested as specified in 4.5.3.

3.7 Chemical properties.- The contractor shall certify that the antiseize product is at least 99 percent polytetrafluoroethylene and contains no materials that are combustible in the presence of oxygen or that produce toxic vapors at temperatures up to 260° F. Test methods and technical data to this effect shall be submitted by the contractor to support this statement (see 4.3.2).

3.8 Application instructions.- Application instructions shall be printed using letters not less than 1/16 inch high containing the following information in the order listed:

#### APPLICATION INSTRUCTIONS

1. Thoroughly clean male and female threads assuring the removal of all previously applied antiselise 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 cone ends.

3.9 Identification of product.- Tape assemblies shall be marked in accordance with MIL-STD-130.

3.10 Workmanship.- Assemblies shall be manufactured in a thoroughly workman-like manner. Finished tape assemblies shall be clean and shall be free from oil, grease, or any other foreign material.

#### 4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection.- Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may utilize his own facilities or any commercial laboratory acceptable to the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.2 Classification of tests.- The inspection and testing of the tape assemblies shall be classified as follows:

- |                               |       |
|-------------------------------|-------|
| (a) Preproduction tests       | (4.3) |
| (b) Quality conformance tests | (4.4) |

4.3 Preproduction testing.-

4.3.1 Sampling instructions.- Preproduction test samples shall consist of three tape assemblies of each size specified in the contract or order. The samples shall be identified as required and forwarded as specified in the contract or order (see 6.2).

4.3.2 Test report.- After the preproduction test samples have been tested in accordance with this specification, and prior to forwarding the preproduction test samples to the procuring activity, a test report shall be prepared and submitted to the procuring activity. The report shall include the chemical property data specified in 3.7 and the results of all other examinations and tests, including a detailed statement indicating compliance or extent of noncompliance with each requirement of this specification and referring specifically to the applicable paragraph numbers in this specification.

4.3.3 Preproduction testing.- The preproduction tests shall consist of all examinations and tests described under 4.5.

4.4 Quality conformance tests.- Quality conformance tests shall consist of

- (a) Individual tests (4.4.1)
- (b) Sampling tests (4.4.2)

4.4.1 Individual tests.- Each tape assembly shall be subjected to examination of product (4.5.1).

4.4.2 Sampling tests.-

4.4.2.1 Lot.- A lot shall consist of one size of tape manufactured from the same batch of polytetrafluoroethylene and under essentially the same conditions.

4.4.2.2 Sampling.- A sample unit of tape shall consist of one dispenser containing the required quantity of tape. A sample unit for preparation for delivery shall be one shipping container containing tape preserved, packaged, and packed as required for the specified level. The shipping container shall not be sealed. Samples shall be selected in accordance with MIL-STD-105 under the inspection level specified for the following inspections. A sample of tape failing to pass the tests shall be cause for rejecting the lot.

<u>Test</u>		<u>Inspection level</u>	
(a)	Tape elongation	(4.5.3)	S-3
(b)	Examination of preparation for delivery	(4.5.2)	S-2

4.5 Inspection methods.-

4.5.1 Examination of product.- The tape assembly shall be examined for conformance with this specification with respect to materials, workmanship, dimensions, construction, markings, and other requirements not covered by tests.

4.5.2 Examination of preparation for delivery.- The tape assembly shall be examined for cleanliness, and for preservation, packaging, packing, and marking as required by the level specified in the contract or order.

4.5.3 Tape elongation.- At least three samples of the tape shall be tested for elongation in accordance with method 5102 of CCC-T-191, except that the width of the specimen shall be according to the size that is being tested (size I or size II).

## 5. PREPARATION FOR DELIVERY

5.1 Preservation, packaging, and packing.- The tape shall be preserved, packaged, and packed in accordance with level A, B, or C of PPP-T-680. The level shall be as specified in the contract or order (see 6.2).

5.2 Application instructions.- One copy of the application instructions as specified in 3.6 shall be packaged with each tape dispenser.

## 6. NOTES

6.1 Intended use.- The tape is intended as an antiseize and sealant of pipe threads of liquid and gaseous oxygen systems of 2,000 psi and less.

6.2 Ordering data.- Procurement documents should specify:

- (a) Title, number, and date of this specification.
- (b) Stock number.
- (c) Size of tape required (see 1.2).
- (d) Instructions for shipping preproduction samples and if preproduction test reports are required (see 4.3.1 and 4.3.2).
- (e) Applicable levels of preservation and packaging and packing required (see 5.1).

6.3 Marginal indicia.- The margins of this specification are marked to indicate where changes, deletions, or additions to the previous issue have been made. This is done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content as written, irrespective of the marginal notations and relationship to the last previous issue.

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Navy - Weps  
Air Force - 11

Preparing activity:

Air Force - 11

Reviewer activity:

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User activity:

Navy -  
Air Force -

Review/user information is current as of the date of this document. For future coordination of changes to this document, draft circulation should be based on the information in the current DoD Index of Specifications and Standards.

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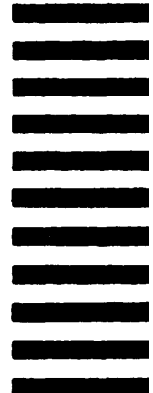
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(See Instructions - Reverse Side)

1. DOCUMENT NUMBER

2. DOCUMENT TITLE

3a. NAME OF SUBMITTING ORGANIZATION

4. TYPE OF ORGANIZATION (Mark)

☐ VENDOR

☐ USER

☐ MANUFACTURER

☐ OTHER (Specify):

b. ADDRESS (Street, City, State, ZIP Code)

5. PROBLEM AREAS

a. Paragraph Number and Wording:

b. Recommended Wording

c. Reason/Rationale for Recommendation

6. REMARKS

7a. NAME OF SUBMITTER (Last, First, MI) - Optional

b. WORK TELEPHONE NUMBER (Include Code) - Optional

c. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional

8. DATE OF SUBMISSION (YYMMDD)

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