

FEDERAL SPECIFICATION SHEET

TAPE, INSTRUMENTATION RECORDING, MAGNETIC OXIDE-COATED,
345 OERSTEDS COERCIVITY, 5 DROPOUTS PER 100 FOOT (FT) (30 METERS (M))
OF TAPE, WITH 76.2 MILLIMETER (3 INCH) CENTER-HOLE DIAMETER REEL.

The General Services Administration has authorized the use of this federal specification, by all federal agencies.

The complete requirements for procuring the instrumentation recording tapes described herein shall consist of this document and the latest issue in effect of W-T-1553.

1 Scope. This federal specification sheet covers the general requirements for 345 oersteds (Oe) coercivity magnetic oxide-coated, instrumentation recording tape with five dropouts per 100 feet (30 m) of tape.

2 Classification. This federal specification sheet uses a classification system which is included in the Part or Identification Number (PIN). The PIN shall be WT 155301 (plus additional indicators from table I). Complete PIN example: WT155301AA036T (see table I).

3. Requirements.

3.1 Design and construction. Instrumentation recording tape supplied to this slash sheet shall be as specified herein.

3.2 Physical properties.

3.2.1 Base film material. The base film material shall be polyester.

3.2.2 Base film thickness. The base film thickness shall be 0.0254 mm (1.0 mil) nominal.

3.2.3 Oxide coating thickness. The oxide coating thickness shall be .005 mm (0.20 mil) nominal.

Beneficial comments, recommendations, additions, deletions, clarifications, etc., and any data which may improve this document should be sent to: Defense Supply Center, Columbus, ATTN: DSCC-VAM, Post Office Box 3990, Columbus, OH 43216-5000, or telephone (614) 692-0548, or facsimile (FAX) (614) 692-6939.

AMSC N/A

FSC 5835

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3.2.4 Backcoat thickness. The backcoat thickness shall be .001 mm (0.04 mil) nominal.

3.2.5 Tape width. The tape width shall be as specified in table I.

3.2.6 Tape length. The tape length shall be as specified in table I.

TABLE I. Characteristics of available PIN options.

Federal specification indicator	Tape width indicator: A: For a 1/2-inch (12.7 mm) nominal tape. B: For a 1-inch (25.4 mm) nominal tape. (see 1.2.2 of W-T-1553)	Reel and hub indicator (see 1.2.3 of W-T-1553)	Tape length indicator (see 1.2.4 of W-T-1553)	Optional testing level indicator. (see 1.2.5 of W-T-1553)
WT155301	A	A	036	T or blank ^{1/}
WT155301	A	A	046	
WT155301	A	B	072	
WT155301	A	C	092	
WT155301	A	D	108	
WT155301	A	E	125	
WT155301	B	A	036	
WT155301	B	A	046	
WT155301	B	F	046	
WT155301	B	C	072	
WT155301	B	H	072	
WT155301	B	C	092	
WT155301	B	H	092	
WT155301	B	D	108	
WT155301	B	J	108	
WT155301	B	E	125	

^{1/} In accordance with W-T-1553, to order standard qualified products list product leave this PIN code blank.

3.2.7 Magnetic layer material. The magnetic layer material shall be Gamma Ferreric Oxide Fe_2O_3 .

3.3 Magnetic properties.

3.3.1 Retentivity. The retentivity shall be 1,000 percent ± 10 percent Gauss.

3.3.2 Coercivity. The coercivity shall be 345 percent ± 5 percent Oe.

3.4 Performance specifications.

3.4.1 Wavelength response. The wavelength response shall be as specified in table II.

TABLE II. Wavelength response.

Input frequency (kHz)	Wavelength (mils)	Wavelength response in decibels (dB)
0.8	150	0 ± 2.0
12.0	10	0 ± 2.0
480.0	0.125	0 ± 2.0
1500.0	0.08	0 ± 2.0
2000.0	0.06	0 ± 2.0

3.4.2 Layer-to-layer signal transfer. The layer-to-layer signal transfer shall be 40 dB.

3.4.3 Electrical resistance. The maximum electrical resistance of the conductive back coating surface shall be 2×10^6 ohms per square.

3.4.4 Output level uniformity, long term and short term. The long term and short term output level uniformity at 1 megahertz shall be 2.5 dB maximum for both the center and the edge track.

3.4.5 Instantaneous nonuniformity (dropouts per 100 feet (30 m)). The instantaneous nonuniformity shall be as specified in table III.

TABLE III. Instantaneous nonuniformity.

Dropouts per 100 feet	
Edge track	10
Center track	5

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3.5 Temperature.

3.5.1 Operating temperature. The operating temperature shall be +4°C (40°F) to +49°C (120°F).

3.5.2 Storage temperature. The storage temperature shall be +4°C (40°F) to +32°C (90°F).

3.6 Humidity.

3.6.1 Operating humidity. The operating humidity shall be 50 percent relative humidity (RH) ±15 percent.

3.6.2 Storage humidity. The storage humidity shall be less than 40 percent RH.

4. Quality assurance provisions. Quality assurance provisions shall be as specified in the general specification W-T-1553.

4.1 Tapes for qualification. PIN WT 155301AA036 and WT 155301BE125 shall be utilized for qualification of this specification sheet. Qualification to W-T-1553/01 may be the basis for extending qualification to W-T-1553/02 as follows.

- a. Tapes shall be the same design, materials shall be manufactured in the same manufacturing facility using the same manufacturing process.
- b. PIN WT155301BC092 shall be subjected to meet instantaneous nonuniformity test of W-T-1553/02 with zero defects.

5. Packaging. Packaging shall be as specified in W-T-1553.

6. Notes.

6.1 PIN. The PIN should be used for Government purposes to buy instrumentation tapes to this federal specification sheet. See 1.2 for PIN format.

6.2 Suppression and cross reference. See table VI.TABLE VI. Part or Identifying Numbers (PINs).

Superseding Government PIN	Superseded Government PIN	Commercial superseded PIN CAGE 88068
WT155301AA036	TITE3HT500PCP3600C	795-27G13G
WT155301AA046	TITE3HT500PCP4600C	795-27GJ3G
WT155301AB072	TITE3HT500QCP7200C	795-29G93G
WT155301AC092	TITE3HT500SCP9200C	795-29GK3G
WT155301AD108	TITE3HT500TCP10800C	795-2AG13G
WT155301AE125	TITE3HT500UCP12500C	795-2BG13G
WT155301BA036	TITE3HT1000PCP3600C	795-57G13G
WT155301BA046	TITE3HT1000PCP4600C	795-57GJ3G
WT155301BF046	TITE3HT1000PGP4600C	795-57EJ3G
WT155301BC072	TITE3HT1000SCP7200C	795-59G93G
WT155301BH072	TITE3HT1000SGP7200C	795-59E93G
WT155301BC092	TITE3HT1000SCP9200C	795-59GK3G
WT155301BH092	TITE3HT1000SGP9200C	795-59EK3G
WT155301BD108	TITE3HT1000TCP1080C	795-5AG13G
WT155301BJ108	TITE3HT1000TGP10800C	795-5AE13G
WT155301BE125	TITE3HT1000UCP12500C	795-5BG13G

MILITARY INTERESTS:

Custodians

Army - CR
Navy - EC
Air Force - 99

Review activities

Navy - AS, NV, OM
Air Force - 80

CIVIL COORDINATING ACTIVITY:

NASA - NPPO

Preparing Activity:
DLA-ES

(Project 5835-0112-01)