

FEDERAL SPECIFICATION SHEET

TAPE, INSTRUMENTATION RECORDING, MAGNETIC OXIDE-COATED,
345 OERSTEDS COERCIVITY, 4 DROPOUTS PER 100 FOOT (FT) (30 METERS (M))
OF TAPE, WITH 76.2 MILLIMETER (MM) (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 four 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 WT155302 (plus additional indicators from table I). Complete
PIN example: WT155302AA036T (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

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

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)
WT155302	A	A	046	T or blank 1/
WT155302	A	C	092	
WT155302	B	A	046	
WT155302	B	F	046	
WT155302	B	B	072	
WT155302	B	C	092	
WT155302	B	H	092	
WT155302	B	D	108	

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-Fe₂O₃.

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 ±1
12.0	10	0 ±1
480.0	0.125	0 ±1
1500.0	0.08	0 ±1.5
2000.0	0.06	0 ±2.0

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

3.4.3 Output level uniformity, long term and short term. The long term and short term output level uniformity at 1.025 MHz shall be 2.0 dB maximum for both the center and the edge track.

3.4.4 Instantaneous nonuniformity (dropouts per 100 feet (30 m)). The instantaneous nonuniformity shall be less than an average of 4 dropouts per 100 foot (30 m) of tape measured across the width and its entire working lengths, randomly distributed.

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.

3.7 Used or reconditioned material. A manufacturer shall not furnish any instrumentation recording tape which is used or reconditioned or is comprised of used or reconditioned material.

W-T-1553/02

4. Quality assurance provisions. Quality assurance provisions shall be as specified in W-T-1553 except the instantaneous nonuniformity test shall be performed on 100 percent of the lot and as specified herein (see 3.4.5). Defective reels shall be removed from the lot and not be supplied to the specification. (NOTE: For T level product, the instantaneous nonuniformity test shall be performed on a sample basis by the government laboratory in accordance with W-T-1553.)

4.1 Tapes for qualification. PIN WT 155302AA046 and WT 155302BD108 shall be utilized for qualification of this specification sheet. Qualification to W-T-1553/02 may be the basis for extending qualification to W-T-1553/01 as follows. Tapes shall be the same design, materials shall be manufactured in the same manufacturing facility using the same manufacturing process.

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.

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 5835-0112-02)