

# QUANTUM HD

## COMPUTER TAPE SPECIFICATIONS

### A LIFETIME WARRANTY

We're so sure of unequaled performance that we've backed Quantum HD with a limited lifetime warranty. It's your promise that every reel will remain free from defects in materials and workmanship for the entire life of the product. Superior performance guaranteed for a lifetime. Quantum HD from Memorex.

### CERTIFIED AT 40% SIGNAL REMAINING

Quantum HD has been certified at 40% signal remaining for outstanding 6250 cpi performance — the highest threshold in the industry. Additionally, it has been 100% dual density tested for maximum performance at both 1600 and 6250 cpi.



### THE NEXT STEP

Quantum HD... the most advanced computer tape ever made. Now made even better. With improved performance characteristics. Proven reliability. And stringent quality controls that ensure you a lifetime of trouble-free operation.

### MADE STRONG TO LAST LONGER

The special tape formulation used in Quantum HD delivers the most durable tape in the industry, exceeding ISO, ANSI, ECMA and WT 0051C standards. The tough binder also provides compatibility with the new head and transport technologies in today's tape subsystems. For even greater strength, we wind Quantum HD around a SupeReel II hub. The SupeReel I-beam design provides uniform tape support across the entire wind surface — reducing flange deformation and effectively eliminating tape edge damage.

### ERRORLESS PERFORMANCE

How does Quantum HD perform with zero read errors, zero gross errors, and zero permanent write errors? First, our tape is manufactured in a tightly controlled clean room environment, providing you with the maximum in

high-grade performance. Another reason is our superior slitting process, where we utilize carbide blades to slit the tape to the cleanest edge possible — minimizing data loss.

THE COMPUTER HISTORY MUSEUM



# MEMOREX®

# QUANTUM HD

## COMPUTER TAPE SPECIFICATIONS

The following information references ANSI specification X 3.40-1983. Quantum HD exceeds ANSI specifications for 6250 cpi and 1600 cpi dropout performance through a minimum of 1 million passes.

### Physical Properties

Base Film: Oriented Polyethylene Terephthalate

Base Film Thickness: 1.42 mils nominal

Total Thickness:  $1.9 \pm 0.3$  mils

E-Value: Min. 0.25" (0.64cm)

Width:  $0.498'' \pm 0.002''$   
(1.26cm  $\pm$  0.005cm)

Length: Nominal 2400' (731.5m)  
between markers  
Nominal 1200' (365.8m)  
between markers  
nominal 600' (182.9m)  
between markers)

Marker Placement

BOT:  $16' \pm 2'$  (4.88m  $\pm$  0.61m)

EOT:  $25' + 5' - 0'$

(7.62m + 1.62m - 0m)

Splices: None

Creases: None

Toxicity: Non-toxic

Flammability: Self-extinguishing in a still CO<sub>2</sub> atmosphere

Compatibility: Not an inhibitor

Longitudinal Curvature: 0.125" (0.32cm) maximum per 36" (91.4cm)

Yield Strength Min: 8.5 lbs. at 3%

Moment of Inertia: Max. 562 oz. in<sup>2</sup> (10.3 g · m<sup>2</sup>)

Layer-to-Layer Adhesion: None

Surface Roughness: 1-4 $\mu$ " CLA nominal

Cupping: Less than 0.010" (0.025cm) of 0.25" (0.64cm) length/0.5" (1.27cm) width

### Performance Characteristics

Prior to shipment, each reel of tape has been 100% tested to assure minimum system performance as follows:

- zero read errors
- zero permanent write errors
- zero gross errors

Memorex internal test conditions are as follows:

- 6250 cpi tested at 40% signal remaining with respect to NBS SRM-6250

— 1600 cpi tested at 35% signal remaining with respect to NBS SRM-3200

Surface Resistance: (Magnetic Coating): 0.5-500 megohms per square

Signal Output Level Relative to NBS Standards:

1600 cpi +25/-10%

6250 cpi +/-40%

Ease of Erasure: Less than 4% signal at 6250 cpi

Exclusive Noise Errors: 0

Dynamic Skew: Max 1.1 $\mu$ sec at 200 ips (5.08 mps)

Start/Stop Times: Meets all IBM 729, 2400, 3400 requirements

### Environmental Characteristics

Operating:

Temperature: 60°-90°F  
(16°-32°C)

Humidity: 20-80% RH

Optimum Operating Temperature and Humidity: 65°-75°F (18°-24°C) and 40-60% Relative Humidity

Storage: Recorded same as unrecorded except maximum temperature is 90°F (32°C)

Temperature: 40°-120°F (5°-48°C)

Humidity: 20-80% RH

Maximum Wet Bulb: 78°F (26°C)

Recommended Storage Temperature: 75°  $\pm$  9°F (24°  $\pm$  5°C)

*(Tape stored outside the recommended environment should be acclimated at the operating conditions for 24 hours prior to use.)*



**MEMOREX<sup>®</sup>**  
**COMPUTER SUPPLIES**

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## MEMOREX QUANTUM HD COMPUTER TAPE WARRANTY

Memorex has verified the performance of each reel of Quantum HD Computer Tape and warrants that it is free from defects in material and workmanship from date of purchase

## FOR THE LIFE OF THE PRODUCT

Memorex Corporation shall not be responsible for damage resulting from neglect, misuse, improperly adjusted or maintained tape drives or ancillary equipment, or incorrect environments or from wear and tear from ordinary use.

Tapes thought to be defective should be returned, prepaid, to Memorex Corporation, Santa Clara, California, according to prior written authorization of a sanctioned representative of Memorex Corporation. Memorex will test the tape and, if found to be defective, it will be replaced with an equivalent reel of tape at no cost to the purchaser.

If Memorex Corporation determines the Quantum HD Computer Tape is not defective or has been damaged through the user's misuse as previously described, the tape will be returned to the user, freight collect.

**THE FOREGOING WARRANTY IS IN LIEU OF ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. EXCEPT AS STATED ABOVE, MEMOREX CORPORATION WILL NOT BE LIABLE FOR DAMAGES ARISING OUT OF USE OF THE TAPE INCLUDING, WITHOUT LIMITATION, INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR BOTH.**

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