

## LANmark-2000 Enhanced Category 6 Plenum

The LANmark-2000 cable series is comprised of ANSI/TIA/EIA Category 6 compliant cables that are specified and tested to 500 MHz. LANmark-2000 is a true multimedia cable and is specifically designed to handle voice, video and data simultaneously. The useable bandwidth allows for the convergence of analog video, voice and data onto one cable simultaneously. This convergence of technologies simplifies even the most dynamic network. LANmark-2000 is Berk-Tek's highest performing Enhanced Category 6 cable available. Every key electrical property for LANmark-2000 has been improved when measured against the TIA/EIA 568-B.2-1 Category 6 standard. This improvement in electrical performance ensures that transmitted signals will be stronger and less susceptible to outside interference, resulting in more robust network performance.

### Description

#### Construction

23 AWG bare copper wire insulated with FEP. Two insulated conductors twisted together to form a pair and four such pairs laid up to form the basic unit jacketed with flame-retardant PVC.

#### Standards

North American: ANSI/TIA/EIA-568-B.2-1 Category 6

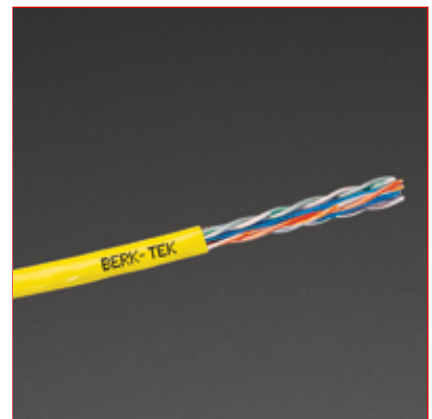
International: ISO/IEC 11801-1995

European: EN 50173

#### Flame Rating

Plenum-NFPA 262, CMP

UL Listed



#### Standards

**National** TIA/EIA-568-B.2

#### Applications

Berk-Tek's LANmark-2000 UTP cable is intended for future and high speed data and multimedia applications including:

- IEEE 802.3 1000BASE-T, 100BASE-TX, 10BASE-T
- 1000BASE-TX (ANSI/TIA/EIA-854-2001)
- 155 Mb/s ATM
- ANSI X3.263 100Mb/s
- 4/16 Mb/s Token Ring

#### Features

- Full duplex operation capable over four cable pairs
- Increased usable bandwidth vs. the Category 6 standard
- Documented balance characteristics (LCL/TCL, EL TCTL)
- Reduced attenuation (Insertion Loss)
- ETL verified to ANSI/TIA/EIA-568-B.2-1 Category 6 standard
- Highest performing UTP cable available

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### Benefits

- Capable of handling applications which utilize full duplex operation and/or simultaneous bidirectional transmission
- Provides bandwidth required for multimedia, broadband video, analog video and other future applications
- Balance characteristics improves overall cable performance and reduces cable emission which results in reduced transmission errors
- Improved insertion loss allows more signal to reach the receiver resulting in cleaner data and video transmission
- State-of-the-art testing allows high frequency characterization of the cable to 500 MHz

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### Contact

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## LANmark-2000 Enhanced Category 6 Plenum

### Characteristics

#### Dimensional characteristics

|                 |           |
|-----------------|-----------|
| Length per reel | 1000.0 ft |
| Number of pairs | 4         |

#### Usage characteristics

|             |              |
|-------------|--------------|
| Fire safety | Plenum Rated |
|-------------|--------------|

### Temperature Rating

|                     |                |
|---------------------|----------------|
| <b>Installation</b> | 0°C to +50°C   |
| <b>Operation</b>    | -10°C to +60°C |

### Technical Data - Physical

|  | CMP    |        |
|--|--------|--------|
| <b>Conductor diameter-in. (mm)</b>           | 0.0245 | (0.62) |
| <b>Cable diameter-in. (mm)</b>               | 0.25   | (6.4)  |
| <b>Nominal cable weight-lb./kft. (kg/km)</b> | 40     | (58.7) |
| <b>Max. installation tension-lb. (N)</b>     | 25     | (110)  |
| <b>Min. bend radius-in. (mm)</b>             | 1      | (25.4) |

### Parametric Measurements

|                                 | HORIZONTAL  |
|---------------------------------|---|
| <b>Mutual Capacitance</b>       | 4.4 nF/100 m nom.   |
| <b>DC resistance max.</b>       | 9.38 Ohms/100 m max.  |
| <b>Skew</b>                     | 35 ns/100 m nom. 45 ns/100 m max                              |
| <b>Pair to ground Unbalance</b> | 330 pF/100 m max.   |
| <b>Velocity of Propagation</b>  | 72% nom. Plenum   |
| <b>Input Impedance</b>          | 100 ± 13% 0.772-100 MHz, 100 ± [13+15log (F/100)] 100-500 MHz |

### Color Code

|               |       |        |
|---------------|-------|--------|
| <b>Pair-1</b> | White | Blue   |
| <b>Pair-2</b> | White | Orange |
| <b>Pair-3</b> | White | Green  |
| <b>Pair-4</b> | White | Brown  |

### Technical Data - Electrical

| HORIZONTAL |
|------------|
|------------|

## LANmark-2000 Enhanced Category 6 Plenum

| FREQ  | SRL       |         | RL     |         | INSERTION LOSS |         | PS-NEXT   |         | NEXT      |         | ACR       |         |
|-------|-----------|---------|--------|---------|----------------|---------|-----------|---------|-----------|---------|-----------|---------|
|       | (dB)      |         | (dB)   |         | (dB/100m)      |         | (dB)      |         | (dB)      |         | (dB/100m) |         |
| MHz   | min.      | typical | min.   | typical | max.           | typical | min.      | typical | min.      | typical | min.      | typical |
| 1     | 26.0      | 44.1    | 20.0   | 32.0    | 1.7            | 1.5     | 78.3      | 98.4    | 80.3      | 100.4   | 78.6      | 93.9    |
| 4     | 26.0      | 47.4    | 23.6   | 32.0    | 3.5            | 3.1     | 69.3      | 88.8    | 71.3      | 90.8    | 67.8      | 82.4    |
| 10    | 26.0      | 45.9    | 26.0   | 36.2    | 5.5            | 4.9     | 63.3      | 80.2    | 65.3      | 82.2    | 59.8      | 72.2    |
| 16    | 26.0      | 43.4    | 26.0   | 39.7    | 7.0            | 6.3     | 60.3      | 77.5    | 62.3      | 79.5    | 55.3      | 68.5    |
| 20    | 26.0      | 42.7    | 26.0   | 39.9    | 7.8            | 7.1     | 58.8      | 75.7    | 60.8      | 77.7    | 53.0      | 65.9    |
| 31.25 | 25.0      | 41.4    | 25.0   | 41.0    | 9.8            | 9.0     | 55.9      | 72.8    | 57.9      | 74.8    | 48.1      | 61.6    |
| 62.5  | 23.5      | 39.5    | 23.5   | 37.7    | 14.1           | 13.0    | 51.4      | 68.3    | 53.4      | 70.3    | 39.2      | 51.5    |
| 100   | 22.5      | 39.9    | 22.5   | 37.4    | 18.0           | 16.8    | 48.3      | 64.5    | 50.3      | 66.5    | 32.3      | 45.1    |
| 155   | 21.6      | 38.9    | 21.6   | 37.3    | 23.2           | 21.4    | 45.4      | 62.0    | 47.4      | 64.0    | 24.2      | 38.1    |
| 200   | 21.0      | 38.0    | 21.0   | 36.0    | 29.1           | 24.7    | 43.8      | 59.5    | 45.8      | 61.5    | 16.7      | 32.0    |
| 250   | 20.5      | 37.4    | 20.5   | 35.2    | 30.9           | 27.9    | 42.3      | 58.1    | 44.3      | 60.1    | 13.4      | 27.6    |
| 350   | 19.8      | 34.1    | 19.8   | 32.0    | 38.1           | 34.0    | 40.2      | 54.8    | 42.2      | 56.8    | 4.1       | 19.2    |
| 500   | 19.0      | 33.2    | 19.0   | 31.3    | 47.7           | 42.0    | 37.8      | 53.5    | 39.8      | 55.5    | -         | 9.0     |
| 600   | 18.6      | 32.6    | 18.6   | 30.6    | 53.7           | 47.7    | 36.6      | 51.6    | 38.6      | 53.6    | -         | -       |
| FREQ  | PS-ACR    |         | ELFEXT |         | PS-ELFEXT      |         | LCL/TCL   |         | EL TCTL   |         |           |         |
|       | (dB/100m) |         | (dB)   |         | (dB)           |         | (dB@100m) |         | (dB@100m) |         |           |         |
| MHz   | min.      | typical | min.   | typical | min.           | typical | min.      | typical | min.      | typical |           |         |
| 1     | 76.6      | 92.1    | 72.8   | 94.3    | 72.8           | 85.4    | 50.0      | 63.8    | 35.0      | 58.3    |           |         |
| 4     | 65.8      | 81.0    | 60.7   | 83.1    | 60.7           | 73.8    | 44.0      | 61.8    | 23.0      | 54.0    |           |         |
| 10    | 57.8      | 70.4    | 52.8   | 74.0    | 52.8           | 65.5    | 40.0      | 60.2    | 15.0      | 50.8    |           |         |
| 16    | 53.3      | 66.8    | 48.7   | 70.9    | 48.7           | 61.9    | 38.0      | 60.5    | 10.9      | 49.6    |           |         |
| 20    | 51.0      | 64.1    | 46.7   | 69.5    | 46.7           | 60.0    | 37.0      | 59.0    | 9.0       | 49.6    |           |         |
| 31.25 | 46.1      | 59.9    | 42.9   | 66.4    | 42.9           | 56.9    | 35.1      | 58.4    | 5.5       | 49.6    |           |         |
| 62.5  | 37.3      | 49.9    | 36.8   | 61.1    | 36.8           | 51.3    | 32.0      | 56.4    | -         | -       |           |         |
| 100   | 30.3      | 43.3    | 32.8   | 56.0    | 32.8           | 47.0    | 30.0      | 54.2    | -         | -       |           |         |
| 155   | 22.2      | 36.4    | 28.9   | 52.3    | 28.9           | 42.7    | 28.0      | 53.0    | -         | -       |           |         |
| 200   | 14.7      | 30.4    | 26.7   | 47.6    | 26.7           | 39.6    | 27.0      | 51.4    | -         | -       |           |         |
| 250   | 11.4      | 26.1    | 24.8   | 46.2    | 24.8           | 37.6    | 26.0      | 50.2    | -         | -       |           |         |
| 350   | 2.1       | 17.7    | 21.9   | 41.4    | 21.9           | 34.0    | 24.6      | -       | -         | -       |           |         |
| 500   | -         | 7.2     | 18.8   | 38.9    | 18.8           | 33.0    | 23.0      | -       | -         | -       |           |         |
| 600   | -         | -       | 17.2   | 37.2    | 17.2           | 30.5    | 22.2      | -       | -         | -       |           |         |

IMPORTANT: Berk-Tek performance guarantees are based on swept-frequency testing and apply to all frequencies for the entire specified frequency range and are not limited to the tables of data shown which are presented to demonstrate our guarantees at "representative" frequencies. Values above 500 MHz are provided for engineering information. Limited Combustible version also available. Other jacket colors available.

## LANmark-2000 Enhanced Category 6 Plenum

### Product List

| Berk-Tek P/N | Description                             | Type of cable | Colour     | Packaging     | Field of application |
|--------------|---|---------------|------------|---------------|----------------------|
| 10033827     | LANmark-2000 Enhanced Category 6 Plenum | UTP           | Light grey | Reel          | Indoor               |
| 10065417     | LANmark-2000 Enhanced Category 6 Plenum | UTP           | Light grey | Reel in a box | Indoor               |
| 10033829     | LANmark-2000 Enhanced Category 6 Plenum | UTP           | White      | Reel          | Indoor               |
| 10064548     | LANmark-2000 Enhanced Category 6 Plenum | UTP           | White      | Reel in a box | Indoor               |
| 10044303     | LANmark-2000 Enhanced Category 6 Plenum | UTP           | Red        | Reel          | Indoor               |
| 10085753     | LANmark-2000 Enhanced Category 6 Plenum | UTP           | Red        | Reel in a box | Indoor               |
| 10064885     | LANmark-2000 Enhanced Category 6 Plenum | UTP           | Black      | Reel          | Indoor               |
| 10066101     | LANmark-2000 Enhanced Category 6 Plenum | UTP           | Black      | Reel in a box | Indoor               |
| 10062484     | LANmark-2000 Enhanced Category 6 Plenum | UTP           | Orange     | Reel          | Indoor               |
| 10066100     | LANmark-2000 Enhanced Category 6 Plenum | UTP           | Orange     | Reel in a box | Indoor               |
| 10033828     | LANmark-2000 Enhanced Category 6 Plenum | UTP           | Yellow     | Reel          | Indoor               |
| 10064549     | LANmark-2000 Enhanced Category 6 Plenum | UTP           | Yellow     | Reel in a box | Indoor               |
| 10032251     | LANmark-2000 Enhanced Category 6 Plenum | UTP           | Blue       | Reel          | Indoor               |
| 10064547     | LANmark-2000 Enhanced Category 6 Plenum | UTP           | Blue       | Reel in a box | Indoor               |
| 10033860     | LANmark-2000 Enhanced Category 6 Plenum | UTP           | Green      | Reel          | Indoor               |
| 10065416     | LANmark-2000 Enhanced Category 6 Plenum | UTP           | Green      | Reel in a box | Indoor               |
| 10052785     | LANmark-2000 Enhanced Category 6 Plenum | UTP           | Violet     | Reel          | Indoor               |
| 10065216     | LANmark-2000 Enhanced Category 6 Plenum | UTP           | Violet     | Reel in a box | Indoor               |
| 10069545     | LANmark-2000 Enhanced Category 6 Plenum | UTP           | Pink       | Reel          | Indoor               |
| 10069546     | LANmark-2000 Enhanced Category 6 Plenum | UTP           | Pink       | Reel in a box | Indoor               |