



# Category 6 U/UTP Communications Cable

**Product Type:**  
Data Cable

**Application:**

Concordia Category 6 U/UTP cables are designed for external environments to support horizontal networking applications over channel distances up to 100 metres. The cable meets the specified performance for Category 6 U/UTP and supports all CLASS E applications as defined within ISO/IEC 11801 2<sup>nd</sup> Edition.

**Standards / Conformances:**

- ISO/IEC 11801 2<sup>nd</sup> Edition
- TIA/EIA 568-C.2
- EN 50173, EN 50288-3-1
- IEC 61156-5

**Construction:**

Conductor:	Solid plain annealed copper
Insulation:	Polyethylene
Cable:	8 insulated wires formed into 4 pairs. The 4 pairs are subsequently cabled together around a polyethylene cross filler to form a cohesive unit.
Sheath:	Polyethylene, Black
Diameter:	5.8mm

**Electrical properties at 20°C**

Characteristic Impedance (1-100MHz)	100 ± 15Ω
DC loop resistance	≤ 19Ω/100m
Resistance unbalance	≤ 2%
Capacitance unbalance to earth	≤ 1600 pF/km
Nominal velocity of propagation	67%
Delay skew	≤ 45ns/100m
Propagation delay @ 4MHz	≤ 552ns/100m
Test voltage (d.c. for 1 minute)	1000V
Conductor/Conductor	
Insulation resistance (500V d.c)	≥ 500MΩ.km
Coupling attenuation	≥ 40dB



Suppliers of Quality Assured Cables

### Transmission line performance at 20°C

Frequency MHz	Attenuation dB/100m	NEXT dB	ACR dB/100m	PSNEXT dB	ELFEXT dB/100m	PSELFEXT dB/100m	Return Loss
1	2.1	74.3	72.2	72.3	68	65	20.0
4	3.8	65.3	61.5	63.3	56	53	23.0
10	6.0	59.3	53.3	57.3	48	45	25.0
16	7.6	56.2	48.6	54.2	44	41	25.0
20	8.5	54.8	46.3	52.8	42	39	25.0
62.5	15.5	47.4	31.9	45.4	32	29	21.5
100	19.9	44.3	24.4	42.3	28	25	20.1
155.5	25.3	41.4	16.1	39.4	24	21	18.8
250	33.0	38.3	5.3	36.3	20	17	17.3

### Mechanical Characteristics:

Temperature Range:		
	Operation	-20°C to + 60°C
	Installation	0°C to +50°C
	Storage	-20°C to + 70°C
Minimum bend radii:		
	Installation	8 x Cable Diameter
	Installed	4 x Cable Diameter
Maximum tensile force:		
	During Installation	100N

### Other Relevant Information:

- Pair colour code:
  - Pair 1: Orange and White/Orange
  - Pair 2: Blue and White/Blue
  - Pair 3: Brown and White/Brown
  - Pair 4: Green and White/Green

### Packaging:

Part No.	Description	Packaging
GMCC6EXTPECT	Concord Cat6 U/UTP PE External	305m box