



## PRODUCT DESCRIPTION

Hyperline brings Category 6 FUTP performance to a new level. Category 6 Plenum (CMP) is ideal for voice, data, video and security communication mediums for all your network installation requirements. Manufactured to the highest quality standards and approved by 3rd party organizations such as UL and ETL, Hyperline Cable, when compared to TIA guidelines meets or surpasses the specifications in every category with guaranteed performance up to 400 MHz. The overall metal foil screen with drain wire along with a construction comprised of 8 x 23-gauge solid bare copper cores, which are then insulated with high density polyethylene insulation and organized into four color coded twisted pair sets

## USAGE & ENVIRONMENTAL CONDITION

Temperature range	Storage & shipping	-20°C to 75°C
	Installation	0°C to 60°C
	Operation	-20°C to 60°C
Minimum bending radius	≥ 4 times of overall diameter	
Maximum pulling tension	≤ 110 N	

## APPLICATIONS

- Structured cabling for horizontal and building backbone cable.
- Transmission of digital and analogue for data, video and audio applications.
- IEEE 802.3an 10GBASE-T and legacy speeds.
- CDDI / ATM / Token Ring
- IEEE 802.3af (PoE) / IEEE 802.3at (PoE+)

## PERFORMANCE COMPLIANCE

- UL 444
- EU Directive 2011/65/EC (RoHS2)
- EU Directive 2006/95/EC (LVD)
- CE compliance date: 2010.01.01

## PHYSICAL & ELECTRICAL CHARACTERISTICS

at 20 °C	
Temperature/voltage rating	75°C / 300V
Spark test	2.5 KV DC
AC leakage current through overall jacket	≤ 10mA (1.5KV AC)
Cable cold bend	-20°C for 4 hr
Conductor DC resistance	≤ 9.38 Ω/100m
Resistance unbalance	≤ 5%
Dielectric strength	1.5 KV ac for 2 s
Insulation resistance	≥ 5000 MΩ•Km
Mutual capacitance	≤ 5.6 nF/100m
Capacitance unbalance pair-to-ground	≤ 330 pF/100m

## FEATURES

- Award winning trademarked packaging
- High performance rate of transmission
- High quality of safety property
- Sweep frequency up to 400 MHz (Enhanced) verified to 250 MHz
- Meets/exceeds ANSI/TIA-568-C.2 specification
- Meets ISO/IEC 11801 (Edition2.2)
- Meets IEC 61156-5 (Edition2.0)
- Flame Test –NFPA 262 (CMP)
- Wide-mouth and Reelex carton
- Quick Count marking system in feet
- Lower cross talk

Available in ten different jacket colors



# ELECTRICAL PERFORMANCE COMPARISON (At 20 °C)

Frequency (MHz)	INSERTION LOSS		NEXT		PS.NEXT		ACR	
	TIA-568-C.2	Hyperline	TIA-568-C.2	Hyperline	TIA-568-C.2	Hyperline	TIA-568-C.2	Hyperline
	Max. dB/100m	Max. dB/100m	Max. dB/100m	Max. dB/100m	Max. dB/100m	Max. dB/100m	Max. dB/100m	Max. dB/100m
1	2.0	2.0	74.3	74.3	72.3	72.3	72.3	72.3
4	3.8	3.8	65.3	65.3	63.3	63.3	61.5	61.5
10	6.0	6.0	59.3	59.3	57.3	57.3	53.3	53.3
16	7.6	7.6	56.2	56.3	54.2	54.3	48.6	48.7
20	8.5	8.5	54.8	54.8	52.8	52.8	46.3	46.3
25	9.5	9.6	53.3	53.3	51.3	51.3	43.8	43.7
31.25	10.7	10.7	51.9	51.9	49.9	49.9	41.2	41.2
62.5	15.4	15.4	47.4	47.4	45.4	45.1	32.0	32.0
100	19.8	19.8	44.3	44.3	42.3	42.3	24.5	24.5
200	29.0	29.0	39.8	39.8	37.8	37.8	10.8	10.8
250	32.8	32.8	38.3	38.3	36.3	36.3	5.5	5.5
300		36.4		37.2		35.2		0.8
400		43.0		35.3		33.3		NA

Frequency (MHz)	PS.ACR		ACRF		PS.ACRF		RETURN LOSS	
	TIA-568-C.2	Hyperline	TIA-568-C.2	Hyperline	TIA-568-C.2	Hyperline	TIA-568-C.2	Hyperline
	Max. dB/100m	Max. dB/100m	Max. dB/100m	Max. dB/100m	Max. dB/100m	Max. dB/100m	Max. dB/100m	Max. dB/100m
1	70.3	70.3	67.8	67.8	64.8	64.8	20.0	20.0
4	59.5	59.5	55.8	55.7	52.8	52.7	23.0	23.0
10	51.3	51.3	47.8	47.8	44.8	44.8	25.0	25.0
16	46.6	46.7	43.7	43.7	40.7	40.7	25.0	25.0
20	44.3	44.3	41.8	41.7	38.8	38.7	25.0	25.0
25	41.8	41.7	39.8	39.8	36.8	36.8	24.3	24.3
31.25	39.2	39.2	37.9	37.9	34.9	34.9	23.6	23.6
62.5	30.0	30.0	31.9	31.8	28.9	28.8	21.5	21.5
100	22.5	22.5	27.8	27.8	24.8	24.8	20.1	20.1
200	8.8	8.8	21.8	21.7	18.8	18.7	18.0	18.0
250	3.5	3.5	19.8	19.8	16.8	16.8	17.3	17.3
300		0		18.2		15.2		16.8
400		NA		15.7		12.7		15.9

Values above 250 MHz are for information only



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## MATERIALS & CONSTRUCTION

Conductor	Material	23AWG solid bare copper	
Insulation	Material	Fluorinated Ethylene Propylene (FEP)	
	Color code & diameter	Blue & white	1.04 ± 0.02 mm
		Orange & white	1.06 ± 0.02 mm
		Green & white	1.09 ± 0.02 mm
		Brown & white	1.06 ± 0.02 mm
Twisted	Description	Left hand direction	
Filler	Material	Fluorinated Ethylene Propylene (FEP)	
Assembly	Description	Left hand direction	
Jacket	Material	FR PVC(LOW SMOKE)	
	Diameter	6.70 ± 0.20	
	Thickness	0.43 ± 0.40mm	
	Color	Per Hyperline standard	
Shield	Material	Mylar tape, Al Mylar tape	
	Description	100% coverage and mylar side facing out	
	Filler (SLOT)	FEP Isolator Separator	

Drain wire	Material	Tinned copper
Nominal Velocity of Propagation	(NVP) 72%	
NRTL Program	c(UL)us listed CMP ETL Verified	
Marking	Hyperline FTP4-C6-SOLID-CMP-XX-305 --- E303448 F/UTP 4PR 23AWG C(UL)US CMP --- ETL VERIFIED TO ANSI/TIA-568-C.2 CAT 6 WW/YY XXXXFT	

## ORDERING

Part Number	Product Description
FUTP4-C6-SOLID-CMP-WH-305	Category 6 Plenum, FTP, 23 AWG, White 305 Meter/1000 FT Pull Box
FUTP4-C6-SOLID-CMP-BL-305	Category 6 Plenum, FTP, 23 AWG, Blue 305 Meter/1000 FT Pull Box
FUTP4-C6-SOLID-CMP-GY-305	Category 6 Plenum, FTP, 23 AWG, Grey 305 Meter/1000 FT Pull Box
FUTP4-C6-SOLID-CMP-OR-305	Category 6 Plenum, FTP, 23 AWG, Orange 305 Meter/1000 FT Pull Box
FUTP4-C6-SOLID-CMP-GN-305	Category 6 Plenum, FTP, 23 AWG, Green 305 Meter/1000 FT Pull Box
FUTP4-C6-SOLID-CMP-VT-305	Category 6 Plenum, FTP, 23 AWG, Violet 305 Meter/1000 FT Pull Box
FUTP4-C6-SOLID-CMP-BK-305	Category 6 Plenum, FTP, 23 AWG, Black 305 Meter/1000 FT Pull Box
FUTP4-C6-SOLID-CMP-YL-305	Category 6 Plenum, FTP, 23 AWG, Yellow 305 Meter/1000 FT Pull Box
FUTP4-C6-SOLID-CMP-RD-305	Category 6 Plenum, FTP, 23 AWG, Red 305 Meter/1000 FT Pull Box
FUTP4-C6-SOLID-CMP-PK-305	Category 6 Plenum, FTP, 23 AWG, Pink 305 Meter/1000 FT Pull Box



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