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# MOHAWK THE COMPANY

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From our main facility located in Leominster, MA, Mohawk controls more than 385,000 square feet of manufacturing space, employing the latest in manufacturing technology. Led by the vast experience of our engineering, manufacturing, and quality staff, we are able to monitor each step of the manufacturing process with real-time data acquisition. We combine exceptional performance that goes beyond standards compliance, enabling us to offer superior products at competitive prices.

Included in this vast New England-based manufacturing space is 50,000 square feet dedicated to advanced fiber optic cable production. Our centralized control of all operations enables us to meet your specifications and your schedules, including copper and fiber composite cables.

We have a long, proud history and we will continue to live up to your expectations of delivering quality products from our ISO 9001 registered manufacturing facilities. Our products make use of industry leading independent testing laboratories such as Underwriters Laboratories and Intertek ETL, assuring you both safety and performance compliance.

Mohawk engineers continue to lead the industry with innovative, standards-leading products such as Augmented Category 6 GigaLAN 10 UTP and Grade 6 fiber cables. By tracking developments in the leading standards bodies which create the active technology standards, we can anticipate future cabling requirements. Customers can take advantage of this insight by specifying products that will maximize their investment in the cable plant.

## **Open Architecture: Guaranteed Cabling Excellence**

Mohawk's unique Open Architecture opens doors to a choice of system components with end-to-end interoperability. Combine Mohawk's fiber optic cable and Category 5e, 6 or enhanced Category 6 with any TIA/EIA-568-B compliant connectivity hardware and your system will be guaranteed the highest performance from backbone to outlet.

Mohawk lets you create your own unique networking solution for flexibility and dependability. All Mohawk structured cabling systems have been verified by an independent third-party testing laboratory and are warranted from 15 years up to a lifetime to meet or exceed the latest industry standards. Test data provides additional guarantees that the cabling system will support the latest applications.

Open Architecture also makes sense for installers. Through Mohawk's Accredited Contractors (MAC) program, contractors can earn the SystemMATE accreditation. Becoming a SystemMATE contractor allows them to offer Mohawk's ChannelMATE end-to-end warranted system when installed using any approved connectivity hardware, previously defined by the industry standards.

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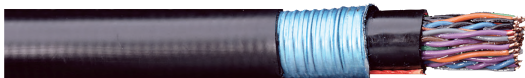
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**1-800-422-9961**

[www.mohawk-cable.com](http://www.mohawk-cable.com)



Products with this logo comply with the EU-RoHS directive 2002/95/EC (Restrictions on hazardous substances) regulations.

**ISO 9001:2000  
CERTIFIED**

# Open Architecture



## Open Architecture: Guaranteed Cabling Excellence

Mohawk's Open Architecture opens doors to allow a completely flexible and warranted mix-and-match network system, without the confines of competitive dictated partnerships. Since the cable products and installation practices are warranted through Mohawk, the channel performance is guaranteed for up to a lifetime (see chart at right).

With the Open Architecture concept, designers and end-users can create their customized network from a variety of connectivity products which have been third-party verified, through Mohawk's ChannelMate® program. Through our extensive Mohawk training, contractors can earn the SystemMATE® accreditation. Becoming a SystemMATE contractor allows them to offer Mohawk's ChannelMATE end-to-end system warranty, installed using any approved connectivity hardware, independently verified and defined by the industry standards.

Mohawk provides the right combination of cable products with many leading industry connectivity products to deliver an infrastructure that affords flexibility, expandability, and durability. With each ChannelMATE warranted system, the end-user is provided with all test results, confirming that the installed system meets or exceeds the latest TIA/EIA-568-B standard, as well as ETL and UL specifications to assure compliance for safety and performance. Mohawk is an ISO 9001 compliant facility, adhering to its quality standards.

ChannelMATE guarantees that the cable and connectivity meet the specified backbone and horizontal system specifications as defined in

TIA/EIA-568-B. All parts and labor are guaranteed from 15 years up to the life of the system, depending on the channel:

- 15-year Warranty**  
5e LAN  
Copper Backbone
- 20-year Warranty**  
MegaLAN  
6 LAN

- 25-year Warranty**  
Fiber Optic  
AdvanceNet
- Lifetime Warranty**  
GigaLAN  
GigaLAN 10







## Futureproof Tomorrow's Network Today

Emerging applications such as converging technologies (voice over IP, streaming video, etc.) and large data storage enterprises will push bandwidth to 10 Gb/s. Network designers need to plan a cabling infrastructure that will support multi-gigabit protocols today and also be scalable for tomorrow's applications.

Mohawk's GigaLAN 10™ cabling solution delivers 10 GbE to the desktop needed in today's bandwidth intensive environments, found in both backbones and enterprise data centers, SANs, and MANs. With extended performance capabilities through the unique engineering of GigaLAN 10 Augmented Category 6 cable, it becomes today's cost-effective twisted-pair solution to fiber for migration to 10 Gb/s.



GigaLAN 10 meets the proposed Augmented Category 6 standards, which will become TIA/EIA-568-B.2-10, to support the operation of 10GBASE-T over 100 meters. Transmission will employ full duplex (transmitting and receiving simultaneously) over all four-pairs for a data rate of 2.5 Gb/s per twisted pair and extend the frequency characterization requirements to 500 MHz.

From engineering design to quality assurance, Mohawk products have exceeded all expectations for over 50 years. With their proven track record,

combined with today's ongoing development and with the backing of Belden, Mohawk is poised to significantly expand its cable product offerings and market share to exceed goals for the next half century, to become the leader in telecommunications.



# Augmented Category 6 UTP GigaLAN 10™

Tested to 750 MHz

GigaLAN 10, the highest performance Augmented Category 6 cable, supports 10GBASE-T applications over a full 100-meter channel, exceeding the requirements of the current Draft of ANSI/TIA/EIA-568-B.2-10. IEEE 802.3an is looking beyond the present, specifying an operating range from 1-500 MHz.

GigaLAN 10's unique FlexWeb® combined with patented fluted jacket construction isolates the cable pairs and has outstanding pair-to-pair balance for superior headroom and reduced crosstalk.

- **Lifetime Warranty\***
- **Increase in power to 500 MHz due to lower insertion loss characteristics than Category 6.**
- **Improvement in NEXT and ELFEXT vs. draft Category 6A** – 2 dB minimum for NEXT and 4 dB minimum for ELFEXT.
- **Application** – Support for 10 Gigabit Ethernet / 10GBASE-T / IEEE 802.3an; fully backwards compatible for 10BASE-T, 100BASE-T, and 1000BASE-T applications.
- **Power Sum Alien Crosstalk** – Power Sum Alien Crosstalk measures the impact of many aggressors on one victim

pair. It is the sum of unwanted signal coupling of crosstalk noise from the external cabling pairs into a victim pair of a cable. In the illustration (see Figure 1), a bundle of 7 cables with 6 cables around a center cable is depicted. What is being measured is the noise coupling from the pairs in the outer ring of cables (aggressor pairs) to the pairs in the center cable (victim pair). Each pair of the aggressor cables contributes noise to each of the pairs in the victim cable. The total impact on the victim is determined using a power summation equation.

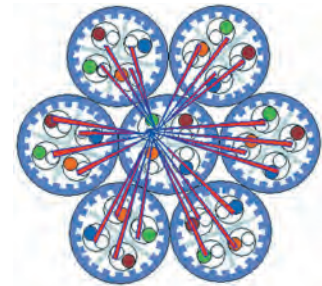


Figure 1

- This cable and/or its manufacture are covered by US Patent Nos. 6,596,944, 6,074,503, 5,424,491, 7,135,641 and patent pending.

\* Warranty available with MAC and SystemMATE® programs.

## Electrical Characteristics

### STANDARDS:

EXCEEDS DRAFT TIA 568-B.2-10 CAT 6A, DRAFT ISO/IEC 11801 ED. 2.1 CAT 6A & DRAFT IEC 61156-5 CAT 6A HORIZONTAL CABLE

### CONDUCTOR DCR:

6.6 Ω/100m (20.0 Ω/Mft) MAX

### DCR UNBALANCE:

3% MAX

### MUTUAL CAPACITANCE:

46 pF/m (14 pF/ft) NOM

### CAPACITANCE UNBALANCE PAIR/GROUND:

33 pF/100m (100 pF/Mft) MAX

### CHARACTERISTIC IMPEDANCE:

100 Ω ±7% (10-550 MHz)

### INPUT IMPEDANCE:

100 Ω ±10% (1-100 MHz)  
100 Ω ±15% (>100-350 MHz)  
100 Ω ±22% (>350 MHz)

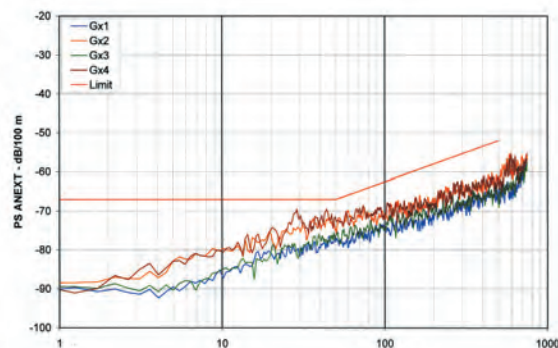
### PROPAGATION DELAY SKEW:

25 ns/100m MAX

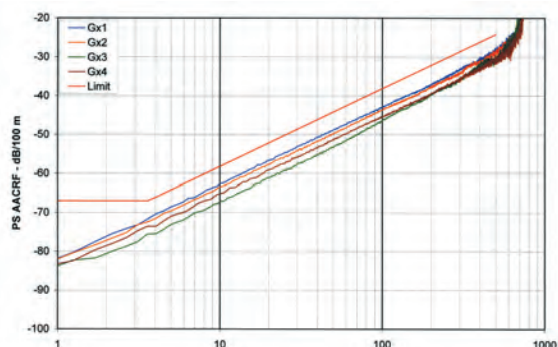
### NOMINAL VELOCITY OF PROPAGATION (NVP):

PLENUM 72%  
NON-PLENUM 68%

Power Sum Alien NEXT



Power Sum Alien ACRF

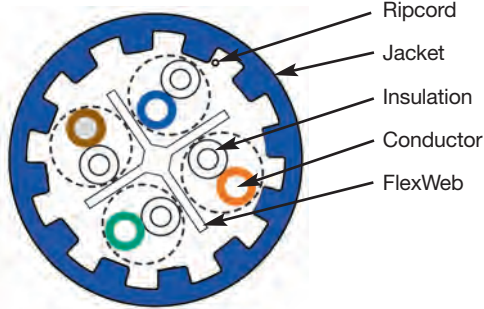


Safety listed to NEC (NFPA 70)



Verified by ETL to TIA/EIA-568-B.2-10

Cable Diagram



Jacket Colors for 4-Pair Non-Plenum

Jacket Color	Mohawk #
WHITE	M58651
BLUE	M58650
YELLOW	M58652
GRAY	M58653

Jacket Colors for 4-Pair Plenum

Jacket Color	Mohawk #
WHITE	M58647
BLUE	M58646
YELLOW	M58648
GRAY	M58649

Custom colors available; please consult the factory.

FREQ (MHz)	INSERTION LOSS (dB/100m)	NEXT (dB/100m)	PS-NEXT (dB/100m)	ACRF (dB/100m)	PS-ACRF (dB/100m)	RETURN LOSS (dB)	PROP DELAY (ns/100m)	ALIEN CROSSTALK	
								PS-ANEXT (dB/100m)	PS-AACRF (dB/100m)
.772	max	min	min	min	min	min	max	min	min
1.0	1.8	78.0	76.0	-	-	-	-	-	-
4.0	2.0	76.3	74.3	71.8	69.8	20.0	570.0	67.0	67.0
8.0	3.7	67.3	65.3	59.8	57.8	24.2	552.0	67.0	66.2
10.0	5.2	62.8	60.8	53.7	51.7	26.3	546.7	67.0	60.1
16.0	5.9	61.3	59.3	51.8	49.8	27.0	545.4	67.0	58.2
20.0	7.4	58.2	56.2	47.7	45.7	27.0	543.0	67.0	54.1
25.0	8.3	56.8	54.8	45.8	43.8	27.0	542.0	67.0	52.2
31.25	9.3	55.3	53.3	43.8	41.8	26.5	541.2	67.0	50.2
62.5	10.4	53.9	51.9	41.9	39.9	25.9	540.4	67.0	48.3
100.0	14.9	49.4	47.4	35.9	33.9	24.2	538.6	65.6	42.3
155.0	19.0	46.3	44.3	31.8	29.8	23.1	537.6	62.5	38.2
200.0	24.0	43.4	41.4	28.0	26.0	22.0	536.9	59.6	34.4
250.0	27.5	41.8	39.8	25.8	23.8	21.4	536.5	58.0	32.2
300.0	31.0	40.3	38.3	23.8	21.8	20.9	536.3	56.5	30.2
350.0	34.2	39.1	37.1	22.3	20.3	20.4	536.1	55.3	28.7
400.0	37.2	38.1	36.1	20.9	18.9	20.1	535.9	54.3	27.3
500.0	40.0	37.3	35.3	19.8	17.8	19.7	535.8	53.5	26.2
550.0	45.3	35.8	33.8	17.8	15.8	19.2	535.6	52.0	24.2
600.0	47.7	35.2	33.2	-	-	19.0	-	-	-
650.0	50.1	34.6	32.6	-	-	18.8	-	-	-
750.0	52.4	34.1	32.1	-	-	18.6	-	-	-
	56.8	33.2	31.2	-	-	18.2	-	-	-

Values above 500 MHz are for engineering information only.

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Type Diameter		Weight		Listings
			inch	mm	lbs/M'	kg/km	
M58651 Non-Plenum	4 PAIR 23 AWG UTP	Thermoplastic	White PVC .320	8.13	49	73	C(UL)US CMR
M58647 Plenum	4 PAIR 23 AWG UTP	FEP	White ThermoPlen®* .320	8.13	50	74	C(UL)US CMP

\*Plenum rated Thermoplastic. For pair colors see chart A on page 59.

Packaging Options

Put-Up	Package	Number Per Pallet	Pallet Size
1000 Ft.	18" Reels	15	44" x 44"



# Category 6e+ UTP GigaLAN®

Tested to 750 MHz

GigaLAN is the one of the highest performance unshielded twisted pair (UTP) cable available today. The FlexWeb® construction isolates the pairs throughout the length of the cable, while providing an installer-friendly cable.

The unique GigaLAN FlexWeb construction isolates the cable pairs and enhances the pair-to-pair balance for superior crosstalk, LCL and LCTL performance. Compact cable design meets the diameter requirements specified in TIA/EIA-568-B, providing flexibility and ease of installation. Electrical performance is ETL verified to TIA/EIA 568-B.2-1 Category 6.

- **Tested to 750 MHz** – with verified stability.
- **Lifetime Warranty\***
- **34% increase in power due to lower insertion loss characteristics at 100 MHz and greater than 50% at 250 MHz than Category 6.**
- **7 dB Minimum** – Improvement in Near End Crosstalk vs. Category 6 NEXT.

- **33 dB Minimum ACR @ 100 MHz and positive ACR to 460 MHz.**
- **Application** – Proven support for Gigabit Ethernet / 100BASE-T / IEEE 802.3ab, ATM up to 155 Mbps, IEEE 802.3af Power Over Ethernet for VoIP, 100 Mbps Fast Ethernet / 100BASE-T / IEEE 802.3, ANSI.X3.263 FDDI TP-PMD, Ethernet / 10BASE-T / IEEE 802.3, 4 & 16 Mbps Token Ring / IEEE 802.5, T1/E1, xDSL, ISDN, 550 MHz Broadband Video and standards under development such as ATM at 622 Mbps, 1.2, 2.4 and 4.8 Gbps.
- **Enhanced Performance Parameters** – All electrical characteristics proven to exceed TIA/EIA 568-B.2-1 and ISO/IEC 11801 Category 6 requirements: including NEXT and ELFEXT (Pair-to-Pair and Power Sum), Insertion Loss, Return Loss, and Delay Skew.
- This cable and/or its manufacture are covered by US Patent Nos. 6,596,944, 6,074,503 and 5,424,491.

\* Warranty available with MAC and SystemMATE® programs.

## Electrical Characteristics

### STANDARDS:

EXCEEDS TIA/EIA 568-B.2-1 CAT 6 & ISO/IEC 11801:2002 CAT 6 HORIZONTAL CABLE

### CONDUCTOR DCR:

6.71 Ω/100m (22.0 Ω/Mft) MAX

### DCR UNBALANCE:

3% MAX

### MUTUAL CAPACITANCE:

46 pF/m (14 pF/ft) NOM

### CAPACITANCE UNBALANCE

**PAIR/GROUND:**  
33 pF/100m (100 pF/Mft) MAX

### CHARACTERISTIC IMPEDANCE:

100 Ω ± 7% (10-550 MHz)

### INPUT IMPEDANCE:

100 Ω ± 12% (1-100 MHz)  
100 Ω ± 15% (> 100-350 MHz)  
100 Ω ± 22% (> 350 MHz)

### PROPAGATION DELAY:

506 + 36/√f ns/100m  
MAX (1-500 MHz)

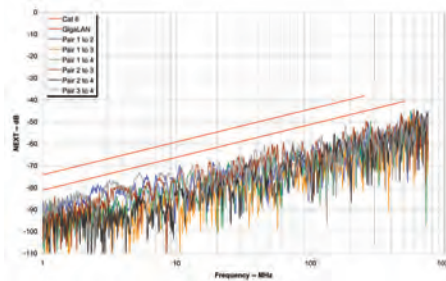
### DELTA DELAY (SKEW):

30 ns/100m MAX (10-500 MHz)

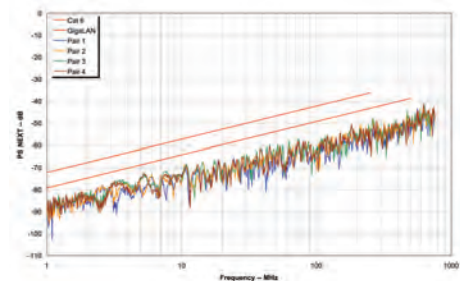
### NOMINAL VELOCITY OF PROPAGATION (NVP):

PLENUM 72%  
NON-PLENUM 68%

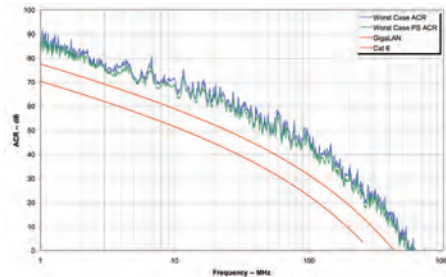
Near End Crosstalk (NEXT)



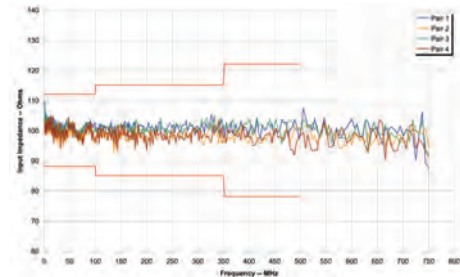
Power Sum NEXT (PS NEXT)



Worst Case ACR and Power Sum ACR



Input Impedance

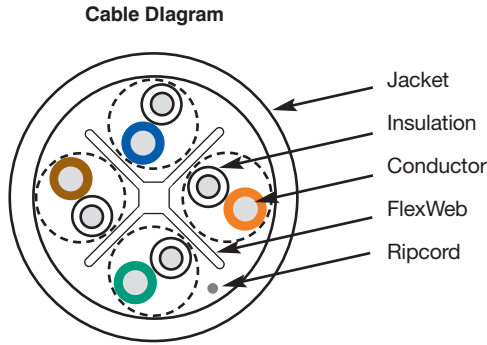


Safety listed to NEC (NFPA 70)



Verified by ETL to TIA/EIA-568-B.2-1





**Jacket Colors for 4-Pair Non-Plenum**

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M57418	RED	M57621
BLUE	M57419	PINK	M57867
YELLOW	M57420	VIOLET	M57870
GREEN	M57421	ORANGE	M57868
GRAY	M57422	BLACK	M57869

**Jacket Colors for 4-Pair Plenum**

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M57413	RED	M57620
BLUE	M57414	PINK	M57750
YELLOW	M57415	VIOLET	M57860
GREEN	M57416	ORANGE	M57861
GRAY	M57417	BLACK	M57866

Custom colors available; please consult the factory.

FREQ (MHz)	INSERTION LOSS (dB/100m)		NEXT (dB/100m)		ACR (dB/100m)	PS-NEXT (dB/100m)		PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)	RL (dB)	DELAY (ns/100m)
	avg	max	avg	min	min	avg	min	min	min	min	min	max
.772	1.6	1.7	93	83.0	81.3	86	81.0	79.3	-	-	-	-
1.0	1.8	1.9	91	81.3	79.4	84	79.3	77.4	74.8	72.8	20.0	542.0
4.0	3.3	3.5	82	72.3	68.8	75	70.3	66.8	62.8	60.8	24.2	524.0
8.0	4.7	4.9	78	67.8	62.9	71	65.8	60.9	56.7	54.7	26.3	518.7
10.0	5.2	5.5	76	66.3	60.8	69	64.3	58.8	54.8	52.8	27.0	517.4
16.0	6.7	7.0	73	63.2	56.2	66	61.2	54.2	50.7	48.7	27.0	515.0
20.0	7.4	7.8	72	61.8	54.0	65	59.8	52.0	48.8	46.8	27.0	514.0
25.0	8.3	8.7	70	60.3	51.6	63	58.3	49.6	46.8	44.8	26.5	513.2
31.25	9.3	9.8	69	58.9	49.1	62	56.9	47.1	44.9	42.9	25.9	512.4
62.5	13.4	14.1	64	54.4	40.3	57	52.4	38.3	38.9	36.9	24.2	510.6
100.0	17.1	18.0	61	51.3	33.3	54	49.3	31.3	34.8	32.8	23.1	509.6
155.0	21.7	22.8	58	48.4	25.6	51	46.4	23.6	31.0	29.0	22.0	508.9
200.0	24.9	26.2	57	46.8	20.6	50	44.8	18.6	28.8	26.8	21.4	508.5
250.0	28.1	29.6	55	45.3	15.7	48	43.3	13.7	26.8	24.8	20.9	508.3
300.0	31.1	32.7	54	44.1	11.4	47	42.1	9.4	25.3	23.3	20.4	508.1
350.0	33.8	35.6	53	43.1	7.5	46	41.1	5.5	23.9	21.9	20.1	507.9
400.0	36.5	38.4	52	42.3	3.9	45	40.3	1.9	22.8	20.8	19.7	507.8
500.0	41.4	43.6	51	40.8	-	44	38.8	-	20.8	18.8	19.2	507.6
550.0	43.7	46.0	50	40.2	-	43	38.2	-	-	-	19.0	-
600.0	46.0	48.4	50	39.6	-	43	37.6	-	-	-	18.8	-
650.0	48.1	50.6	49	39.1	-	42	37.1	-	-	-	18.6	-
750.0	52.3	55.0	48	38.2	-	41	36.2	-	-	-	18.2	-

Values above 500 MHz are for engineering information only.

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Type Diameter		Weight		Listings
			inch	mm	lbs/M'	kg/km	
M57418 Non-Plenum	4 PAIR 23 AWG UTP	Thermoplastic	White PVC .247	6.27	34	51	C(UL)US CMR
M57413 Plenum	4 PAIR 23 AWG UTP	Dual Insulation** FEP on all 4 pairs	White ThermoPlen®* .244	6.20	37	55	C(UL)US CMP
M58405 PlenumPlus™	4 Pair 23 AWG UTP	FEP	White Smokeguard®† FP Rated for 125° C .220	5.59	36	54	UL CMP Limited Combustible c(UL) CMP

\*Plenum rated Thermoplastic. \*\*US Patent No. 5,563,377. †Smokeguard is a registered trademark of AlphaGary. For pair colors see chart A on page 59.

**Packaging Options**

Put-Up	Package	Number Per Pallet	Pallet Size
1000 Ft.	14" Reels	36	42" x 42"
1000 Ft.	Boxes (15½"W x 11¼"D x 14¼"H)	33	45" x 48"
1000 Ft.	Reel in a Box (12¾"W x 12¾"D x 12¾"H)	27	42" x 42"



Above part numbers are for reels only. Add "B" to end of Mohawk # for boxes, or "RB" for Reel-in-a-box packaging.

Bulk put-ups available upon request; please consult the factory.





# Category 6e UTP AdvanceNet®

Tested to 650 MHz

AdvanceNet is unshielded twisted pair cable tested to 650 MHz and ETL verified to TIA/EIA 568-B.2-1 Category 6.

With the new Mini FlexWeb® core separator, the AdvanceNet cable isolates the pairs throughout the length of the cable, while providing a smaller installer-friendly cable.

- **25 Year Warranty\***
- **28 dB Minimum ACR @ 100 MHz** – Proven support for Gigabit Ethernet / 1000BASE-T / IEEE 802.3ab, ATM up to 155 Mbps, IEEE 802.3af Power Over Ethernet for VoIP, 100 Mbps Fast Ethernet / 100BASE-T / IEEE 802.3, ANSI.X3.263 FDDI TP-PMD, Ethernet / 10BASE-T / IEEE 802.3, 4 & 16 Mbps Token Ring / IEEE 802.5, T1/E1, xDSL, ISDN, 550 MHz Broadband Video and standards under development such as ATM at 622 Mbps, 1.2 and 2.4 Gbps.

- **13 dB Minimum** – Improvement in Near End Crosstalk vs. Category 5e NEXT.
- **.25 ns/meter Maximum Skew** – Tightly controlled propagation delay.
- **Enhanced Performance Parameters** – All electrical characteristics proven to exceed TIA/EIA 568-B.2-1 and ISO/IEC 11801 Category 6 requirements: NEXT and ELFEXT (Pair-to-Pair and Power Sum), Insertion Loss, Return Loss, and Delay Skew.
- This cable and/or its manufacture are covered by US Patent Nos. 6,596,944, 6,074,503 and 5,424,491.

\* Warranty available with MAC and SystemMATE® programs.

## Electrical Characteristics

### STANDARDS:

EXCEEDS TIA/EIA 568-B.2-1 CAT 6, ISO/IEC 11801:2002 CAT 6, & IEC 61156-5 CAT 6 HORIZONTAL CABLE

### CONDUCTOR DCR:

8.9  $\Omega$ /100m (27.1  $\Omega$ /Mft) MAX

### DCR UNBALANCE:

3% MAX

### MUTUAL CAPACITANCE:

46 pF/m (14 pF/ft) NOM

### CAPACITANCE UNBALANCE

**PAIR/GROUND:**  
66 pF/100m (200 pF/Mft) MAX

### CHARACTERISTIC IMPEDANCE:

100  $\Omega$   $\pm$  15% (1-350 MHz)

### INPUT IMPEDANCE:

100  $\Omega$   $\pm$  15% (1-100 MHz)  
100  $\Omega$   $\pm$  18% (>100-200 MHz)  
100  $\Omega$   $\pm$  22% (>200-350 MHz)

### PROPAGATION DELAY:

534 + 36/ $\sqrt{f}$  ns/100m MAX

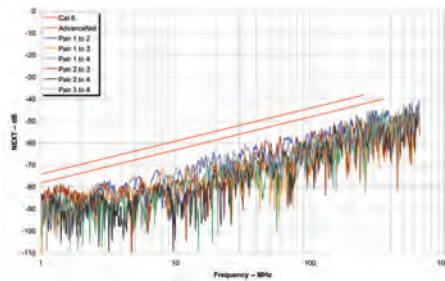
### DELTA DELAY (SKEW):

25 ns/100m MAX

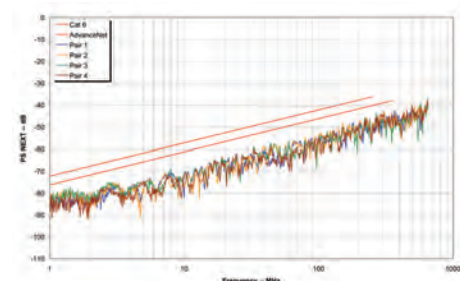
### NOMINAL VELOCITY

**OF PROPAGATION (NVP):**  
PLENUM 72%  
NON-PLENUM 68%

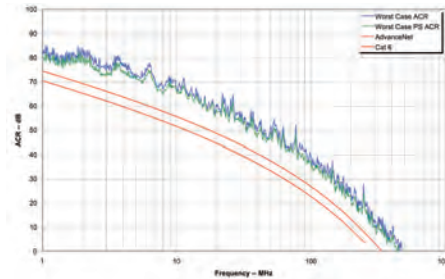
Near End Crosstalk (NEXT)



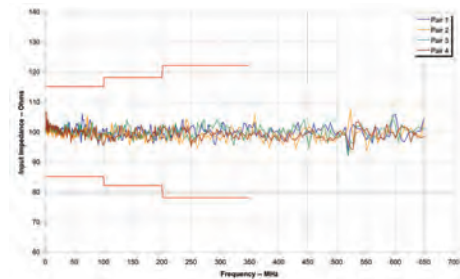
Power Sum NEXT (PS NEXT)



Worst Case ACR and Power Sum ACR



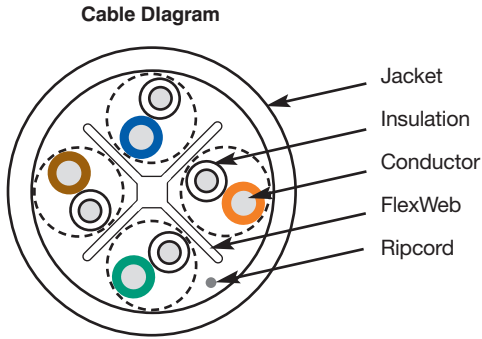
Input Impedance



Safety listed to NEC (NFPA 70)



Verified by ETL to TIA/EIA-568-B.2-1



**Jacket Colors for 4-Pair Non-Plenum**

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M56889	GREEN	M57206
BLUE	M57202	RED	M57207
PINK	M57203	ORANGE	M57208
YELLOW	M57204	BLACK	M57209
GRAY	M57205	VIOLET	M57210

**Jacket Colors for 4-Pair Plenum**

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M56905	GREEN	M57197
BLUE	M57193	RED	M57198
PINK	M57194	ORANGE	M57199
YELLOW	M57195	BLACK	M57200
GRAY	M57196	VIOLET	M57201

Custom colors available; please consult the factory.

FREQ (MHz)	INSERTION LOSS (dB/100m)		NEXT (dB/100m)		ACR (dB/100m)	PS-NEXT (dB/100m)		PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)	RL (dB)
	avg	max	avg	min	min	avg	min	min	min	min	min
.772	1.6	1.8	90	80.0	78.2	83	78.0	76.2	-	-	-
1.0	1.8	2.0	88	78.3	76.3	81	76.3	74.3	70.0	68.0	20.0
4.0	3.5	3.8	79	69.3	65.5	72	67.3	63.5	58.0	56.0	24.2
8.0	4.9	5.3	75	64.8	59.5	68	62.8	57.5	51.9	49.9	26.3
10.0	5.6	5.9	73	63.3	57.4	66	61.3	55.4	50.0	48.0	27.0
16.0	7.1	7.5	70	60.2	52.7	63	58.2	50.7	45.9	43.9	27.0
20.0	7.9	8.4	69	58.8	50.4	62	56.8	48.4	44.0	42.0	27.0
25.0	8.8	9.4	67	57.3	47.9	60	55.3	45.9	42.0	40.0	26.5
31.25	10.0	10.6	66	55.9	45.3	59	53.9	43.3	40.1	38.1	25.9
62.5	14.3	15.3	61	51.4	36.1	54	49.4	34.1	34.1	32.1	24.2
100.0	18.4	19.7	58	48.3	28.6	51	46.3	26.6	30.0	28.0	23.1
155.0	23.4	25.0	55	45.4	20.4	48	43.4	18.4	26.2	24.2	22.0
200.0	27.0	28.8	54	43.8	15.0	47	41.8	13.0	24.0	22.0	21.4
250.0	30.5	32.6	52	42.3	9.7	45	40.3	7.7	22.0	20.0	20.9
300.0	33.9	36.2	51	41.1	4.9	44	39.1	2.9	20.5	18.5	20.4
350.0	37.0	39.5	50	40.1	0.6	43	38.1	-	19.1	17.1	20.1
400.0	40.0	42.7	49	39.3	-	42	37.3	-	18.0	16.0	19.7
500.0	45.5	48.6	48	37.8	-	41	35.8	-	16.0	14.0	19.2
550.0	48.2	51.5	47	37.2	-	40	35.2	-	-	-	19.0
600.0	50.7	54.2	47	36.6	-	40	34.6	-	-	-	18.8
650.0	53.2	56.8	46	36.1	-	39	34.1	-	-	-	18.6

Values above 350 MHz are for engineering information only.

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Type Diameter inch mm	Weight lbs/M' kg/km	Listings
M56889 Non-Plenum	4 PAIR 23 AWG UTP	Thermoplastic	White PVC .225 5.72	30 45	C(UL)US CMR
M56905 Plenum	4 PAIR 23 AWG UTP	Dual Insulation** FEP on all 4 pairs	White ThermoPlen®* .225 5.72	33 49	C(UL)US CMP
M58414 PlenumPlus™	4 PAIR 23 AWG UTP	FEP	White Smokeguard®† FP Rated for 125° C .200 5.08	31 46	UL CMP Limited Combustible c(UL) CMP

\*Plenum rated Thermoplastic. \*\*US Patent No. 5,563,377. †Smokeguard is a registered trademark of AlphaGary. For pair colors see chart A on page 59.

**Packaging Options**

Put-Up	Package	Number Per Pallet	Pallet Size
1000 Ft.	14" Reels	36	42" x 42"
1000 Ft.	Boxes (15½"W x 11¼"D x 14¼"H)	33	45" x 48"
1000 Ft.	Reel in a Box (12¾"W x 12¾"D x 12⅞"H)	27	42" x 42"



Above part numbers are for reels only. Add "B" to end of Mohawk # for boxes, or "RB" for Reel-in-a-box packaging.



Bulk put-ups available upon request; please consult the factory.

# Category 6 UTP 6 LAN™

Tested to 550 MHz

ETL verified to TIA/EIA 568-B.2-1 Category 6.

- **20 Year Warranty\***
- **24 dB Minimum ACR @ 100 MHz** – Proven support for Gigabit Ethernet / 1000BASE-T / IEEE 802.3ab, ATM up to 155 Mbps, IEEE 802.3af Power Over Ethernet for VoIP, 100 Mbps Fast Ethernet / 100BASE-T / IEEE 802.3, ANSI.X3.263 FDDI TP-PMD, Ethernet / 10BASE-T / IEEE 802.3, 4 & 16 Mbps Token Ring / IEEE 802.5, T1/E1, xDSL, ISDN, 550 MHz Broadband Video and standards under development such as ATM at 622 Mbps, 1.2 and 2.4 Gbps.
- **With flat tape core separator** throughout the length of the cable.

- **9 dB Minimum** – Improvement in Near End Crosstalk vs. Category 5e NEXT.
- **Enhanced Performance Parameters** – All electrical characteristics proven to meet TIA/EIA 568-B.2-1 and ISO/IEC 11801 Category 6 requirements: NEXT and ELFEXT (Pair-to-Pair and Power Sum), Insertion Loss, Return Loss, and Delay Skew.
- This cable and/or its manufacture is covered by US Patent Nos. 6,998,537, 6,570,095 and 5,424,491.

\* Warranty available with MAC and SystemMATE® programs.

## Electrical Characteristics

**STANDARDS:**  
MEETS TIA/EIA 568-B.2-1 CAT 6 & ISO/IEC 11801:2002 CAT 6 HORIZONTAL CABLE

**CONDUCTOR DCR:**  
8.9  $\Omega$ /100m (27.1  $\Omega$ /Mft) MAX

**DCR UNBALANCE:**  
3% MAX

**MUTUAL CAPACITANCE:**  
46 pF/m (14 pF/ft) NOM

**CAPACITANCE UNBALANCE PAIR/GROUND:**  
66 pF/100m (200 pF/Mft) MAX

**CHARACTERISTIC IMPEDANCE:**  
100  $\Omega \pm 15\%$  (1-250 MHz)

**INPUT IMPEDANCE:**  
100  $\Omega \pm 15\%$  (1-100 MHz)  
100  $\Omega \pm 20\%$  (>100-200 MHz)  
100  $\Omega \pm 25\%$  (>200 MHz)

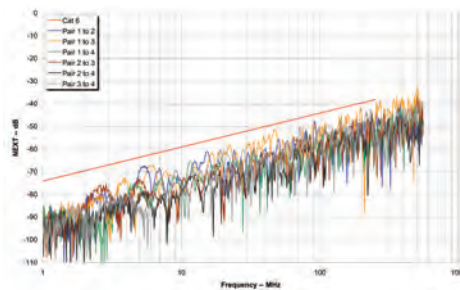
**PROPAGATION DELAY:**  
534 + 36/ $\sqrt{f}$  ns/100m MAX

**DELTA DELAY (SKEW):**  
25 ns/100m MAX

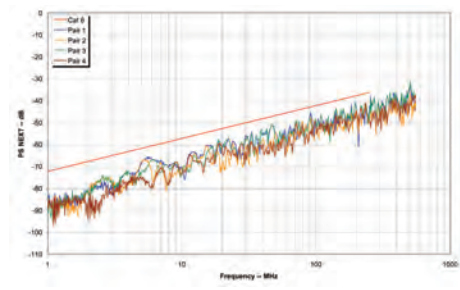
**NOMINAL VELOCITY OF PROPAGATION (NVP):**  
PLENUM 72%  
NON-PLENUM 68%

WHERE  $f$  = FREQUENCY IN MHZ  
from .772 to 250 MHz.

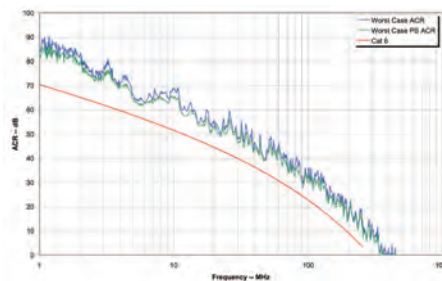
Near End Crosstalk (NEXT)



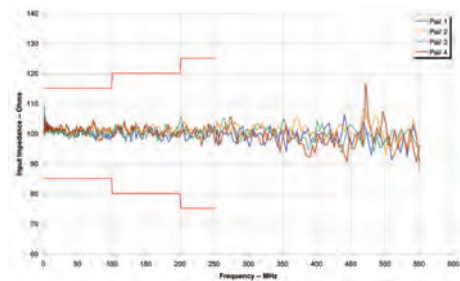
Power Sum NEXT (PS NEXT)



Worst Case ACR and Power Sum ACR



Input Impedance

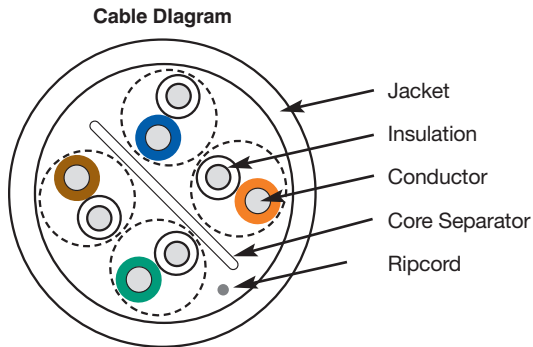


Safety listed to NEC (NFPA 70)



Verified by ETL to TIA/EIA-568-B.2-1





### Jacket Colors for 4-Pair Non-Plenum

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M58291	GREEN	M58296
BLUE	M58292	RED	M58297
PINK	M58293	ORANGE	M58298
YELLOW	M58294	BLACK	M58299
GRAY	M58295	VIOLET	M58300

### Jacket Colors for 4-Pair Plenum

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M58280	GREEN	M58286
BLUE	M58281	RED	M58287
PINK	M58282	ORANGE	M58288
YELLOW	M58283	BLACK	M58289
GRAY	M58285	VIOLET	M58290

Custom colors available; please consult the factory.

FREQ (MHz)	INSERTION LOSS (dB/100m)		NEXT (dB/100m)		ACR (dB/100m)	PS-NEXT (dB/100m)		PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)	RL (dB)
	avg	max	avg	min		avg	min				
.772	1.7	1.8	82	76.0	74.2	77	74.0	72.2	-	-	-
1.0	1.9	2.0	80	74.3	72.3	75	72.3	70.3	67.8	64.8	20.0
4.0	3.6	3.8	71	65.3	61.5	66	63.3	59.5	55.8	52.8	23.0
8.0	5.1	5.3	67	60.8	55.5	62	58.8	53.5	49.7	46.7	24.5
10.0	5.7	6.0	65	59.3	53.3	60	57.3	51.3	47.8	44.8	25.0
16.0	7.3	7.6	62	56.2	48.6	57	54.2	46.6	43.7	40.7	25.0
20.0	8.1	8.5	61	54.8	46.3	56	52.8	44.3	41.8	38.8	25.0
25.0	9.1	9.5	59	53.3	43.8	54	51.3	41.8	39.8	36.8	24.3
31.25	10.2	10.7	58	51.9	41.2	53	49.9	39.2	37.9	34.9	23.6
62.5	14.8	15.4	53	47.4	32.0	48	45.4	30.0	31.9	28.9	21.5
100.0	19.0	19.8	50	44.3	24.5	45	42.3	22.5	27.8	24.8	20.1
155.0	24.2	25.2	47	41.4	16.2	42	39.4	14.2	24.0	21.0	18.8
200.0	27.8	29.0	46	39.8	10.8	41	37.8	8.8	21.8	18.8	18.0
250.0	31.5	32.8	44	38.3	5.5	39	36.3	3.5	19.8	16.8	17.3
300.0	35.0	36.4	43	37.1	0.7	38	35.1	-	18.3	15.3	16.8
350.0	38.2	39.8	42	36.1	-	37	34.1	-	16.9	13.9	16.3
400.0	41.3	43.0	41	35.3	-	36	33.3	-	-	-	15.9
500.0	47.0	48.9	40	33.8	-	35	31.8	-	-	-	15.2
550.0	49.7	51.8	39	33.2	-	34	31.2	-	-	-	14.9

Values above 250 MHz are for engineering information only.

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Type Diameter		Weight		Listings
			inch	mm	lbs/M'	kg/km	
M58291 Non-Plenum	4 PAIR 24 AWG UTP	Thermoplastic	White PVC .216	5.49	26	37	C(UL)US CMR
M58280 Plenum	4 PAIR 24 AWG UTP	Dual Insulation** FEP on all 4 pairs	White ThermoPlen®* .208	5.28	29	43	C(UL)US CMP

\*Plenum rated Thermoplastic. \*\* US Patent No. 5,563,377. For pair colors see chart A on page 59.

### Packaging Options

Put-Up	Package	Number Per Pallet	Pallet Size
1000 Ft.	14" Reels	36	42" x 42"
1000 Ft.	Boxes (15½"W x 11¼"D x 14¼"H)	33	45" x 48"
1000 Ft.	Reel in a Box (12¾"W x 12¾"D x 12⅞"H)	27	42" x 42"



Above part numbers are for reels only. Add "B" to end of Mohawk # for boxes, or "RB" for Reel-in-a-box packaging.

Bulk put-ups available upon request; please consult the factory.



# Category 5E+ UTP MegaLAN®

Tested to 400 MHz

MegaLAN is ETL verified to Category 5e.

- **20 Year Warranty\***
- **20 dB Minimum ACR @ 100 MHz** – Proven support for Gigabit Ethernet / 1000BASE-T / IEEE 802.3ab, ATM up to 155 Mbps, 100 Mbps Fast Ethernet / 100BASE-T / IEEE 802.3, ANSI.X3.263 FDDI TP-PMD, Ethernet / 10BASE-T / IEEE 802.3, 4 & 16 Mbps Token Ring / IEEE 802.5, T1/E1, xDSL, ISDN, 550 MHz Broadband Video and standards under development such as ATM at 622 Mbps and 1.2 Gbps.
- **5 dB Minimum** – Improvement in Near End Crosstalk vs. standard Category 5e NEXT.
- **Meets Return Loss** – Category 5e Standard.
- **.25 ns/meter Maximum Skew** – Tightly controlled propagation delay.

- **Enhanced Performance Parameters** – All electrical characteristics proven to exceed TIA/EIA 568-B Category 5e requirements: Near End Crosstalk, Characteristic Impedance, Insertion Loss, and Delay Skew. Also exceeds TIA/EIA 568-B.2 Category 5e requirements: Power Sum NEXT, and Far End Crosstalk – ELFEXT and PS-ELFEXT.
- **Engineered for Future Applications** – More than 10 years of service and still going strong, MegaLAN has a proven track record of successful installations.
- **User Friendly** – No special stripping tools. No waiting for deliveries. No compromises. Proven Performance all the way.
- This cable and/or its manufacture are covered by US Patent No. 5,424,491.

\* Warranty available with MAC and SystemMATE® programs.

## Electrical Characteristics

### STANDARDS:

EXCEEDS TIA/EIA 568-B.2 CAT 5e & ISO/IEC 11801:2002 CAT 5 HORIZONTAL CABLE

### CONDUCTOR DCR:

8.9  $\Omega$ /100m (27.1  $\Omega$ /Mft) MAX

### DCR UNBALANCE:

3% MAX

### MUTUAL CAPACITANCE:

46 pF/m (14 pF/ft) NOM

### CAPACITANCE UNBALANCE

PAIR/GROUND:  
66 pF/100m (200 pF/Mft) MAX

### CHARACTERISTIC IMPEDANCE:

100  $\Omega$   $\pm$  15% (1-400 MHz)

### INPUT IMPEDANCE:

100  $\Omega$   $\pm$  15% (1-100 MHz)

100  $\Omega$   $\pm$  22% (>100-200 MHz)

### PROPAGATION DELAY:

506 + 36/ $\sqrt{f}$  ns/100m MAX

### DELTA DELAY (SKEW):

25 ns/100m MAX

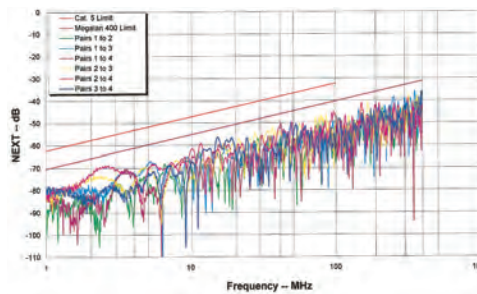
### NOMINAL VELOCITY

OF PROPAGATION (NVP):

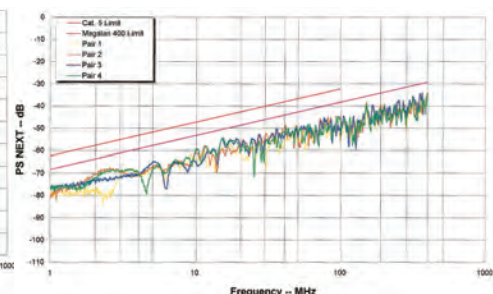
PLENUM 72%

NON-PLENUM 68%

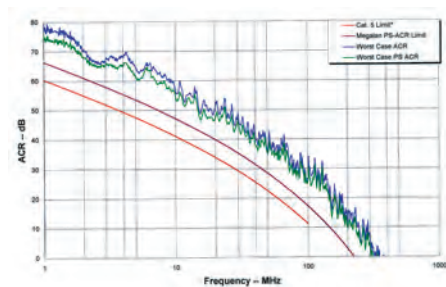
Near End Crosstalk (NEXT)



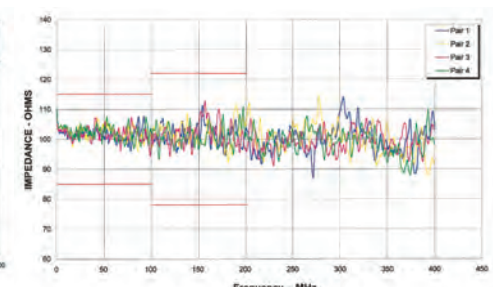
Power Sum NEXT (PS NEXT)



Worst Case ACR and Power Sum ACR



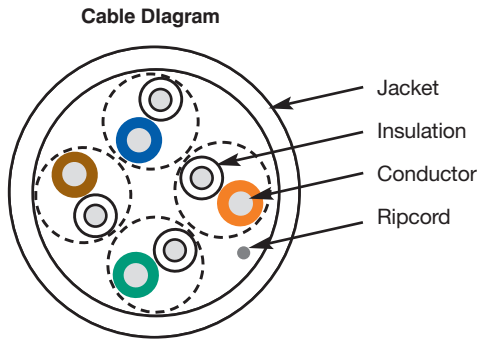
Input Impedance



Safety listed to NEC (NFPA 70)



Verified by ETL to TIA/EIA-568-B.2



MOHAWK MEGALAN™ CAT. 5E

**Jacket Colors for 4-Pair Non-Plenum**

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M55989	VIOLET	M57048
BLUE	M56167	ORANGE	M56954
PINK	M56094	RED	M56670
YELLOW	M56095	BLACK	M57129
GREEN	M56165	GRAY	M56746

**Jacket Colors for 4-Pair Plenum**

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M55988	RED	M56072
BLUE	M56168	ORANGE	M56876
PINK	M56092	BLACK	M56877
YELLOW	M56093	VIOLET	M56878
GRAY	M56882	GREEN	M56166

Custom colors available; please consult the factory.

FREQ (MHz)	INSERTION LOSS			NEXT		ACR	PS-NEXT		PS-ACR	ELFEXT	PS-ELFEXT	RL
	avg	max	max	avg	min	min	avg	min	min	min	min	min
.772	1.6	1.8	5.5	82	72.0	72.2	75	70.0	68.2	-	-	-
1.0	1.8	2.0	6.2	80	70.3	70.3	73	68.3	66.3	67.8	64.8	20.0
4.0	3.6	4.0	12.2	70	61.3	59.3	63	59.3	55.3	55.8	52.8	23.0
8.0	5.2	5.7	17.4	66	56.8	53.1	59	54.8	49.1	49.7	46.7	24.5
10.0	5.8	6.4	19.4	64	55.3	50.9	58	53.3	46.9	47.8	44.8	25.0
16.0	7.3	8.1	24.7	62	52.2	46.1	56	50.2	42.1	43.7	40.7	25.0
20.0	8.3	9.1	27.7	60	50.8	43.7	54	48.8	39.7	41.8	38.8	25.0
25.0	9.3	10.2	31.0	59	49.3	41.1	52	47.3	37.1	39.8	36.8	24.3
31.25	10.4	11.4	34.8	58	47.9	38.5	51	45.9	34.5	37.9	34.9	23.6
62.5	15.1	16.4	50	54	43.4	29.0	47	41.4	25.0	31.9	28.9	21.5
100.0	19.6	21.0	64	50	40.3	21.3	43	38.3	17.3	27.8	24.8	20.1
155.0	25.0	26.6	81	48	37.4	12.9	41	35.4	8.9	24.0	21.0	18.8
200.0	28.8	30.5	93	46	35.8	7.3	40	33.8	3.3	21.8	18.8	18.0
250.0	32.8	34.4	105	45	34.3	1.9	38	32.3	-	19.8	16.8	17.3
300.0	36.5	38.0	116	44	33.1	-	37	31.1	-	-	-	16.8
350.0	40.0	41.4	126	43	32.1	-	36	30.1	-	-	-	16.3
400.0	43.2	44.6	136	42	31.3	-	35	29.3	-	-	-	15.9

Values above 250 MHz are for engineering information only.

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Type Diameter inch mm	Weight lbs/M' kg/km	Listings
M55989 Non-Plenum	4 PAIR 24 AWG UTP	Thermoplastic	White PVC .190 4.83	20 30	C(UL)US CMR
M55988 Plenum	4 PAIR 24 AWG UTP	Dual Insulation** FEP on all 4 pairs	White ThermoPlen®* .190 4.83	24 36	C(UL)US CMP
M57113 PlenumPlus™	4 PAIR 24 AWG UTP	FEP	White Smokeguard®† FP Rated for 125° C .175 4.45	26 39	UL, CMP Limited Combustible c(UL) CMP

\*Plenum rated Thermoplastic. \*\*US Patent No. 5,563,377. †Smokeguard is a registered trademark of AlphaGary. For pair colors see chart A on page 59.

**Packaging Options**

Put-Up	Package	Number Per Pallet	Pallet Size
1000 Ft.	12" Reels	60	38" x 48"
1000 Ft.	Boxes (13 <sup>7</sup> / <sub>8</sub> "W x 10 <sup>1</sup> / <sub>4</sub> "D x 12 <sup>1</sup> / <sub>2</sub> "H)	36	44" x 44"
1000 Ft.	Reel in a Box (11 <sup>7</sup> / <sub>8</sub> "W x 11 <sup>3</sup> / <sub>8</sub> "D x 11 <sup>7</sup> / <sub>8</sub> "H)	36	38" x 48"



Above part numbers are for reels only. Add "B" to end of Mohawk # for boxes, or "RB" for Reel-in-a-box packaging.

Bulk put-ups available upon request; please consult the factory.

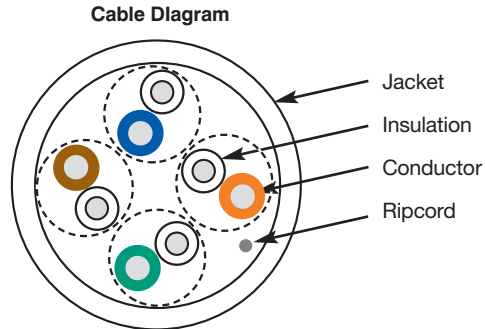




# Category 5e UTP 5e LAN<sup>®</sup>

Tested to 200 MHz

- **15 Year Warranty\***
- **14 dB Minimum ACR @ 100 MHz** – Proven support for Gigabit Ethernet / 1000BASE-T / IEEE 802.3ab, ATM up to 155 Mbps, 100 Mbps Fast Ethernet / 100BASE-T / IEEE 802.3, ANSI.X3.263 FDDI TP-PMD, Ethernet / 10BASE-T / IEEE 802.3, 4 & 16 Mbps Token Ring / IEEE 802.5, T1/E1, xDSL, ISDN, 550 MHz Broadband Video and standards under development such as ATM at 622 Mbps.
- **4 dB Minimum** – Improvement in Near End Crosstalk vs. TIA/EIA 568-B Category 5.
- **ETL Verified to Category 5e.**
- **.45 ns/meter Maximum Skew** – Tightly controlled propagation delay.
- **Engineered for Future Applications** – Tested for all



parameters specified...for 4 pair UTP in TIA/EIA 568-B.2, including PS-NEXT, Return Loss, ELFEXT and PS-ELFEXT.

- This cable and/or its manufacture are covered by US Patent No. 5,424,491.

\* Warranty available with MAC and SystemMATE<sup>®</sup> programs.

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Type Diameter		Weight		Listings
			inch	mm	lbs/M'	kg/km	
M57554 Non-Plenum	4 PAIR 24 AWG UTP	Thermoplastic	White PVC .190	4.83	20	30	C(UL)US CMR
M57547 Plenum	4 PAIR 24 AWG UTP	Dual Insulation** FEP on all 4 pairs	White ThermoPlen <sup>®</sup> * .180	4.57	23	34	C(UL)US CMP
M58104 PlenumPlus <sup>™</sup>	4 PAIR 24 AWG UTP	FEP	White Smokeguard <sup>®</sup> † FP Rated for 125° C .170	4.32	24	36	UL, CMP Limited Combustible c(UL) CMP

\*Plenum rated Thermoplastic. \*\*US Patent No. 5,563,377. †Smokeguard is a registered trademark of AlphaGary. For pair colors see chart A on page 59.

### Jacket Colors for 4-Pair Non-Plenum

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M57554	GREEN	M57557
BLUE	M57553	RED	M58008
PINK	M57555	ORANGE	M58009
YELLOW	M57556	BLACK	M58010
GRAY	M57552	VIOLET	M58007

### Jacket Colors for 4-Pair Plenum

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M57547	GREEN	M57551
BLUE	M57546	RED	M57887
PINK	M57548	ORANGE	M57924
YELLOW	M57550	BLACK	M57936
GRAY	M57545	VIOLET	M57761

Custom colors available; please consult the factory.

Above part numbers are for reels only. Add "B" to end of Mohawk # for boxes, or "RB" for Reel-in-a-box packaging.

FREQ (MHz)	INSERTION LOSS			NEXT		ACR (dB/100m)	PS-NEXT		PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)	RL (dB)
	(dB/100m)	(dB/mft)	(dB/mft)	(dB/100m)	(dB/100m)		(dB/100m)	(dB/100m)				
.772	avg 1.6	max 1.8	max 5.5	avg 79	min 68.0	min 66.2	avg 70	min 64.0	min 62.2	min -	min -	min -
1.0	1.8	2.0	6.3	77	66.3	64.3	68	62.3	60.3	63.8	60.8	20.0
4.0	3.8	4.1	13	68	57.3	53.2	57	53.3	49.2	51.8	48.8	23.0
8.0	5.4	5.8	18	64	52.8	47.0	54	48.8	43.0	45.7	42.7	24.5
10.0	6.0	6.5	20	62	51.3	44.8	52	47.3	40.8	43.8	40.8	25.0
16.0	7.6	8.2	25	60	48.2	40.0	50	44.2	36.0	39.7	36.7	25.0
20.0	8.6	9.3	28	58	46.8	37.5	48	42.8	33.5	37.8	34.8	25.5
25.0	9.7	10.4	32	57	45.3	34.9	47	41.3	30.9	35.8	32.8	24.3
31.25	10.9	11.7	36	56	43.9	32.2	46	39.9	28.2	33.9	30.9	23.6
62.5	15.8	17.0	52	52	39.4	22.4	42	35.4	18.4	27.9	24.9	21.5
100.0	20.5	22.0	67	48	36.3	14.3	38	32.3	10.3	23.8	20.8	20.1
155.0	26.2	28.1	86	45	33.4	5.3	35	29.4	1.3	20.0	17.0	18.8
200.0	30.2	32.4	99	43	31.8	-	33	27.8	-	17.8	14.8	18.0

Values above 100 MHz are for engineering information only.



Safety listed to NEC (NFPA 70)

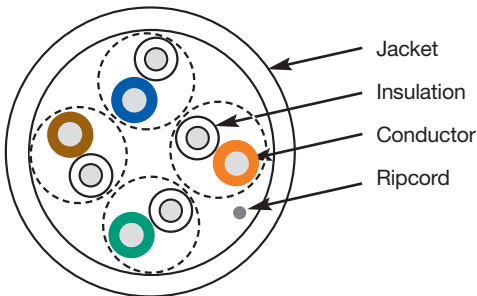


Verified by ETL to TIA/EIA-568-B.2



# UTP Category 5 & 3

Cable Diagram



## Category 5 UTP

- **14 dB Minimum ACR @ 100 MHz** – Proven support for 155 Mbps ATM, 100 Mbps Fast Ethernet, 100 Mbps TP-PMD, 100VG-AnyLAN, 550 MHz Broadband Video and standards under development such as ATM at 622 Mbps.
- **4 dB Minimum** – Improvement in Near End Crosstalk vs. TIA-EIA 568-B Category 5.
- **.25 ns/meter Maximum Skew** – Tightly controlled propagation delay.
- **Engineered for Future Applications** – Tested for parameters not specified for Category 5: 4 pair UTP in TIA.EIA 568-B.2, such as PS-NEXT, ACR, RL, and ELFEXT.

Mohawk Part No.	Cable Type	Dielectric Type	Shield Type	Jacket Type Diameter		Weight		Listings
				inch	mm	lbs/M'	kg/km	

### Category 5

M54568 Non-Plenum	4 PAIR 24 AWG UTP	Thermoplastic	None	Lt. Gray PVC .190	4.83	20	30	C(UL)US CMR
M54785 Non-Plenum	Dual 4 Pair UTP/UTP	Thermoplastic	None	Lt. Gray PVC .190x.395	4.83x10.03	43	64	C(UL)US CMR
M54998 Plenum	4 PAIR 24 AWG UTP	Dual Insulation** FEP on all 4 pairs	None	Gray ThermoPlen®* .180	4.57	23	34	C(UL)US CMP
M55477 Plenum	Dual 4 Pair UTP/UTP	Dual Insulation** FEP on all 4 pairs	None	Gray ThermoPlen®* .180x.375	4.57x9.53	45	67	C(UL)US CMP

### Category 3

M52995 Non-Plenum	4 PAIR 24 AWG UTP	Thermoplastic	None	Lt. Gray PVC .161	4.09	21	31	C(UL)US CMR
M55760 Plenum	4 PAIR 24 AWG UTP	ThermoPlen®*	None	Gray ThermoPlen®* .161	4.09	21	31	C(UL)US CMP

\*Plenum rated Thermoplastic. \*\*US Patent No. 5,563,377. For pair colors see chart A on page 59.  
Note: Also available in LSOH cable versions.

#### Jacket Colors for Category 5 4-Pair Non-Plenum

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M55995	RED	M56009
BLUE	M55436	ORANGE	M55721
PINK	M55959	BLACK	M56230
YELLOW	M55980	VIOLET	M56210
GRAY	M54568	GREEN	M55994

#### Jacket Colors for Category 5 4-Pair Plenum

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M55530	RED	M56256
BLUE	M55586	ORANGE	M55902
PINK	M55837	BLACK	M55901
YELLOW	M55915	VIOLET	M55900
GRAY	M54998	GREEN	M55916

Custom colors available; please consult the factory.  
Above part numbers are for reels only. Add "B" to end of Mohawk # for boxes, or "RB" for Reel-in-a-box packaging.



Safety listed to NEC (NFPA 70)



Verified by ETL to TIA/EIA-568-B.2



# Category 6 ScTP AdvanceNet®

Tested to 650 MHz

AdvanceNet is screened twisted pair (ScTP or FTP) cable tested to 650 MHz that is third-party verified to Category 6.

Now with FlexWeb® construction, the AdvanceNet cable isolates the pairs throughout the length of the cable, while providing a round installer-friendly cable.

- **25 Year Warranty\***
- **24 dB Minimum ACR @ 100 MHz** – Proven support for Gigabit Ethernet / 1000BASE-T / IEEE 802.3ab, ATM up to 155 Mbps, 100 Mbps Fast Ethernet / 100BASE-T / IEEE 802.3, ANSI.X3.263 FDDI TP-PMD, Ethernet / 10BASE-T / IEEE 802.3, 4 & 16 Mbps Token Ring / IEEE 802.5, T1/E1, xDSL, ISDN, 550 MHz Broadband Video and standards under development such as ATM at 622 Mbps, 1.2 and 2.4 Gbps.
- **9 dB Minimum** – Improvement in Near End Crosstalk vs. standard Category 5e NEXT.

- **.30 ns/meter Maximum Skew** – Tightly controlled propagation delay.
- 100% insulation (plenum).
- **Enhanced Performance Parameters** – All electrical characteristics proven to exceed TIA/EIA 568-B.2-1 and ISO/IEC 11801 Category 6 requirements: NEXT and ELFEXT (Pair-to-Pair and Power Sum), Insertion Loss, Return Loss, and Delay Skew.
- **Use All Shielded Components for a Shielded or Screened System** – Mohawk strongly recommends the use of shielded or screened connecting hardware, and all shielded or screened cords: patch, work area and equipment cords should be used throughout the structured cabling system.
- This cable and/or its manufacture are covered by US Patent Nos. 6,596,944, 6,074,503 and 5,424,491.

\*Warranty available with MAC and SystemMATE® programs.

## Electrical Characteristics

**STANDARDS:**  
EXCEEDS TIA/EIA 568-B.2-1 CAT 6 & ISO/IEC 11801:2002 CAT 6 HORIZONTAL CABLE

**CONDUCTOR DCR:**  
8.9 Ω/100m (27.1 Ω/Mft) MAX

**DCR UNBALANCE:**  
3% MAX

**MUTUAL CAPACITANCE:**  
46 pF/m (14 pF/ft) NOM

**CAPACITANCE UNBALANCE PAIR/GROUND:**  
66 pF/100m (200 pF/Mft) MAX

**CHARACTERISTIC IMPEDANCE:**  
100 Ω ± 15% (1-300 MHz)

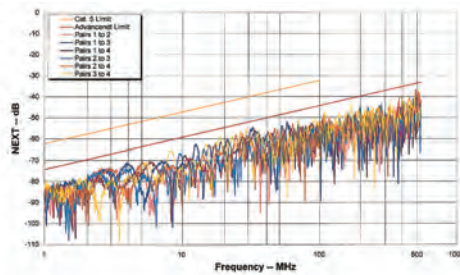
**INPUT IMPEDANCE:**  
100 Ω ± 15% (1-100 MHz)  
100 Ω ± 22% (>100-200 MHz)  
100 Ω ± 32% (>200-350 MHz)

**PROPAGATION DELAY:**  
534 + 36/√f ns/100m MAX

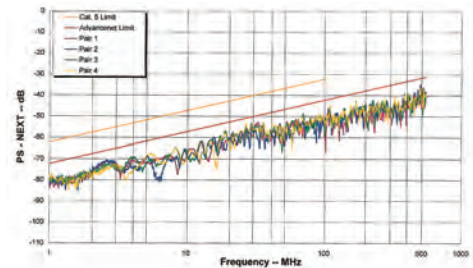
**DELTA DELAY (SKEW):**  
30 ns/100m MAX

**NOMINAL VELOCITY OF PROPAGATION (NVP):**  
PLENUM 72%  
NON-PLENUM 68%

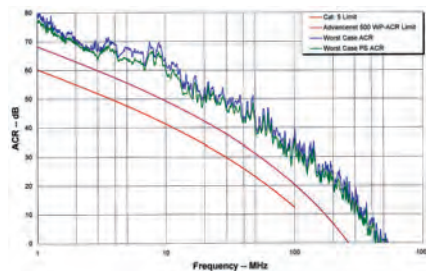
Near End Crosstalk (NEXT)



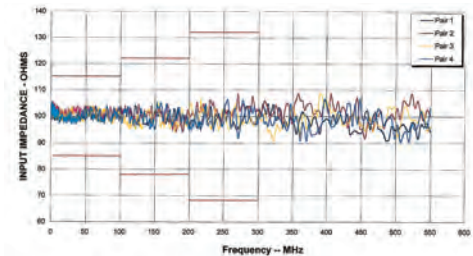
Power Sum NEXT (PS NEXT)



Worst Case ACR and Power Sum ACR



Input Impedance

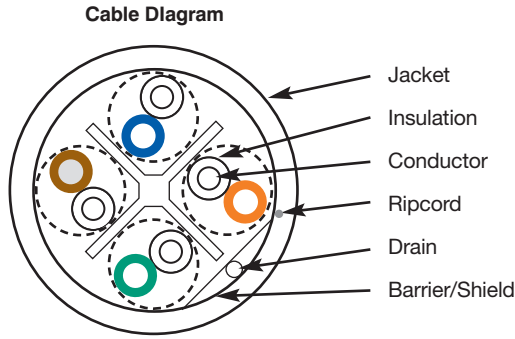


Safety listed to NEC (NFPA 70)



Verified by ETL to TIA/EIA-568-B.2-1





**Jacket Colors for 4-Pair Non-Plenum**

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M58155	GREEN	M58160
BLUE	M58156	RED	M58161
PINK	M58157	ORANGE	M58162
YELLOW	M58158	BLACK	M58163
GRAY	M58159	VIOLET	M58164

**Jacket Colors for 4-Pair Plenum**

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M58175	GREEN	M58180
BLUE	M58176	RED	M58181
PINK	M58177	ORANGE	M58182
YELLOW	M58178	BLACK	M58183
GRAY	M58179	VIOLET	M58184

Custom colors available; please consult the factory.

FREQ (MHz)	INSERTION LOSS (dB/100m)		NEXT (dB/1000ft)		ACR (dB/100m)	PS-NEXT (dB/100m)		PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)	RL (dB/100m)
	avg	max	avg	min	min	avg	min	min	min	min	min
.772	1.7	1.8	86	76.0	74.2	80	74.0	72.2	-	-	-
1.0	1.9	2.0	82	74.3	72.3	75	72.3	70.3	70.0	68.0	20.0
4.0	3.6	3.8	73	65.3	61.5	65	63.3	59.5	58.0	56.0	23.0
8.0	5.0	5.3	69	60.8	55.5	61	58.8	53.5	51.9	49.9	24.5
10.0	5.6	6.0	67	59.3	53.3	60	57.3	51.3	50.0	48.0	25.0
16.0	7.1	7.6	66	56.2	48.6	58	54.2	46.6	45.9	43.9	25.0
20.0	7.9	8.5	64	54.8	46.3	56	52.8	44.3	44.0	42.0	25.0
25.0	8.9	9.5	63	53.3	43.8	54	51.3	41.8	42.0	40.0	24.3
31.25	10.0	10.7	62	51.9	41.2	53	49.9	39.2	40.1	38.1	23.6
62.5	14.4	15.4	58	47.4	32.0	49	45.4	30.0	34.1	32.1	21.5
100.0	18.5	19.8	54	44.3	24.5	45	42.3	22.5	30.0	28.0	20.1
155.0	23.6	25.2	52	41.4	16.2	43	39.4	14.2	26.2	24.2	18.8
200.0	27.1	29.0	50	39.8	10.8	42	37.8	8.8	24.0	22.0	18.0
250.0	30.7	32.8	49	38.3	5.5	40	36.3	3.5	22.0	20.0	17.3
300.0	34.0	36.4	48	37.1	0.7	39	35.1	-	20.5	18.5	16.8
350.0	37.2	39.8	47	36.1	-	38	34.1	-	19.1	17.1	16.3
400.0	40.2	43.0	46	35.3	-	37	33.3	-	-	-	15.9
500.0	45.7	48.9	45	33.8	-	36	31.8	-	-	-	15.2
550.0	48.4	51.8	44	33.2	-	35	31.2	-	-	-	14.9
600.0	51.0	54.5	43	32.6	-	35	30.6	-	-	-	14.7
650.0	53.5	57.2	42	32.1	-	35	30.1	-	-	-	14.4

Values above 350 MHz are for engineering information only.

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Type Diameter inch mm	Weight lbs/M' kg/km	Listings
M58155 Non-Plenum	4 PAIR 23 AWG ScTP	Thermoplastic	White PVC .265 6.73	44 65	C(UL)US CMR
M58175 Plenum	4 PAIR 23 AWG ScTP	FEP	White ThermoPlen®* .255 6.48	49 73	C(UL)US CMP

\*Plenum rated Thermoplastic. For pair colors see chart A on page 59.



# Category 5E+ ScTP MegaLAN®

Tested to 400 MHz

Category 5E+ cable in a screened twisted pair (ScTP or FTP) design, consisting of an overall tape/drain shield.

MegaLAN ScTP is ETL verified to Category 5e.

- **20 Year Warranty\***
- **20 dB Minimum ACR @ 100 MHz** – Proven support for Gigabit Ethernet / 1000BASE-T / IEEE 802.3ab, ATM up to 155 Mbps, 100 Mbps Fast Ethernet / 100BASE-T / IEEE 802.3, ANSI.X3.263 FDDI TP-PMD, Ethernet / 10BASE-T / IEEE 802.3, 4 & 16 Mbps Token Ring / IEEE 802.5, T1/E1, xDSL, ISDN, 550 MHz Broadband Video and standards under development such as ATM at 622 Mbps and 1.2 Gbps.
- **5 dB Minimum** – Improvement in Near End Crosstalk vs. standard Category 5e NEXT.
- **.30 ns/meter Maximum Skew** – Tightly controlled propagation delay.
- 100% insulation (plenum).

- **Enhanced Performance Parameters** – All electrical characteristics proven to exceed TIA/EIA 568-B Category 5e requirements: Near End Crosstalk, Characteristic Impedance, Insertion loss and Delay Skew. Also exceeds TIA/EIA 568-B.2 Category 5e requirements: Power Sum NEXT, Return Loss, and Far End Crosstalk – ELFEXT and PS-ELFEXT.
- **Engineered for Future Applications** – Where cabling is to be installed in a high external noise location. This could be in the path of radar or next to a telecomm or a broadcast transmission point. Or is security an issue? When quality cable is properly installed, grounded, and tested, shielded cable provides measurably lower RF emissions.
- **Use All Shielded Components for a Shielded or Screened System** – Mohawk strongly recommends the use of shielded or screened connecting hardware, and all shielded or screened cords: patch, work area and equipment cords should be used throughout the structured cabling system.
- This cable and/or its manufacture are covered by US Patent No. 5,424,491.

\* Warranty available with MAC and SystemMATE® programs.

## Electrical Characteristics

### STANDARDS:

EXCEEDS TIA/EIA 568-B.2 CAT 5e & ISO/IEC 11801:2002 CAT 5 HORIZONTAL CABLE

### CONDUCTOR DCR:

8.9  $\Omega$ /100m (27.1  $\Omega$ /Mft) MAX

### DCR UNBALANCE:

3% MAX

### MUTUAL CAPACITANCE:

46 pF/m (14 pF/ft) NOM

### CAPACITANCE UNBALANCE

PAIR/GROUND:  
66 pF/100m (200 pF/Mft) MAX

### CHARACTERISTIC IMPEDANCE:

100  $\Omega \pm 15\%$  (1-400 MHz)

### INPUT IMPEDANCE:

100  $\Omega \pm 15\%$  (1-100 MHz)  
100  $\Omega \pm 22\%$  (>100-200 MHz)

### PROPAGATION DELAY:

506 +  $36/\sqrt{f}$  ns/100m MAX

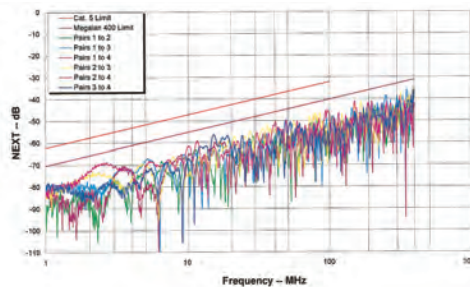
### DELTA DELAY (SKEW):

30 ns/100m MAX

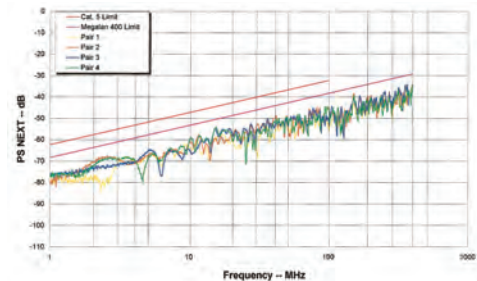
### NOMINAL VELOCITY

OF PROPAGATION (NVP):  
PLENUM 72%  
NON-PLENUM 68%

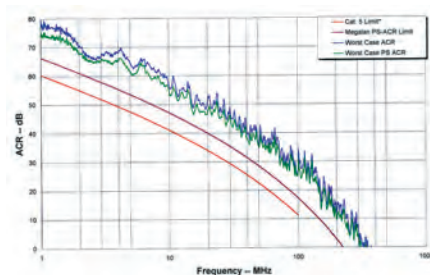
Near End Crosstalk (NEXT)



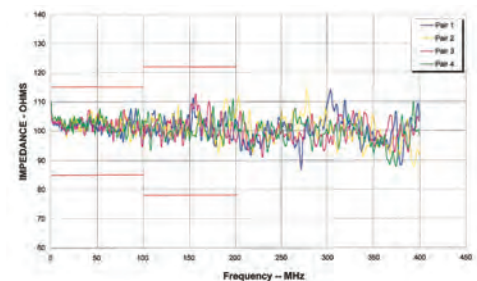
Power Sum NEXT (PS NEXT)



Worst Case ACR and Power Sum ACR



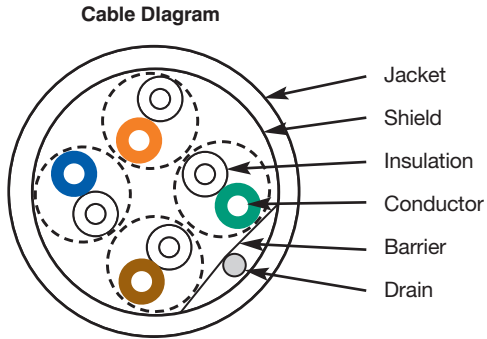
Input Impedance



Safety listed to NEC (NFPA 70)



Verified by ETL to TIA/EIA-568-B.2



**Jacket Colors for 4-Pair Non-Plenum**

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M55987	GREEN	M57374
BLUE	M57370	RED	M57375
PINK	M57371	ORANGE	M57376
YELLOW	M57372	BLACK	M57377
GRAY	M57373	VIOLET	M57378

**Jacket Colors for 4-Pair Plenum**

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M55986	RED	M57364
BLUE	M57360	ORANGE	M57365
PINK	M57322	BLACK	M57366
YELLOW	M57361	VIOLET	M57367
GRAY	M57362	GREEN	M57363

Custom colors available; please consult the factory.

FREQ (MHz)	INSERTION LOSS			NEXT		ACR	PS-NEXT		PS-ACR	ELFEXT	PS-ELFEXT	RL
	avg	max	max	avg	min	min	avg	min	min	min	min	min
	(dB/100m)	(dB/1000ft)	(dB/1000ft)	(dB/100m)	(dB/100m)	(dB/100m)	(dB/100m)	(dB/100m)	(dB/100m)	(dB/100m)	(dB/100m)	(dB)
.772	1.6	1.8	5.5	82	72.0	72.2	75	70.0	68.2	—	—	—
1.0	1.8	2.0	6.2	80	70.3	70.3	73	68.3	66.3	67.8	64.8	20.0
4.0	3.6	4.0	12.2	70	61.3	59.3	63	59.3	55.3	55.8	52.8	23.0
8.0	5.2	5.7	17.4	66	56.8	53.1	59	54.8	49.1	49.7	46.7	24.5
10.0	5.8	6.4	19.4	64	55.3	50.9	58	53.3	46.9	47.8	44.8	25.0
16.0	7.3	8.1	24.7	62	52.2	46.1	56	50.2	42.1	43.7	40.7	25.0
20.0	8.3	9.1	27.7	60	50.8	43.7	54	48.8	39.7	41.8	38.8	25.0
25.0	9.3	10.2	31.0	59	49.3	41.1	52	47.3	37.1	39.8	36.8	24.3
31.25	10.4	11.4	34.8	58	47.9	38.5	51	45.9	34.5	37.9	34.9	23.6
62.5	15.1	16.4	50	54	43.4	29.0	47	41.4	25.0	31.9	28.9	21.5
100.0	19.6	21.0	64	50	40.3	21.3	43	38.3	17.3	27.8	24.8	20.1
155.0	25.0	26.6	81	48	37.4	12.9	41	35.4	8.9	24.0	21.0	18.8
200.0	28.8	30.5	93	46	35.8	7.3	40	33.8	3.3	21.8	18.8	18.0
250.0	32.8	34.4	105	45	34.3	1.9	38	32.3	—	19.8	16.8	17.3
300.0	36.5	38.0	116	44	33.1	—	37	31.1	—	—	—	16.8
350.0	40.0	41.4	126	43	32.1	—	36	30.1	—	—	—	16.3
400.0	43.2	44.6	136	42	31.3	—	35	29.3	—	—	—	15.9

Values above 250 MHz are for engineering information only.

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Type Diameter		Weight		Listings
			inch	mm	lbs/M'	kg/km	
M55987 Non-Plenum	4 PAIR 24 AWG ScTP	Thermoplastic	White PVC .245	6.22	32	48	C(UL)US CMR
M55986 Plenum	4 PAIR 24 AWG ScTP	FEP	White ThermoPlen®* .224	5.69	33	49	C(UL)US CMP

\*Plenum rated Thermoplastic. For pair colors see chart A on page 59.

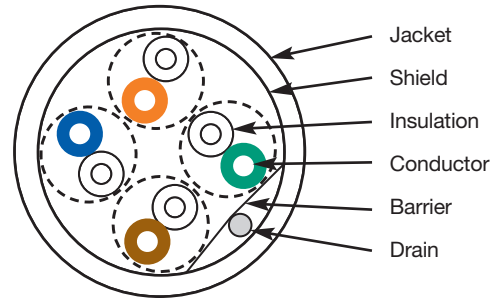




# Category 5e ScTP 5e LAN<sup>®</sup>

Tested to 200 MHz

- **15 Year Warranty\***
- **14 dB Minimum ACR @ 100 MHz** – Proven support for Gigabit Ethernet / 1000BASE-T / IEEE 802.3ab, ATM up to 155 Mbps, 100 Mbps Fast Ethernet / 100BASE-T / IEEE 802.3, ANSI.X3.263 FDDI TP-PMD, Ethernet / 10BASE-T / IEEE 802.3, 4 & 16 Mbps Token Ring / IEEE 802.5, T1/E1, xDSL, ISDN, 550 MHz Broadband Video and standards under development such as ATM at 622 Mbps.
- **4 dB Minimum** – Improvement in Near End Crosstalk vs. TIA/EIA 568-B Category 5.
- **ETL verified to Category 5e.**
- **.30 ns/meter Maximum Skew** – Tightly controlled propagation delay.



- 100% insulation (plenum).
- **Engineered for Future Applications** – Tested for all parameters specified...for 4 pair ScTP in TIA/EIA 568-B.2, including PS-NEXT, Return Loss, ELFEXT and PS-ELFEXT.

\* Warranty available with MAC and SystemMATE<sup>®</sup> programs.

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Type Diameter inch mm	Weight lbs/M* kg/km	Listings
M58145 Non-Plenum	4 PAIR 24 AWG ScTP	Thermoplastic	Lt. Gray PVC .232 5.89	30 45	C(UL)US CMR
M58144 Plenum	4 PAIR 24 AWG ScTP	FEP	Gray ThermoPlen <sup>®</sup> * .218 5.54	32 48	C(UL)US CMP

\*Plenum rated Thermoplastic. For pair colors see chart A on page 59.

### Jacket Colors for 4-Pair Non-Plenum

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M58195	GREEN	M58199
BLUE	M58196	RED	M58200
PINK	M58197	ORANGE	M58201
YELLOW	M58198	BLACK	M58202
GRAY	M58145	VIOLET	M58203

### Jacket Colors for 4-Pair Plenum

Jacket Color	Mohawk #	Jacket Color	Mohawk #
WHITE	M58185	RED	M58190
BLUE	M58186	ORANGE	M58191
PINK	M58187	BLACK	M58192
YELLOW	M58188	VIOLET	M58193
GRAY	M58144	GREEN	M58189

Custom colors available; please consult the factory.



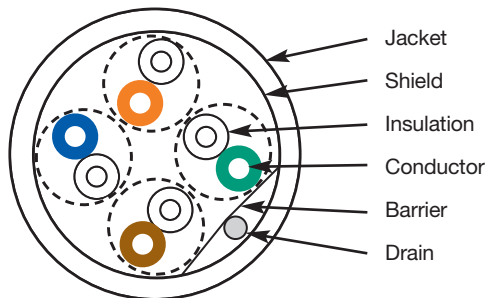
Safety listed to NEC (NFPA 70)



Verified by ETL to TIA/EIA-568-B.2



# ScTP Category 5 & 3



## Category 5 ScTP

- **Category 5 cable** in a screened twisted pair (ScTP) design, or overall shielded.
- **10 dB Minimum ACR @ 100 MHz** – Proven support for 155 Mbps ATM, 100 Mbps Fast Ethernet, 100 Mbps TP-PMD, 100VG-AnyLAN, 550 MHz Broadband Video and standards under development such as ATM at 622 Mbps.
- **.30 ns/meter Maximum Skew** – Tightly controlled propagation delay.

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Type Diameter		Weight		Listings
			inch	mm	lbs/M'	kg/km	

### Category 5

M54783 Non-Plenum	4 PAIR 24 AWG ScTP	Thermoplastic	Lt. Gray PVC .240	6.1	32	48	C(UL)US CMR
M55082 Plenum	4 PAIR 24 AWG ScTP	FEP	Gray ThermoPlen®* .230	5.84	34	51	C(UL)US CMP

### Category 3

M53639 Non-Plenum	4 PAIR 24 AWG ScTP	Thermoplastic	Lt. Gray PVC .210	5.33	29	43	C(UL)US CMR
M54708 Plenum	4 PAIR 24 AWG ScTP	ThermoPlen®**	Gray ThermoPlen®* .189	4.80	29	43	C(UL)US CMP

\*Plenum rated Thermoplastic. For pair colors see chart A on page 59.

#### Jacket Colors for Category 5 4-Pair Non-Plenum

Jacket Color	Mohawk #	Jacket Color	Mohawk #
GRAY	M54783	BLACK	M57277
BLUE	M56912	ORANGE	M57564
GREEN	M57116	WHITE	M57662
RED	M56669	VIOLET	M57850

#### Jacket Colors for Category 5 4-Pair Plenum

Jacket Color	Mohawk #	Jacket Color	Mohawk #
GRAY	M55082	GREEN	M56823
WHITE	M56760	RED	M56809
BLUE	M57009	BLACK	M57269
PINK	M58143		

Custom colors available; please consult the factory.



Safety listed to NEC (NFPA 70)



Verified by ETL to TIA/EIA-568-B.2



# High Pair Count

25 and 50 pair Category 5 and 5e cables and/or their manufacture are covered by US Patent Nos. 5,821,466 and 5,424,491.



## Power Sum Backbone Cables\*\*

**OPERATING TEMP:** -20°C to +60°C (-4°F to +140°F)  
**STORAGE TEMP:** -20°C to +75°C (-4°F to +167°F)  
**INSTALLATION TEMP:\*** 0°C to +60°C (+32°F to +140°F)

\* THE INSTALLATION TEMPERATURE REFERS TO THE TEMPERATURE OF THE CABLE WHILE BEING INSTALLED OR PULLED. DO NOT INSTALL BELOW 0°C (+32°F).

Mohawk Part No.	Cable Type	Shield Type	Jacket Type Diameter		Weight		Min Bend Radius		Listings
			inch	mm	lbs/M'	kg/km	inch	mm	

### Category 5e: Non-Plenum

M58141†	25 PAIR 24 AWG UTP	None	Lt. Gray PVC .470	11.94	119	177	4.7	119	C(UL)US CMR
M58522	50 PAIR 24 AWG UTP	None	Lt. Gray PVC .750	19.05	252	375	7.5	191	C(UL)US CMR
M58520	25 PAIR 24 AWG ScTP	O/A ALUM/PLY W/DW	Lt. Gray PVC .522	13.26	149	222	5.25	133	C(UL)US CMR

### Category 5e: Plenum

M58142†	25 PAIR 24 AWG UTP	None	Gray FEP .430	10.92	137	204	4.3	109	C(UL)US CMP
M58521	25 PAIR 24 AWG ScTP	O/A ALUM/PLY W/DW	Gray ThermoPlen®* .472	11.99	157	234	4.75	120	C(UL)US CMP

### Category 5: Non-Plenum

M56753†	25 PAIR 24 AWG UTP	None	Lt. Gray PVC .470	11.94	119	177	4.7	119	C(UL)US CMR
M57040†	50 PAIR 24 AWG UTP	None	Lt. Gray PVC .750	19.05	252	375	7.5	191	C(UL)US CMR
M56832†	25 PAIR 24 AWG ScTP	O/A ALUM/PLY W/DW	Lt. Gray PVC .522	13.26	149	222	5.25	133	C(UL)US CMR

### Category 5: Plenum

M56773†	25 PAIR 24 AWG UTP	None	Gray FEP .430	10.92	137	204	4.3	109	C(UL)US CMP
M56700	25 PAIR 24 AWG ScTP	O/A ALUM/PLY W/DW	Gray ThermoPlen®* .472	11.99	157	234	4.75	120	C(UL)US CMP

\*Plenum rated Thermoplastic. †Verified by Independent Test Laboratories. For pair and binder colors see chart B on page 59.

### Category 5/5e Power Sum 25 Pair Packaging Options

Type	Reel/Put-up	Gross Weight (lbs.)	Type	Reel/Put-up	Gross Weight (lbs.)	Type	Reel/Put-up	Gross Weight (lbs.)
Plenum	22" Reel 1000 Ft.	131	Plenum	36" Reel 5000 Ft.	655	Non-Plenum	36" Reel 2000 Ft.	245
Plenum	30" Reel 2000 Ft.	262	Non-Plenum	24" Reel 1000 Ft.	119	Non-Plenum	48" Reel 5000 Ft.	640

Mohawk Part No.	Cable Type	Shield Type	Jacket Type Diameter		Weight		Min Bend Radius		Listings
			inch	mm	lbs/M'	kg/km	inch	mm	

### Category 3: Non-Plenum

M55700	25 PAIR 24 AWG UTP	None	Lt. Gray PVC .364 9.25		100	149	3.6	91	C(UL)US CMR
M55216	50 PAIR 24 AWG UTP	None	Lt. Gray PVC .591 15.01		197	293	5.9	150	C(UL)US CMR
M55211	100 PAIR 24 AWG UTP	None	Lt. Gray PVC .707 17.96		381	567	7.1	180	C(UL)US CMR
M55212	200 PAIR 24 AWG UTP	None	Lt. Gray PVC 1.054 26.77		814	1211	10.5	267	C(UL)US CMR
M57098	300 PAIR 24 AWG UTP	None	Lt. Gray PVC 1.222 31.04		1186	1765	12.25	311	C(UL)US CMR
M57996	400 PAIR 24 AWG UTP	None	Lt. Gray PVC 1.590 40.38		1750	2604	16.0	406	C(UL)US CMR
M55704	25 PAIR 24 AWG ScTP	O/A ALUM/PLY W/DW	Lt. Gray PVC .394 10.01		111	165	4.0	102	C(UL)US CMR

### Category 3: Plenum

M56801	25 PAIR 24 AWG UTP	None	Gray ThermoPlen®* .389 9.88		123	183	3.9	99	C(UL)US CMP
M56126	50 PAIR 24 AWG UTP	None	Gray ThermoPlen®* .550 13.97		224	333	5.5	140	C(UL)US CMP
M56128	100 PAIR 24 AWG UTP	None	Gray ThermoPlen®* .786 19.96		467	695	7.9	201	C(UL)US CMP
M56129	200 PAIR 24 AWG UTP	None	Gray ThermoPlen®* 1.088 27.64		942	1402	10.9	277	C(UL)US CMP
M57211	300 PAIR 24 AWG UTP	None	Gray ThermoPlen®* 1.334 33.88		1397	2079	13.3	338	C(UL)US CMP
M58349	400 PAIR 24 AWG UTP	None	Gray ThermoPlen®* 1.527 38.79		1760	2619	15.3	389	C(UL)US CMP
M55073	25 PAIR 24 AWG ScTP	O/A ALUM/PLY W/DW	Gray ThermoPlen®* .346 8.79		115	171	3.5	88	C(UL)US CMP

\*Plenum rated Thermoplastic. For pair and binder colors see chart B on page 59.

### Category 3 High Pair Count Packaging Options

Pair Count	Reel/Put-up	Gross Weight (lbs.)	Pair Count	Reel/Put-up	Gross Weight (lbs.)	Pair Count	Reel/Put-up	Gross Weight (lbs.)
25	20" Reel 1000 Ft.	123	100	30" Reel 1000 Ft.	467	200	72" Reel 5000 Ft.	4300
25	24" Reel 2000 Ft.	246	100	36" Reel 2000 Ft.	950	300	48" Reel 1000 Ft.	1897
25	36" Reel 5000 Ft.	620	100	42" Reel 2500 Ft.	1167	300	54" Reel 2000 Ft.	2800
25	36" Reel 6500 Ft.	805	100	48" Reel 4000 Ft.	1910	300	60" Reel 3000 Ft.	4200
50	22" Reel 1000 Ft.	224	100	54" Reel 5000 Ft.	2400	300	72" Reel 4000 Ft.	5600
50	30" Reel 2000 Ft.	455	200	42" Reel 1000 Ft.	814	400	54" Reel 1000 Ft.	1900
50	48" Reel 5000 Ft.	1160	200	54" Reel 2000 Ft.	1680	400	72" Reel 2000 Ft.	3900





# UTP & ScTP Patch Cables



## GigaLink™ Category 6e+ UTP Patch Cable — Tested to 750 MHz

Mohawk Part No.	Cable Type	Dielectric Type	Shield Type	Jacket Type Diameter		Weight		Listings
				inch	mm	lbs/M'	kg/km	
M57634	4 PAIR 24 AWG (7/32) TC UTP	Thermoplastic	None	White PVC .226	5.7	29	43	C(UL)US CMG

For pair colors see chart A on page 59.

Jacket Colors/Mohawk#	BLUE -- M57635	RED -- M57641	GREEN -- M57638	YELLOW -- M57637
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Additional colors & custom colors available - please consult the factory.

## AdvanceLink® Category 6e UTP Patch Cable — Tested to 650 MHz

M57507	4 PAIR 24 AWG (7/32) TC UTP	Thermoplastic	None	White PVC .216	5.49	25	37	C(UL)US CMG
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For pair colors see chart A on page 59.

Jacket Colors/Mohawk#	BLUE -- M57508	RED -- M57519	GREEN -- M57512	YELLOW -- M57511
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Additional colors & custom colors available - please consult the factory.

## MegaLink™ Category 5e+ UTP & ScTP Patch Cable

Mohawk Part No.	Cable Type	Dielectric Type	Shield Type	Jacket Type Diameter		Weight		Listings
				inch	mm	lbs/M'	kg/km	
M56726	4 PAIR 24 AWG (7/32) TC UTP	Thermoplastic	None	White PVC .200	5.10	25	37	C(UL)US CMG
M57542	4 PAIR 26 AWG (7/34) TC ScTP	Thermoplastic	O/A ALUM/PLY W/DW	White PVC .203	5.16	23	34	C(UL)US CMG

For pair colors see chart A on page 59.

Jacket Colors/Mohawk# for 4-Pair UTP	BLUE -- M57076	RED -- M57073	GREEN -- M57075	YELLOW -- M56985
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Jacket Colors/Mohawk# for 4-Pair ScTP	BLUE -- M57544	RED -- M57770	GREEN -- M58219	YELLOW -- M58218
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Additional colors & custom colors available - please consult the factory.

## 5e LAN® Category 5e UTP & ScTP Patch Cable

M58126	4 PAIR 24 AWG (7/32) TC UTP	Thermoplastic	None	White PVC .200	5.10	25	37	C(UL)US CMG
M58208	4 PAIR 26 AWG (7/34) TC ScTP	Thermoplastic	O/A ALUM/PLY W/DW	White PVC .203	5.16	23	34	C(UL)US CMG

For pair colors see chart A on page 59.

Jacket Colors/Mohawk# for 4-Pair UTP	BLUE -- M58127	RED -- M58133	GREEN -- M58130	YELLOW -- M58129
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Jacket Colors/Mohawk# for 4-Pair ScTP	BLUE -- M58209	RED -- M58214	GREEN -- M58213	YELLOW -- M58211
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Additional colors & custom colors available - please consult the factory.

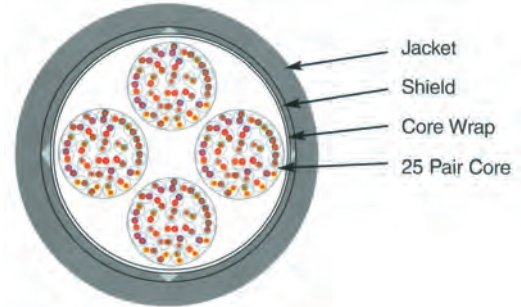


# ARMM Riser Cable

## Multi-Pair 24 AWG Category 3

**ARMM Riser Cable** is a rugged multi-pair cable that exceeds Category 3 Cable for use in backbone cabling systems as described in TIA/EIA 568-B. The cable consists of #24 AWG solid bare copper insulated conductors, assembled into twisted pairs, core wrap, corrugated aluminum shield bonded to an overall PVC jacket.

The cable is riser (non-plenum) rated for use as a vertical run in a shaft and for general purpose communications use in accordance with Article 800 of the National Electrical Code (NEC). The cable is UL (USA) & c(UL) (CANADA) listed for this application by passing UL 1666 Riser Cable Flammability test.



Mohawk Part No.	Cable Type	Shield Type	Jacket Diameter		Weight		Min Bend Radius		Listings
			inch	mm	lbs/M'	kg/km	inch	mm	

### Multi-Pair 24 AWG Category 3

M58452	25 PAIR 24 AWG ARMM	0/A .008 CORRUGATED ALUMINUM	Gray PVC .470	11.9	115	171	4.7	119	UL, c(UL) CMR
M58460	50 PAIR 24 AWG ARMM	0/A .008 CORRUGATED ALUMINUM	Gray PVC .660	16.8	230	342	6.9	188	UL, c(UL) CMR
M58461	75 PAIR 24 AWG ARMM	0/A .008 CORRUGATED ALUMINUM	Gray PVC .760	19.3	345	519	7.8	190	UL, c(UL) CMR
M58453	100 PAIR 24 AWG ARMM	0/A .008 CORRUGATED ALUMINUM	Gray PVC .850	21.6	412	613	8.5	215	UL, c(UL) CMR
M58462	150 PAIR 24 AWG ARMM	0/A .008 CORRUGATED ALUMINUM	Gray PVC .990	25.1	616	918	9.9	261	UL, c(UL) CMR
M58454	200 PAIR 24 AWG ARMM	0/A .008 CORRUGATED ALUMINUM	Gray PVC 1.10	27.9	820	1222	11	280	UL, c(UL) CMR
M58455	250 PAIR 24 AWG ARMM	0/A .008 CORRUGATED ALUMINUM	Gray PVC 1.22	30.9	950	1415	12.2	310	UL, c(UL) CMR
M58456	300 PAIR 24 AWG ARMM	0/A .008 CORRUGATED ALUMINUM	Gray PVC 1.32	33.5	1100	1693	13.2	335	UL, c(UL) CMR
M58457	400 PAIR 24 AWG ARMM	0/A .008 CORRUGATED ALUMINUM	Gray PVC 1.50	38.1	1400	2086	15	380	UL, c(UL) CMR

For pair and binder colors see chart D on page 59.



# Special Applications LAN-Trak™ OSP

LAN-Trak OSP delivers TIA/EIA 568-B Category 5, 5e+, or 6 electrical performance in an outside plant cable, because even small amounts of moisture or water in the cable will degrade the electrical performance of a Category cable. These cables are designed for exposure to the elements. Jacketed with black UV resistant polyethylene, they employ a craft-friendly semi-dry flooding material that cleans easily from the cable core.

Traditional petroleum based gels such as “icky-pick” result in hard to clean and time consuming cable prep time. This thixotropic gel has a dry, soft texture that is dermally safe and cleans easily with citrus based cleaners. The result is faster cable prep time, quicker clean-ups and happier technicians.



## Outside Plant Cable

These cables allow you to extend your current network to outdoor satellite structures such as temporary classrooms or trailers in a campus environment. They are also well suited for runs under concrete slabs and in other wet locations.

These cables are offered in both unshielded (UTP) and the more robust shielded (ScTP) cables. Also, the NEC may require a Category 5, 5e, or 6 rated protection device.

As with all horizontal cables, run length is limited to 90 meters (295 feet) per TIA/EIA 568-B for Category 5, 5e, or 6 operation.

Mohawk Part No.	Cable Type	Jacket Diameter		Weight		Min. Bend Radius	
		Inch	mm	lbs/M'	kg/km	Inch	mm

### AdvanceNet® LAN-Trak OSP Category 6 Cable

M57622***	4 PAIR 24 AWG Duct/Aerial Lashed	.271	6.88	36	54	2.75	70
M57623***	4 PAIR 24 AWG Direct Burial (Shielded)	.460	11.68	99	147	6.90	175

### MegaLAN® LAN-Trak OSP Category 5E+ Cable

M57561*	4 PAIR 24 AWG Duct/Aerial Lashed	.251	6.38	31	46	2.50	61
M57562*	4 PAIR 24 AWG Direct Burial (Shielded)	.380	9.65	88	131	5.70	145

### LAN-Trak OSP Category 5e Cable

M58527**	25 PAIR 24 AWG Direct Burial (Shielded)	.730	18.54	300	446	11.00	280
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### LAN-Trak OSP Category 5 Cable

M56871*	4 PAIR 24 AWG Outdoor Duct/Aerial Lashed	.196	4.98	22	33	2.00	51
M57041*	4 PAIR 24 AWG Aerial Lashed	.246	6.25	30	45	2.50	61
M57042*	4 PAIR 24 AWG Direct Burial (Shielded)	.380	9.65	87	129	5.70	145
M57656**	25 PAIR 24 AWG Direct Burial (Shielded)	.730	18.54	300	446	11.00	280

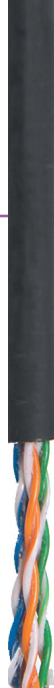
\*US Patent No. 5,424,491. \*\*US Patent Nos. 5,424,491; 5,821,466. \*\*\*US Patent Nos. 5,424,491; 6,074,503; 6,496,944.  
For 4 pair colors see chart A; for 25 pair colors see chart D on page 59.



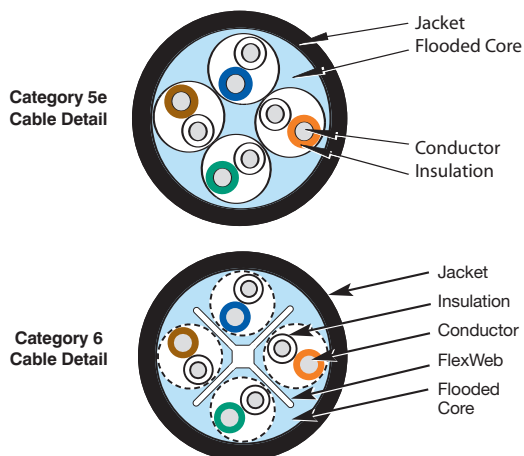
# Special Applications VersaLAN™ CM

The cable is suitable for use in buildings in wet locations and suitable for use outdoors in duct and for aerial lashing. It is fully water blocked and has a black sunlight resistant jacket. It is not suitable for direct burial. This product and/or its manufacture is covered by US patent No. 5,424,491.

The cable is NEC rated for general purpose communications use in accordance with Article 800 of the National Electrical Code (NEC). The cable is UL (USA) & c(UL) (CANADA) listed for this application by passing UL 1581 vertical tray flame test.



## Indoor/Outdoor Category 5e & 6 Cable



Mohawk Part No.	Cable Type	Jacket Diameter inch	Diameter mm	Weight lbs/M'	Weight kg/km	Min. Bend Radius inch	Radius mm	Listings
M58762	Cat 5e 4 PAIR 24 AWG UTP	.251	6.38	38	57	2.50	61	C(UL)US CM-LS
M58772	Cat 6 4 PAIR 24 AWG UTP	.271	6.88	43	64	2.75	70	C(UL)US CM-LS

### Electrical Characteristics - Category 5e

FREQ (MHz)	INSERTION LOSS			NEXT		ACR	PS-NEXT		PS-ACR	ELFEXT	PS-ELFEXT	RL
	avg	max	max	avg	min	min	avg	min	min	min	min	min
.772	1.6	1.8	5.5	82	72.0	72.2	75	70.0	68.2	-	-	-
1.0	1.8	2.0	6.2	80	70.3	70.3	73	68.3	66.3	67.8	64.8	20.0
4.0	3.6	4.0	12.2	70	61.3	59.3	63	59.3	55.3	55.8	52.8	23.0
8.0	5.2	5.7	17.4	66	56.8	53.1	59	54.8	49.1	49.7	46.7	24.5
10.0	5.8	6.4	19.4	64	55.3	50.9	58	53.3	46.9	47.8	44.8	25.0
16.0	7.3	8.1	24.7	62	52.2	46.1	56	50.2	42.1	43.7	40.7	25.0
20.0	8.3	9.1	27.7	60	50.8	43.7	54	48.8	39.7	41.8	38.8	25.0
25.0	9.3	10.2	31.0	59	49.3	41.1	52	47.3	37.1	39.8	36.8	24.3
31.25	10.4	11.4	34.8	58	47.9	38.5	51	45.9	34.5	37.9	34.9	23.6
62.5	15.1	16.4	50	54	43.4	29.0	47	41.4	25.0	31.9	28.9	21.5
100.0	19.6	21.0	64	50	40.3	21.3	43	38.3	17.3	27.8	24.8	20.1
155.0	25.0	26.6	81	48	37.4	12.9	41	35.4	8.9	24.0	21.0	18.8
200.0	28.8	30.5	93	46	35.8	7.3	40	33.8	3.3	21.8	18.8	18.0
250.0	32.8	34.4	105	45	34.3	1.9	38	32.3	-	19.8	16.8	17.3
300.0	36.5	38.0	116	44	33.1	-	37	31.1	-	-	-	16.8
350.0	40.0	41.4	126	43	32.1	-	36	30.1	-	-	-	16.3
400.0	43.2	44.6	136	42	31.3	-	35	29.3	-	-	-	15.9

### Electrical Characteristics - Category 6

FREQ (MHz)	INSERTION LOSS		NEXT		ACR	PS-NEXT		PS-ACR	ELFEXT	PS-ELFEXT	RL
	avg	max	avg	min	min	avg	min	min	min	min	min
.772	1.6	1.8	86	77.0	75.2	80	75.0	73.2	-	-	-
1.0	1.8	2.0	82	75.3	73.3	75	73.3	71.3	70.0	68.0	20.0
4.0	3.5	3.8	73	66.3	62.5	65	64.3	60.5	58.0	56.0	23.0
8.0	5.0	5.3	69	61.8	56.5	61	59.8	54.5	51.9	49.9	24.5
10.0	5.6	5.9	67	60.3	54.4	60	58.3	52.4	50.0	48.0	25.0
16.0	7.1	7.5	66	57.2	49.7	58	55.2	47.7	45.9	43.9	25.0
20.0	7.9	8.4	64	55.8	47.4	56	53.8	45.4	44.0	42.0	25.0
25.0	8.9	9.4	63	54.3	44.9	54	52.3	42.9	42.0	40.0	24.3
31.25	10.0	10.6	62	52.9	42.3	53	50.9	40.3	40.1	38.1	23.6
62.5	14.4	15.3	58	48.4	33.1	49	46.4	31.1	34.1	32.1	21.5
100.0	18.5	19.7	54	45.3	25.6	45	43.3	23.6	30.0	28.0	20.1
155.0	23.5	25.0	52	42.4	17.4	43	40.4	15.4	26.2	24.2	18.8
200.0	27.2	28.8	50	40.8	12.0	42	38.8	10.0	24.0	22.0	18.0
250.0	30.7	32.6	49	39.3	6.7	40	37.3	4.7	22.0	20.0	17.3
300.0	34.0	36.2	48	38.1	2.0	39	36.1	0.0	20.5	18.5	16.8
350.0	37.2	39.5	47	37.1	-	38	35.1	-	19.1	17.1	16.3
400.0	40.2	42.7	46	36.3	-	37	34.3	-	-	-	15.9
500.0	45.8	48.6	45	34.8	-	36	32.8	-	-	-	15.2
550.0	48.4	51.5	44	34.2	-	35	32.2	-	-	-	14.9





# Special Applications Cellular Tower Cables

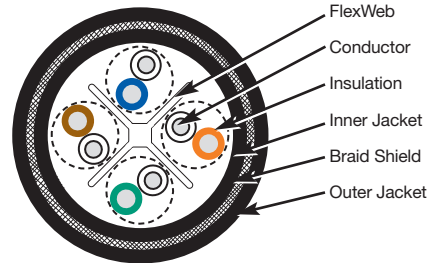
Mohawk's Cellular Tower Cable is an overall foil/braid shielded twisted pair cable intended for outdoor use. The compact rugged design is more flexible versus traditional armored cable typically used for this application. The foil/braid shield is an excellent choice where interference from external radio frequency or electromagnetic sources is a concern.

These cables can be used not only to connect cellular phone sites, but other services including pagers, mobile radio, wireless data, personal communications service (PCS), and even newer services such as high speed broadband wireless internet access and weather collection equipment.

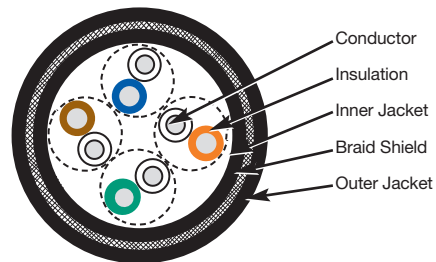
- **EMI & RFI Protection** – 60% Coverage Braid and 100% Coverage Metallic Foil Tape offer excellent EMI and RFI immunity in a tower environment, where there may be interference from other services located on the same tower now or in the future.
- **Easy Termination** – Grounding is made simple because the braid can be crimped to a ground wire or clamped to the enclosure.
- **Gel filled and fully water-blocked** – Prevents migration of water through the cable into sensitive electronics enclosures. Gel filling prevents corrosion of the conductors in the presence of water.
- **UV stabilized polyethylene outer jacket.**
- **Meets applicable TIA/EIA Category grades.**



**Category 6  
Cable Detail**



**Category 5E+/5  
Cable Detail**



- Category 5, 5e, and 6 conductors should be terminated with 110 style Category rated jacks and the link completed with a short Category rated patch cable.
- Standard RJ-45 plugs may not fit the Category 5e & 6 insulated conductors. Please consult the factory for the proper plug to fit these cables.



## Category 6 Cable

Mohawk Part No.	Cable Type	Jacket Diameter		Weight		Min. Bend Radius	
		inch	mm	lbs/M'	kg/km	inch	mm
M58577	4 PAIR 24 AWG	.305	7.75	49	73	3.0	76

## Category 5E+ Cable

Mohawk Part No.	Cable Type	Jacket Diameter		Weight		Min. Bend Radius	
		inch	mm	lbs/M'	kg/km	inch	mm
M58463	4 PAIR 24 AWG	.276	7.01	43	64	2.8	71

## Category 5 Cable

Mohawk Part No.	Cable Type	Jacket Diameter		Weight		Min. Bend Radius	
		inch	mm	lbs/M'	kg/km	inch	mm
M58116	4 PAIR 24 AWG	.250	6.35	38	57	2.5	64

# Special Applications OmniGUARD®

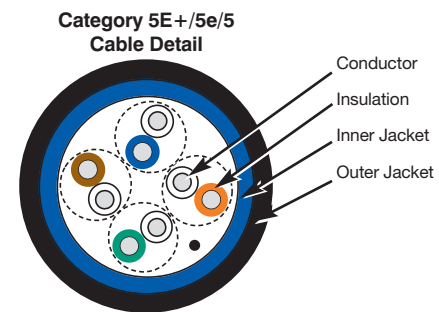
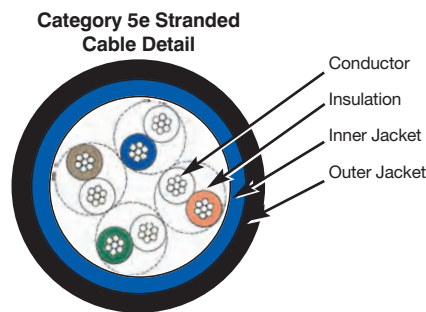
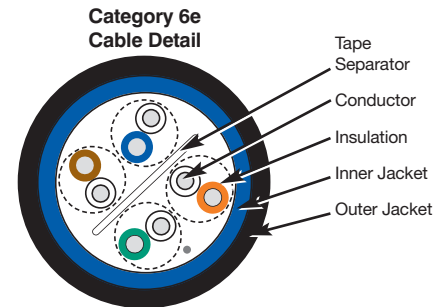
## Industrial Grade Cables

### Rugged Cable Solutions for Extreme Environments

Today's high-performance networking applications are moving from clean office environments out to greasy factory floors. Mohawk has responded with a line of Industrial Ethernet cable solutions.

Mohawk's OmniGUARD Industrial Grade AdvanceNet® and LAN copper cable families include both unshielded and shielded twisted pair constructions with Category 5, Category 5e or Category 6. These cables are designed to meet or exceed the performance standards of TIA/EIA-568-B and ISO/IEC11801 requirements, while providing added jacket compounds for durability.

- **Riser** – For use as vertical runs in a shaft and for general-purpose communications.
- **Oil and UV-resistant** – Black TPE jacket for excellent abrasion/cut-through resistance.
- **-20°C to +60°C operating temperature.**



### AdvanceNet® Category 6e UTP Cable

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Diameter		Weight	
			inch	mm	lbs/M'	kg/km
M58622	4 PAIR 24 AWG UTP	Polyolefin	.266	6.76	39	58

### MegaLAN® Category 5E+ UTP Cable

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Diameter		Weight	
			inch	mm	lbs/M'	kg/km
M58629	4 PAIR 24 AWG UTP	Polyolefin	.230	5.84	30	45

### 5e LAN® Category 5e UTP Cable

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Diameter		Weight	
			inch	mm	lbs/M'	kg/km
M58620	4 PAIR 24 AWG UTP	Polyolefin	.230	5.84	30	45

### Category 5e Stranded UTP Cable

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Diameter		Weight	
			inch	mm	lbs/M'	kg/km
M58509	4 PAIR 24 AWG UTP STRANDED	Polyolefin	.260	6.60	37	55

### Category 5 UTP Cable

Mohawk Part No.	Cable Type	Dielectric Type	Jacket Diameter		Weight	
			inch	mm	lbs/M'	kg/km
M58630	4 PAIR 24 AWG UTP	Polyolefin	.230	5.84	30	45

# Special Applications Media Pull™

## Bundled Cables

**Tired of setting up multiple cable reels for a common cable pull?**

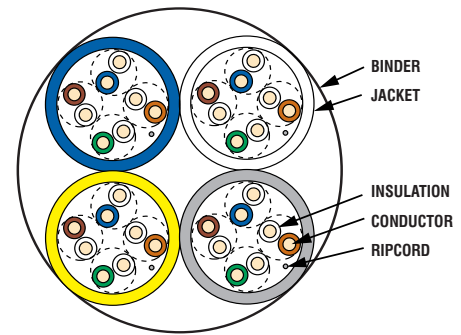
**Mohawk has the answer, Media Pull Bundled Cables.**

### Ultimate Versatility

Media Pull Cables are multiples of individually jacketed components, such as 4 pair copper cable elements. The components are bundled together in a neat, clean and easy to use package.

### UL Approved

Mohawk's line of Media Pull cables are fully approved to UL safety requirements for CMR (Riser) or CMP (Plenum) copper applications and for OFNR (Riser) or OFNP (Plenum) fiber optic applications.



### Guaranteed Performance

Individual cable elements are tested prior to cabling and tested again once the cabling operation is complete. This additional testing ensures that Media Pull constructions deliver the performance you've come to expect from an industry leader like Mohawk.

## Media Pull Category 6 Copper Components

Mohawk Part No.	Number of Components	Component Cable Type	Dielectric Type	Component Jacket Type Diameter		Cable Diameter		Weight		Listings
				inch	mm	inch	mm	lbs/M'	kg/km	
M57626 Non-Plenum	3	4 PAIR 24 AWG	Thermoplastic	PVC .247	6.27	.478	12.14	104	155	C(UL)US CMR
M57627 Non-Plenum	4	4 PAIR 24 AWG UTP	Thermoplastic	PVC .247	6.27	.536	13.61	132	196	C(UL)US CMR
M57628 Non-Plenum	6	4 PAIR 24 AWG	Thermoplastic	PVC .247	6.27	.670	17.02	229	341	C(UL)US CMR
M57629 Plenum	3	4 PAIR 24 AWG UTP	Dual Insulation** FEP on all 4 pairs	ThermoPlen®* .244	6.20	.525	13.33	129	192	C(UL)US CMP
M57630 Plenum	4	4 PAIR 24 AWG UTP	Dual Insulation** FEP on all 4 pairs	ThermoPlen®* .244	6.20	.586	14.88	162	241	C(UL)US CMP
M57631 Plenum	6	4 PAIR 24 AWG UTP	Dual Insulation** FEP on all 4 pairs	ThermoPlen®* .244	6.20	.738	18.75	253	376	C(UL)US CMP

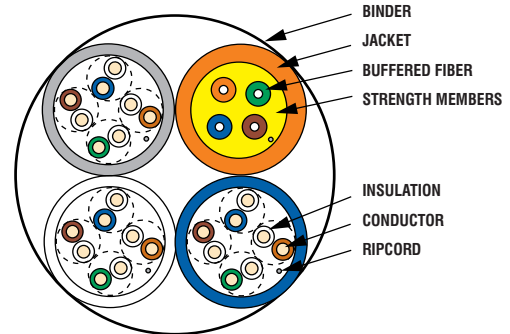
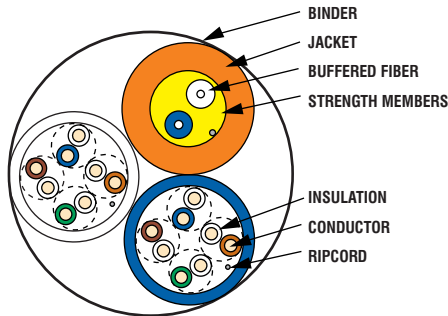
## Media Pull MegaLAN® Category 5E+ Copper Components

Mohawk Part No.	Number of Components	Component Cable Type	Dielectric Type	Component Jacket Type Diameter		Cable Diameter		Weight		Listings
				inch	mm	inch	mm	lbs/M'	kg/km	
M57404 Non-Plenum	3	4 PAIR 24 AWG UTP	Thermoplastic	PVC .201	5.11	.389	9.88	70	104	C(UL)US CMR
M57407 Non-Plenum	4	4 PAIR 24 AWG UTP	Thermoplastic	PVC .201	5.11	.436	11.07	90	134	C(UL)US CMR
M57408 Non-Plenum	6	4 PAIR 24 AWG UTP	Thermoplastic	PVC .201	5.11	.543	13.79	136	202	C(UL)US CMR
M57409 Plenum	3	4 PAIR 24 AWG UTP	Dual Insulation** FEP on all 4 pairs	ThermoPlen®* .186	4.72	.360	9.14	74	110	C(UL)US CMP
M57410 Plenum	4	4 PAIR 24 AWG UTP	Dual Insulation** FEP on all 4 pairs	ThermoPlen®* .186	4.72	.403	10.24	95	141	C(UL)US CMP
M57411 Plenum	6	4 PAIR 24 AWG UTP	Dual Insulation** FEP on all 4 pairs	ThermoPlen®* .186	4.72	.502	12.75	140	208	C(UL)US CMP

\*Plenum rated Thermoplastic. \*\*U.S. Patent No. 5,563,377.  
For pair colors see chart A on page 59. For component jacket colors see page 33.

# Special Applications Bundled Cables

Both Fiber Optic & Copper Cables in  
One Media Pull™ Package



Media Pull Bundled Cables are also available with Enhanced Copper Cables, AdvanceLite Fiber Cables and Coaxial Cables.



## Media Pull Category 5 UTP Copper & AdvanceLite® Fiber Optic Components

Mohawk Part No.	Number of Components	Component Cable Type	Dielectric Type	Component Jacket Type Diameter		Cable Diameter		Weight		Listings	
				inch	mm	inch	mm	lbs/M'	kg/km		
M96512	2	4 PAIR 24 AWG UTP	Thermoplastic	PVC	.198	5.03	.374	9.50	64	95	C(UL)US CMR
	1	2 FIBER MM (62.5/125) DISTRIBUTION	PVC	PVC	.184	4.67					UL, c(UL) OFNR OFN FT4
M96633	3	4 PAIR 24 AWG UTP	Thermoplastic	PVC	.198	5.03	.431	10.95	85	126	C(UL)US CMR
	1	4 FIBER MM (62.5/125) DISTRIBUTION	PVC	PVC	.200	5.08					UL, c(UL) OFNR OFN FT4
M96632	2	4 PAIR 24 AWG UTP	FEP	Thermoplen®*	.180	4.57	.351	8.92	60	89	C(UL)US CMP
	1	2 FIBER MM (62.5/125) DISTRIBUTION	ThermoPlen®*	Thermoplen®*	.184	4.67					UL, c(UL) OFNP OFN FT6
M95830	3	4 PAIR 24 AWG UTP	FEP	Thermoplen®*	.180	4.57	.387	9.83	83	124	C(UL)US CMP
	1	4 FIBER MM (62.5/125) DISTRIBUTION	ThermoPlen®*	Thermoplen®*	.174	4.42					UL, c(UL) OFNP OFN FT6

\*Plenum rated Thermoplastic. For pair colors see chart A on page 59.

Fiber Optic Component jacket colors: orange for multimode, yellow for single-mode.

### Component Jacket Colors

Jacket Color	Cable #	Jacket Color	Cable #
Blue	1	Yellow	4
White	2	Green	5
Gray	3	Pink	6





# AdvanceLite® Fiber Optic Cables

## Mohawk's Range of Fiber Optic Cables for Gigabit Applications

Mohawk has been manufacturing and testing fiber optic cable in accordance with many industry standards, including Telcordia, RUS and TIA/EIA, since 1990. Cables are listed by Underwriters Laboratories (UL) for compliance with the National Electrical Code and Canadian Electrical Code.

Cables are available with fiber counts ranging from 1 to 216 in multimode, single-mode or hybrid versions. They are compatible with all major manufacturers' connectivity hardware, including LID fusion splicers.

Mohawk's ISO 9001 registration assures our customers of consistent quality. Also, by working closely with customers, vendors, and industry organizations, Mohawk can help determine the best solution for a given application.

AdvanceLite features fiber optimized for laser-based protocols, yet these cables are still compatible with LED systems. They provide guaranteed link lengths to handle multi-gigabit transmission while maintaining full compatibility with existing installed FDDI-grade cable.

### Multimode Fiber Grade Selector

Short Wavelength or Long Wavelength, 50/125 micron or 62.5/125 micron, we have a solution for you. Mohawk has designed our Fiber Grade Selector to help you determine which multimode fiber type best suits your application. Legacy installations to emerging networking protocols are identified and the guaranteed performance of each fiber is given along with the appropriate optical specifications.



### Fiber Optic Inventory

When you need fiber optic cabling fast, Mohawk is ready and waiting for you. We stock over 100 of our most popular fiber optic cables, which can be shipped from our warehouse with no minimum order quantity necessary. Specific part numbers are listed on page 58, where you may determine if the cable you require is an inventory item.\*

### Multimode —

**Grade 6** is a 50/125 fiber that exceeds TIA/EIA-568-B.3-1 (ISO 11801 OM3) for 500-meter lengths at 10 Gigabit data rates.

**Grade 5** is a 50/125 fiber that complies with TIA/EIA-568-B.3-1 (ISO 11801 OM3) for 300-meter lengths at 10 Gigabit data rates. (Formerly AdvanceLite 2000)

**Grade 4** is a 50/125 fiber that complies with TIA/EIA-568-B.3 (ISO 11801 OM2) and provides 600-meter link lengths for Gigabit Ethernet. (Formerly AdvanceLite 600)

**Grade 3** is a 62.5/125 fiber that complies with TIA/EIA-568-B.3 (ISO 11801 OM1) and provides up to 1000-meter link lengths for Gigabit Ethernet. (Formerly AdvanceLite 1000)

**Grade 2** is a 62.5/125 fiber that complies with TIA/EIA-568-B.3 (ISO 11801 OM1) and provides up to 550-meter link lengths for Gigabit Ethernet. (Formerly AdvanceLite 300)

**Grade 1** is FDDI grade 62.5/125 fiber and is the majority of the currently installed base of cable. Not recommended for future installations except as patch cordage.

### Single-Mode —

**Grade SM2** is a single-mode fiber that complies with ITU G.652.c/d. This is a low water peak fiber with advantages for CWDM applications.

**Grade SM1** is a single-mode fiber that complies with ITU G.652.a/b.

Optical Fibers Supplied By:



\*Mohawk reserves the right to modify managed inventory items at any time with or without notice.

## Jacket Colors

For outside plant cables, the standard jacket color is black. This includes loose tube, RiserLite® and VersaLite™ cables.

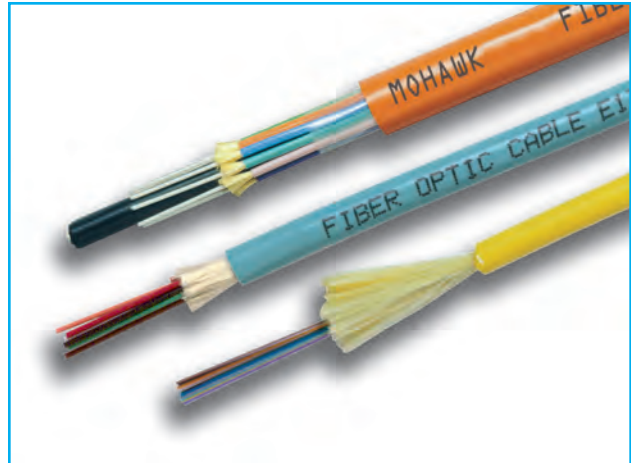
For tight buffered cables, excluding simplex and duplex, the following is the standard jacket color code:

Grades 2, 3, 4 — Orange

Grades 5, 6 — Aqua

Grades SM2 — Yellow

Non-standard jacket colors are available.



## Optical Characteristics

Meets or exceeds ISO/IEC 11801

	OM1	OM1	OM2	OM3	OM3	
Grade	2	3	4	5	6	SM2
<b>Glass Type</b>	62.5/125 MM AdvanceLite	62.5/125 MM AdvanceLite	50/125 MM AdvanceLite	50/125 MM AdvanceLite	50/125 MM AdvanceLite	Single-Mode Enhanced <sup>6</sup>
<b>Part Number Code (X)</b>	B	D	A	C	E	W
<b>Operating Wavelength (nm)</b>	850/1300	850/1300	850/1300	850/1300	850/1300	1310/1550
<b>Min. OFL<sup>1</sup> Bandwidth (MHz-km)</b>	200/500	200/500	500/500	1500/500	3000/500	—
<b>Min. Laser<sup>2</sup> Bandwidth (MHz-km)</b>	220/500	385/500	510/500	2000/500	4700/500	—
<b>Max. Attenuation Loose Tube (dB/km)</b>	3.25/1.0	3.25/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.40/0.30
<b>Max. Attenuation Tight Buffered<sup>3</sup> (dB/km)</b>	3.50/1.25	3.50/1.25	3.50/1.25	3.50/1.25	3.50/1.25	0.80/0.50
<b>100 Mbit Fast Ethernet Min. Link Length (meters S/L/E<sup>4</sup>)</b>	300/2000	300/2000	300/2000	300/2000	300/2000	5000/—
<b>1 Gigabit Ethernet Min. Link Length (meters S/L/E<sup>4</sup>)</b>	300/550	500/1000	600/600	1000 <sup>5</sup> /600	1000 <sup>5</sup> /600	5000/—
<b>10 Gigabit Ethernet Min. Link Length (meters S/L/E<sup>4</sup>)</b>	33/300	33/300	82/300	300/300	550/300	10,000/40,000

<sup>1</sup> OFL – Overfilled Launch

<sup>2</sup> Effective Modal Bandwidth, determined by RML or DMD performance specifications

<sup>3</sup> Max. Attenuation for Tight Buffered, Ribbon, Micro-Loose Tube & VersaLite Cables

<sup>4</sup> S/L/E – Short wavelength (850 nm) / Long wavelength (1310 nm) / Extra long wavelength (1550 nm)

<sup>5</sup> >2000 meters for engineered links

<sup>6</sup> Low water peak Single-Mode suitable for CWDM use complies with ITU G.652.c/d

# Riser Distribution

AdvanceLife®

Riser UL/c(UL) Type OFNR / OFN FT4



### Recommended Applications

- Riser cabling
- Office cabling
- Computer room cabling

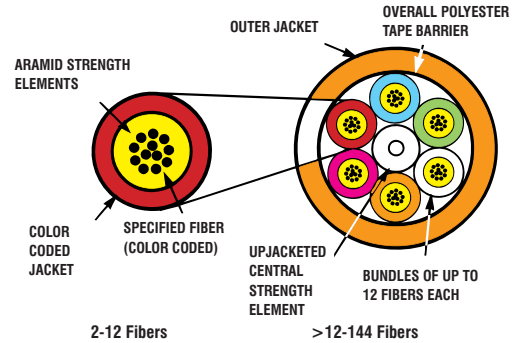
### Product Features

- 900 μm tight buffered fibers
- Color coded for easy termination
- Flame Retardant
- UL listed for code compliance
- MSHA approved cables are available

### Mechanical, Environmental & Flame Characteristics

- Crush Resistance (EIA-455-41) 2000 N/cm
- Impact Resistance (EIA-455-25) 2000 Impacts w/1.6 N-m
- Flexure (EIA-455-104) 2000 cycles min.
- Min. Bend Radius Long Term – No Load 10x Cable diameter
- Min. Bend Radius Short Term – Load 15x Cable diameter
- Operating Temp. – -20°C to +70°C
- Installation Temp. – -10°C to +60°C
- Storage Temp. – -40°C to +80°C
- UL/c(UL) Rated Type OFNR / OFN FT4
- Flame Resistance UL 1666 Passed

FIBER BUNDLE DETAIL



Product Note: May be suitable for outdoor installations. Refer to Technical Advisory on page 66.

**Stocked items available! See page 58 for specific part numbers in our inventory.**

Part Number	Fiber Count	Outside Diameter		Weight		Min. Bend Radius				Max. Load (Installation)	
		mm	in.	kg/km	lbs/M'	Short Term		Long Term		Newtons	Ibs.
M9X037	2	4.67	.184	19	13	7.0	2.8	4.7	1.8	801	180
M9X038	4	5.08	.200	24	16	7.6	3.0	5.1	2.0	867	195
M9X039	6	5.59	.220	28	19	8.4	3.3	5.6	2.2	1201	270
M9X040	8	5.97	.235	33	22	8.9	3.5	6.1	2.4	1201	270
M9X042	12	6.48	.255	40	27	9.6	3.8	6.6	2.6	1334	300
M9X601*	24	8.26	.325	63	42	12.4	4.9	8.4	3.3	1735	390
M9X602	24	12.60	.496	124	83	18.8	7.4	12.7	5.0	4270	960
M9X604	36	16.36	.644	204	137	24.6	9.7	16.5	6.4	6405	1440
M9X606	48	15.93	.627	195	131	23.9	9.4	16.0	6.3	4203	945
M9X609	72	19.10	.750	290	195	28.6	11.3	19.1	7.5	6005	1350
M9X622	96	22.73	.895	432	290	34.0	13.4	22.9	9.0	8820	1983
M9X619	144	24.49	.964	467	314	36.8	14.5	24.4	9.6	12,210	2745

For "X" in part number see optical characteristics on page 33.

\*Single jacket version.

For Buffer and Inner Jacket colors see chart C on page 59.

# Plenum Distribution

AdvanceLite®

Plenum UL/c(UL) Type OFNP / OFN FT6



### Recommended Applications

- Plenum or Riser cabling
- Office cabling
- Computer room cabling

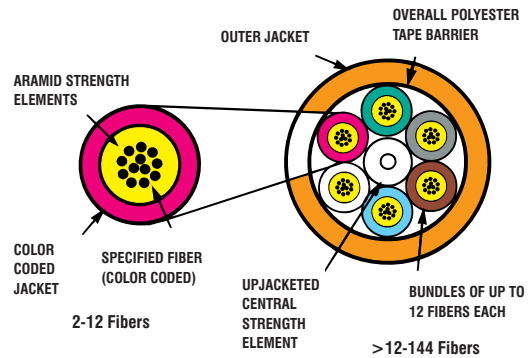
### Product Features

- 900 μm tight buffered fibers
- Color coded for easy termination
- Flame Retardant
- UL listed for code compliance

### Mechanical, Environmental & Flame Characteristics

- Crush Resistance (EIA-455-41) 2000 N/cm
- Impact Resistance (EIA-455-25) 2000 Impacts w/1.6 N-m
- Flexure (EIA-455-104) 2000 cycles min.
- Min. Bend Radius Long Term – No Load 10x Cable diameter
- Min. Bend Radius Short Term – Load 15x Cable diameter
- Operating Temp. – -20°C to +70°C
- Installation Temp. – 0°C to +60°C
- Storage Temp. – -40°C to +80°C
- UL/c(UL) Rated Type OFNP / OFN FT6
- Flame Resistance UL 910 Passed

FIBER BUNDLE DETAIL



Product Note: May be suitable for outdoor installations. Refer to Technical Advisory on page 66.

**Stocked items available! See page 58 for specific part numbers in our inventory.**

Part Number	Fiber Count	Outside Diameter		Weight		Min. Bend Radius				Max. Load (Installation)	
		mm	in.	kg/km	lbs/M'	Short Term		Long Term		Newton	lbs.
M9X043	2	4.67	.184	21	14	7.0	2.8	4.7	1.8	801	180
M9X044	4	4.42	.174	19	13	7.0	2.8	4.7	1.8	867	195
M9X045	6	4.83	.190	24	16	7.6	3.0	5.1	2.0	1201	270
M9X046	8	5.64	.222	28	19	8.5	3.3	5.6	2.2	1201	270
M9X048	12	5.72	.225	33	22	8.6	3.4	5.8	2.3	1334	300
M9X611*	24	8.38	.330	60	40	12.4	4.9	8.4	3.3	1735	390
M9X612	24	12.52	.493	132	89	19.0	7.5	12.6	5.0	5618	1263
M9X614	36	15.09	.594	199	134	22.6	8.9	15.0	5.9	8509	1913
M9X616	48	15.21	.599	195	131	22.9	9.0	15.2	6.0	5538	1245
M9X620	72	19.15	.754	293	197	28.7	11.3	19.1	7.5	9310	2093
M9X623	96	22.96	.904	478	321	34.5	13.6	22.9	9.0	10,422	2343
M9X621	144	26.59	1.047	539	362	39.9	15.7	26.7	10.5	16,213	3645

For "X" in part number see optical characteristics on page 33.

\*Single jacket version.

For Buffer and Inner Jacket colors see chart C on page 59.



# LSZH Distribution

AdvanceLife®

Light Duty – Low Smoke Zero Halogen  
Riser UL/c(UL) Type OFNR / OFN FT4



### Recommended Applications

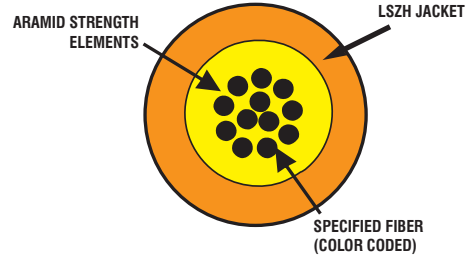
- Riser cabling
- Office cabling
- Computer room cabling

### Product Features

- 900 μm tight buffered fibers
- Color coded for easy termination
- Flame Retardant
- UL listed for code compliance

### Mechanical, Environmental & Flame Characteristics

- Crush Resistance (EIA-455-41) 2000 N/cm
- Impact Resistance (EIA-455-25) 2000 Impacts w/1.6 N-m
- Flexure (EIA-455-104) 2000 cycles min.
- Min. Bend Radius Long Term – No Load 10x Cable diameter
- Min. Bend Radius Short Term – Load 15x Cable diameter
- Operating Temp. – –20°C to +70°C
- Installation Temp. – –10°C to +60°C
- Storage Temp. – –40°C to +80°C
- UL/c(UL) Rated Type OFNR / OFN FT4
- Flame Resistance UL 1666 Passed



Product Note: May be suitable for outdoor installations. Refer to Technical Advisory on page 66.

Part Number	Fiber Count	Outside Diameter		Weight		Min. Bend Radius				Max. Load (Installation)	
		mm	in.	kg/km	lbs/M'	Short Term		Long Term		Newtons	lbs.
M9X100	2	4.7	.184	22	15	7.1	2.8	4.6	1.8	801	180
M9X101	4	5.1	.200	25	17	7.6	3.0	5.1	2.0	867	195
M9X102	6	5.6	.220	31	21	8.4	3.3	5.6	2.2	1201	270
M9X103	8	6.0	.235	36	24	8.9	3.5	6.1	2.4	1201	270
M9X104	12	6.5	.255	43	29	9.7	3.8	6.6	2.6	1334	300

For "X" in part number see optical characteristics on page 33.

For Buffer colors see chart C on page 59.

# Riser & Plenum Ribbon Cables

AdvanceLife®

Riser UL/c(UL) Type OFNR / OFN FT4  
Plenum UL/c(UL) Type OFNP / OFN FT6

### Recommended Applications

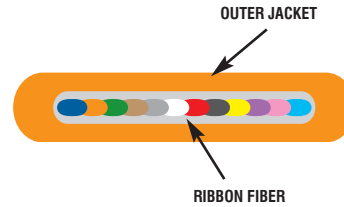
- Inter-equipment connections
- NEBS applications

### Product Features

- Color coded fibers
- Suitable for use with standard ribbon connectors
- Half-inch minimum bend radius
- Tight center-to-center tolerances
- Optional identification printing available
- OFNR or OFNP Rated

### Mechanical, Environmental & Flame Characteristics

- Crush Resistance (EIA-455-41) 2000 N/cm
- Impact Resistance (EIA-455-25) 2000 Impacts w/1.6 N-m
- Flexure (EIA-455-104) 2000 cycles min.
- Min. Bend Radius Long Term – No Load 10x Cable diameter
- Min. Bend Radius Short Term – Load 15x Cable diameter
- Short Term Load FOTP-33 100 lbs (444N)
- Operating Temp. – –20°C to +70°C
- Installation Temp. – 0°C to +60°C
- Storage Temp. – –40°C to +80°C
- UL/c(UL) Rated Type OFNR / OFN FT4
- Flame Resistance UL 1666 Passed
- UL/c(UL) Rated Type OFNP / OFN FT6
- Flame Resistance UL 910 Passed



Stocked items available! See page 58 for specific part numbers in our inventory.

Riser Part Number	Plenum Part Number	Fiber Count	Outside Diameter		Weight	
			mm	in.	kg/km	lbs/M'
M9X630	M9X640	2	2.9	.114	7	5
M9X631	M9X641	4	2.0 x 2.9	.078 x .115	6	4
M9X632	M9X642	6	2.0 x 3.5	.078 x .137	9	6
M9X633	M9X643	8	2.0 x 4.0	.078 x .158	9	6
M9X634	M9X644	12	2.0 x 4.6	.078 x .180	10	7

For "X" in part number see optical characteristics on page 33.

For Buffer colors see chart C on page 59.

# Riser Breakout

AdvanceLite®

2.0 mm sub-unit –  
Riser UL/c(UL) Type OFNR / OFN FT4



### Recommended Applications

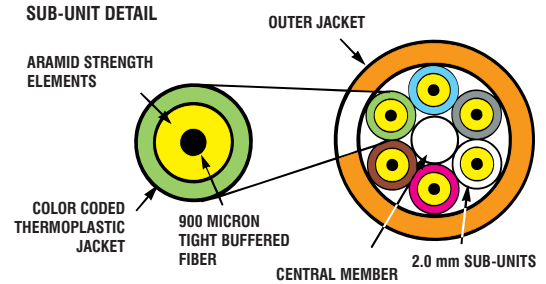
- Riser cabling (typically under 300 meters)
- Office cabling
- Computer room cabling

### Product Features

- 900 μm tight buffered fibers
- Color coded for easy termination
- Flame Retardant
- UL listed for code compliance
- Direct connectorization
- MSHA approved cables are available

### Mechanical, Environmental & Flame Characteristics

- Crush Resistance (EIA-455-41) 2000 N/cm
- Impact Resistance (EIA-455-25) 2000 Impacts w/1.6 N-m
- Flexure (EIA-455-104) 2000 cycles min.
- Min. Bend Radius Long Term – No Load 10x Cable diameter
- Min. Bend Radius Short Term – Load 15x Cable diameter
- Operating Temp. – -20°C to +70°C
- Installation Temp. – -10°C to +60°C
- Storage Temp. – -40°C to +80°C
- UL/c(UL) Rated Type OFNR / OFN FT4
- Flame Resistance UL 1666 Passed



Product Note: May be suitable for outdoor installations. Refer to Technical Advisory on page 66.

**Stocked items available! See page 58 for specific part numbers in our inventory.**

Part Number	Fiber Count	Outside Diameter		Weight		Min. Bend Radius				Max. Load (Installation)	
		mm	in.	kg/km	lbs/M'	Short Term		Long Term		Newton	lbs.
						cm	in.	cm	in.		
M9X005	2	6.60	.260	36	24	9.9	3.9	6.6	2.6	1068	240
M9X006	4	8.15	.321	52	35	12.2	4.8	8.1	3.2	1535	345
M9X007	6	9.09	.358	80	54	13.6	5.4	9.1	3.6	2415	543
M9X008	8	10.29	.405	103	69	15.4	6.1	10.3	4.1	2700	600
M9X009	10	11.56	.455	128	86	17.3	6.8	11.5	4.5	2700	600
M9X010	12	13.06	.514	164	110	19.6	7.7	13.1	5.1	2700	600
M9X011	18	13.21	.520	155	104	19.8	7.8	13.2	5.2	2700	600
M9X012	24	14.99	.590	201	135	22.6	8.9	15.0	5.9	2700	600
M9X083	36	17.27	.680	250	168	25.9	10.2	17.3	6.8	2700	600

For "X" in part number see optical characteristics on page 33.

For fiber counts 2 – 12 see chart C on page 59. For greater than 12 fibers, jackets are orange or aqua (MM) or yellow (SM) and numbered.

# Plenum Breakout

AdvanceLite®

2.0 mm sub-unit –  
Plenum UL/c(UL) Type OFNP / OFN FT6

### Recommended Applications

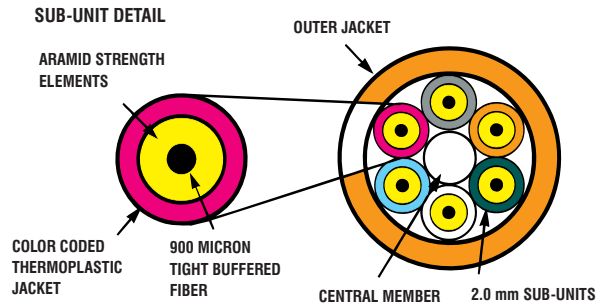
- Plenum and Riser cabling
- Office cabling
- Computer room cabling

### Product Features

- 900 μm tight buffered fibers
- Color coded for easy termination
- Flame Retardant
- UL listed for code compliance
- Direct connectorization

### Mechanical, Environmental & Flame Characteristics

- Crush Resistance (EIA-455-41) 2000 N/cm
- Impact Resistance (EIA-455-25) 2000 Impacts w/1.6 N-m
- Flexure (EIA-455-104) 2000 cycles min.
- Min. Bend Radius Long Term – No Load 10x Cable diameter
- Min. Bend Radius Short Term – Load 15x Cable diameter
- Operating Temp. – -20°C to +70°C
- Installation Temp. – 0°C to +60°C
- Storage Temp. – -40°C to +80°C
- UL/c(UL) Rated Type OFNP / OFN FT6
- Flame Resistance UL 910 Passed



Product Note: May be suitable for outdoor installations. Refer to Technical Advisory on page 66.

**Stocked items available! See page 58 for specific part numbers in our inventory.**

Part Number	Fiber Count	Outside Diameter		Weight		Min. Bend Radius				Max. Load (Installation)	
		mm	in.	kg/km	lbs/M'	Short Term		Long Term		Newtons	Ibs.
M9X013	2	5.84	.230	30	20	8.9	3.5	5.8	2.3	801	180
M9X014	4	6.68	.263	45	30	9.9	3.9	6.6	2.6	1535	345
M9X015	6	7.85	.309	61	41	11.7	4.6	7.9	3.1	2068	465
M9X016	8	8.53	.336	82	55	13.0	5.1	8.7	3.4	2700	600
M9X017	10	9.78	.385	109	73	14.7	5.8	9.8	3.9	2700	600
M9X018	12	9.93	.391	89	60	15.0	5.9	9.9	3.9	2700	600
M9X019	18	11.58	.456	132	89	17.3	6.8	11.4	4.5	2700	600
M9X020	24	13.82	.544	174	117	20.6	8.1	13.7	5.4	2700	600
M9X082	36	15.54	.612	229	154	23.6	9.3	15.7	6.2	2700	600

For "X" in part number see optical characteristics on page 33.

For fiber counts 2 – 12 see chart C on page 59. For greater than 12 fibers, jackets are orange or aqua (MM) or yellow (SM) and numbered.

# Riser Breakout

AdvanceLite®

2.5 mm sub-unit –  
Riser UL/c(UL) Type OFNR / OFN FT4



### Recommended Applications

- Riser cabling
- Office cabling
- Computer room cabling

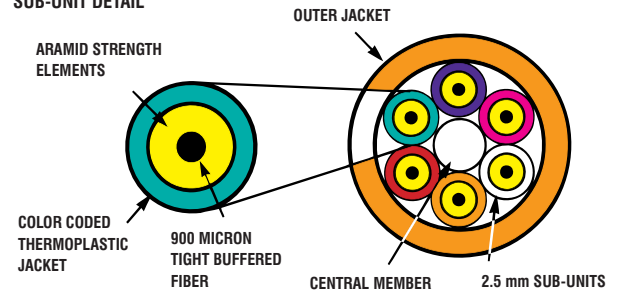
### Product Features

- 900 μm tight buffered fibers
- Color coded for easy termination
- Flame Retardant
- UL listed for code compliance
- Direct connectorization
- MSHA approved cables are available

### Mechanical, Environmental & Flame Characteristics

- Crush Resistance (EIA-455-41) 2000 N/cm
- Impact Resistance (EIA-455-25) 2000 Impacts w/1.6 N-m
- Flexure (EIA-455-104) 2000 cycles min.
- Min. Bend Radius Long Term – No Load 10x Cable diameter
- Min. Bend Radius Short Term – Load 15x Cable diameter
- Operating Temp. – –20°C to +70°C
- Installation Temp. – –10°C to +60°C
- Storage Temp. – –40°C to +80°C
- UL/c(UL) Rated Type OFNR / OFN FT4
- Flame Resistance UL 1666 Passed

### SUB-UNIT DETAIL



Product Note: May be suitable for outdoor installations. Refer to Technical Advisory on page 66.

Part Number	Fiber Count	Outside Diameter		Weight		Min. Bend Radius				Max. Load (Installation)	
		mm	in.	kg/km	lbs/M'	Short Term		Long Term		Newton	lbs.
M9X021	2	7.62	.300	45	30	11.4	4.5	7.6	3.0	1068	240
M9X022	4	9.17	.361	64	43	13.7	5.4	9.1	3.6	1535	345
M9X023	6	10.67	.420	104	70	15.9	6.3	10.6	4.2	2700	600
M9X024	8	12.14	.478	135	91	18.2	7.2	12.1	4.8	2700	600
M9X025	10	13.72	.540	202	136	20.6	8.1	13.7	5.4	2700	600
M9X026	12	15.60	.614	220	148	23.4	9.2	15.6	6.1	2700	600
M9X027	18	15.75	.620	205	138	23.6	9.3	15.7	6.2	2700	600
M9X028	24	17.98	.708	271	182	26.9	10.6	18.0	7.1	2700	600

For "X" in part number see optical characteristics on page 33.

For fiber counts 2 – 12 see chart C on page 59. For greater than 12 fibers, jackets are orange or aqua (MM) or yellow (SM) and numbered.



# Plenum Breakout



AdvanceLite®

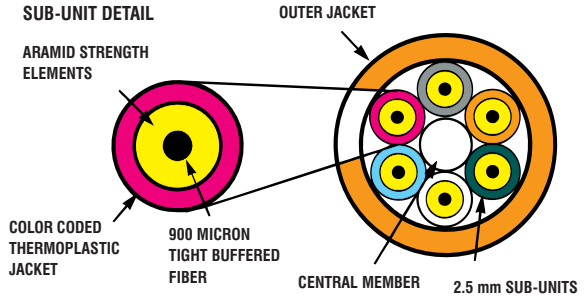
2.5 mm sub-units –  
Plenum UL/c(UL) Type OFNP / OFN FT6

### Recommended Applications

- Plenum and Riser cabling
- Office cabling
- Computer room cabling

### Product Features

- 900 μm tight buffered fibers
- Color coded for easy termination
- Flame Retardant
- UL listed for code compliance
- Direct connectorization



### Mechanical, Environmental & Flame Characteristics

- Crush Resistance (EIA-455-41) 2000 N/cm
- Impact Resistance (EIA-455-25) 2000 Impacts w/1.6 N-m
- Flexure (EIA-455-104) 2000 cycles min.
- Min. Bend Radius Long Term – No Load 10x Cable diameter
- Min. Bend Radius Short Term – Load 15x Cable diameter
- Operating Temp. – –20°C to +70°C
- Installation Temp. – 0°C to +60°C
- Storage Temp. – –40°C to +80°C
- UL/c(UL) Rated Type OFNP / OFN FT6
- Flame Resistance UL 910 Passed



Product Note: May be suitable for outdoor installations. Refer to Technical Advisory on page 66.

Part Number	Fiber Count	Outside Diameter		Weight		Min. Bend Radius				Max. Load (Installation)	
		mm	in.	kg/km	lbs/M'	Short Term		Long Term		Newtons	lbs.
M9X029	2	6.88	.271	39	26	10.4	4.1	6.9	2.7	801	180
M9X030	4	7.72	.304	58	39	11.4	4.5	7.6	3.0	1535	345
M9X031	6	8.84	.348	82	55	13.2	5.2	8.9	3.5	2700	600
M9X032	8	10.36	.408	113	76	15.5	6.1	10.4	4.1	2700	600
M9X033	10	11.94	.470	149	100	17.9	7.1	11.9	4.7	2700	600
M9X034	12	11.96	.471	119	80	17.9	7.1	11.9	4.7	2700	600
M9X035	18	14.12	.556	179	120	21.1	8.3	14.2	5.6	2700	600
M9X036	24	16.94	.667	234	157	25.4	10.0	17.0	6.7	2700	600

For "X" in part number see optical characteristics on page 33.

For fiber counts 2 – 12 see chart C on page 59. For greater than 12 fibers, jackets are orange or aqua (MM) or yellow (SM) and numbered.

# Outdoor Loose Tube

AdvanceLife®

Outdoor

### Recommended Applications

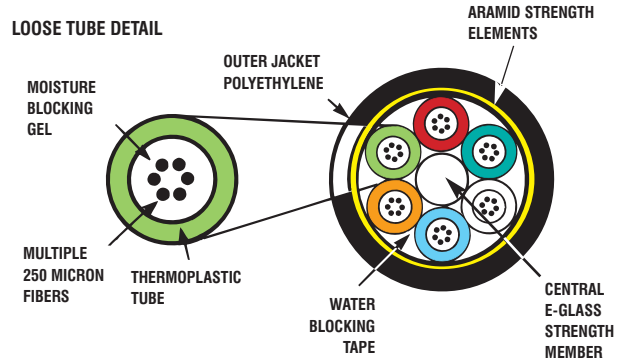
- Building interconnections and data trunk
- Long haul networking
- Ducts between buildings and aerial lashing
- Applications requiring good ozone, moisture, weather resistance

### Product Features

- All dielectric central strength member
- Excellent attenuation performance
- Dry water blocking for moisture protection
- Polyethylene jacket for weather and UV protection
- Breakout kits available (see page 53)
- Waterblock gel available

### Mechanical & Environmental Characteristics

- Crush Resistance (EIA-455-41) 2000 N/cm
- Impact Resistance (EIA-455-25) 2000 Impacts w/1.6 N-m
- Min. Bend Radius Long Term – No Load 15x Cable diameter
- Min. Bend Radius Short Term – Load 20x Cable diameter
- Operating Temp. – -40°C to +70°C
- Installation Temp. – -30°C to +60°C
- Storage Temp. – -50°C to +80°C



Stocked items available! See page 58 for specific part numbers in our inventory.

Part Number	Fiber Count	Fibers Per Tube	Outside Diameter		Weight		Min. Bend Radius				Max. Load (Installation)	
			mm	in.	kg/km	lbs/M'	Short Term		Long Term		Newton	lbs.
M9X510T	6	6	9.65	.380	65	44	19.3	7.6	14.5	5.7	2700	600
M9X511T	12	6	9.65	.380	65	44	19.3	7.6	14.5	5.7	2700	600
M9X500T	24	6	9.65	.380	67	45	19.3	7.6	14.5	5.7	2700	600
M9X502T	36	6	9.65	.380	70	47	19.3	7.6	14.5	5.7	2700	600
M9X505T	48	12	12.19	.480	104	70	24.4	9.6	18.3	7.2	2700	600
M9X507T	72	12	12.19	.480	104	70	24.4	9.6	18.3	7.2	2700	600
M9X513T	96	12	13.89	.547	138	93	27.7	10.9	20.8	8.1	2700	600
M9X509T	144	12	17.78	.700	222	149	35.6	14.0	26.7	10.5	2700	600
M9X520T	216	12	18.16	.715	220	148	36.3	14.3	27.2	10.7	2700	600

For "X" in part number see optical characteristics on page 33.

See color chart C on page 59.

# Armored Loose Tube

AdvanceLife®

## Outdoor Direct Burial – Armored

### Recommended Applications

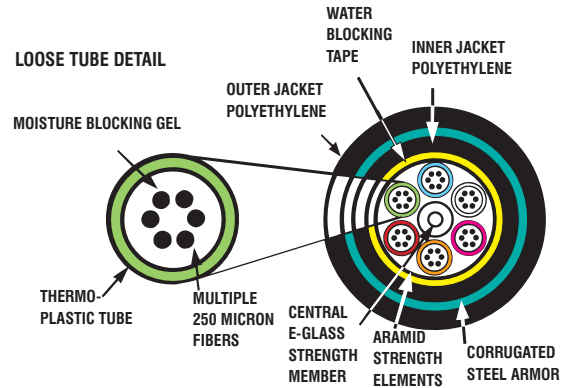
- Building interconnections
- Telecommunications and data trunk
- Long haul networking
- Direct burial and aerial lashing
- Applications requiring good ozone, moisture, weather resistance

### Product Features

- Excellent attenuation performance
- Dry water blocking for moisture protection
- Polyethylene jacket for weather and UV protection
- Breakout kits available (see page 53)
- Corrugated Steel Tape
- Rodent Resistant
- Waterblock gel available

### Mechanical & Environmental Characteristics

- Crush Resistance (EIA-455-41) 2000 N/cm
- Impact Resistance (EIA-455-25) 2000 Impacts w/1.6 N-m
- Min. Bend Radius Long Term – No Load 15x Cable diameter
- Min. Bend Radius Short Term – Load 20x Cable diameter
- Operating Temp. – -40°C to +70°C
- Installation Temp. – -30°C to +60°C
- Storage Temp. – -50°C to +80°C



Stocked items available! See page 58 for specific part numbers in our inventory.

Part Number	Fiber Count	Fibers Per Tube	Outside Diameter		Weight		Min. Bend Radius				Max. Load (Installation)	
			mm	in.	kg/km	lbs/M'	Short Term		Long Term		Newtons	lbs.
M9X381T	6	6	13.46	.530	150	101	26.9	10.6	20.2	8.0	2700	600
M9X382T	12	6	13.46	.530	152	102	26.9	10.6	20.2	8.0	2700	600
M9X384T	24	6	13.46	.530	153	103	26.9	10.6	20.2	8.0	2700	600
M9X386T	36	6	13.46	.530	155	104	26.9	10.6	20.2	8.0	2700	600
M9X389T	48	12	16.51	.650	214	144	33.0	13.0	24.9	9.8	2700	600
M9X391T	72	12	16.51	.650	211	142	33.0	13.0	24.9	9.8	2700	600
M9X398T	96	12	17.53	.690	250	168	35.1	13.8	26.4	10.4	2700	600
M9X393T	144	12	22.10	.870	359	241	44.2	17.4	33.3	13.1	2700	600
M9X400T	216	12	22.10	.870	359	241	44.2	17.4	33.3	13.1	2700	600

For "X" in part number see optical characteristics on page 33.

See color chart C on page 59.

# Loose Tube RiserLite®

AdvanceLite®

Indoor/Outdoor –  
UL/c(UL) Type OFNR / OFN FT4

### Recommended Applications

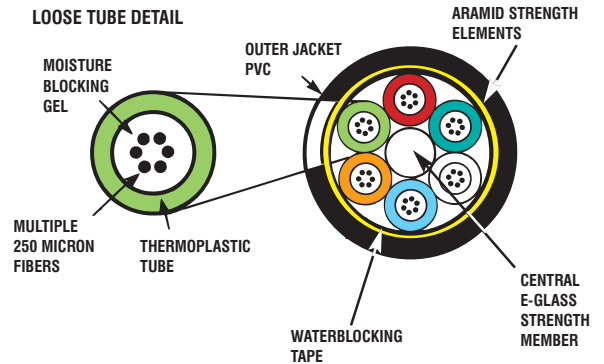
- Indoor/outdoor installations
- Telecommunications and data trunk
- Building interconnections

### Product Features

- No splicing required at building entrance
- Available with zero-halogen jacket
- Breakout kits available (see page 53)
- Fully waterblocked

### Mechanical & Environmental Characteristics

- Crush Resistance (EIA-455-41) 2000 N/cm
- Impact Resistance (EIA-455-25) 2000 Impacts w/1.6 N-m
- Min. Bend Radius Long Term – No Load 15x Cable diameter
- Min. Bend Radius Short Term – Load 20x Cable diameter
- Operating Temp. – -40°C to +70°C
- Installation Temp. – -20°C to +60°C
- Storage Temp. – -40°C to +80°C
- UL/c(UL) Rated Type OFNR / OFN FT4
- Flame Resistance UL 1666 Passed



Stocked items available! See page 58 for specific part numbers in our inventory.

Part Number	Fiber Count	Fibers Per Tube	Outside Diameter		Weight		Min. Bend Radius				Max. Load (Installation)	
			mm	in.	kg/km	lbs/M'	Short Term		Long Term		Newton	lbs.
M9X810	6	6	9.65	.380	94	63	19.3	7.6	14.5	5.7	2700	600
M9X811	12	6	9.65	.380	92	62	19.3	7.6	14.5	5.7	2700	600
M9X812	24	6	9.65	.380	91	61	19.3	7.6	14.5	5.7	2700	600
M9X813	36	6	9.65	.380	89	60	19.3	7.6	14.5	5.7	2700	600
M9X814	48	12	12.19	.480	132	89	24.4	9.6	18.3	7.2	2700	600
M9X815	72	12	12.19	.480	129	87	24.4	9.6	18.3	7.2	2700	600
M9X816	96	12	13.89	.547	170	114	27.7	10.9	20.8	8.2	2700	600
M9X817	144	12	17.78	.700	278	187	35.6	14.0	26.7	10.5	2700	600

For "X" in part number see optical characteristics on page 33.

See color chart C on page 59.

# Loose Tube RiserLite®

AdvanceLite®

Indoor/Outdoor Direct Burial/  
Armored UL/c(UL) Type OFCR/OFC FT4

### Recommended Applications

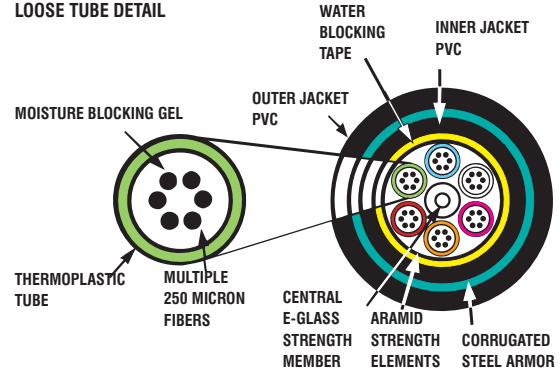
- Indoor/outdoor building interconnections
- Telecommunications and data trunk
- Long haul networking
- Direct burial and aerial lashing

### Product Features

- No splicing required at building entrance
- Available with zero-halogen jacket
- Breakout kits available (see page 53)
- Fully waterblocked

### Mechanical & Environmental Characteristics

- Crush Resistance (EIA-455-41) 2000 N-m
- Impact Resistance (EIA-455-25) 2000 Impacts w/1.6 N-m
- Min. Bend Radius Long Term – No Load 15x Cable diameter
- Min. Bend Radius Short Term – Load 20x Cable diameter
- Operating Temp. – -40°C to +70°C
- Installation Temp. – -20°C to +60°C
- Storage Temp. – -40°C to +80°C
- UL/c(UL) Rated Type OFCR / OFC FT4
- Flame Resistance 1666 Passed



Stocked items available! See page 58 for specific part numbers in our inventory.

Part Number	Fiber Count	Fibers Per Tube	Outside Diameter		Weight		Min. Bend Radius				Max. Load (Installation)	
			mm	in.	kg/km	lbs/M'	Short Term		Long Term		Newtons	lbs.
M9X890	6	6	13.72	.540	205	138	27.4	10.8	20.6	8.1	2700	600
M9X891	12	6	13.72	.540	204	137	27.4	10.8	20.6	8.1	2700	600
M9X892	24	6	13.72	.540	202	136	27.4	10.8	20.6	8.1	2700	600
M9X893	36	6	13.72	.540	201	135	27.4	10.8	20.6	8.1	2700	600
M9X894	48	12	16.76	.660	262	176	33.5	13.2	25.1	9.9	2700	600
M9X895	72	12	16.76	.660	256	172	33.5	13.2	25.1	9.9	2700	600
M9X896	96	12	17.78	.700	307	206	35.6	14.0	26.7	10.5	2700	600
M9X897	144	12	22.35	.880	449	302	44.7	17.6	33.5	13.2	2700	600

For "X" in part number see optical characteristics on page 33.

See color chart C on page 59.



# Plenum VersaLite™

AdvanceLite®

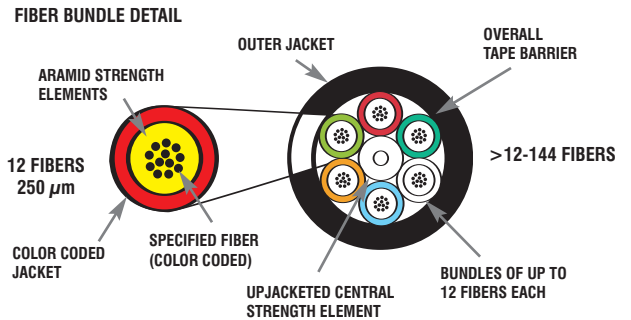
Indoor / Outdoor  
UL/c(UL) Type OFNP / OFN FT6

### Recommended Applications

- Campus backbones
- Interbuilding installations
- Data centers
- High density cable trays

### Product Features

- 2 to 144 fiber
- Small diameter and bend radius facilitate installation in tight spaces
- Fibers and subunits are color-coded for ease of identification
- All-dielectric construction eliminates the need for grounding
- Fibers grouped into sets of 12 for maximum density



### Mechanical & Environmental Characteristics

- Crush Resistance (EIA-455-41) 250 N/cm
- Impact Resistance (EIA-455-25) 2000 Impacts w/1.6 N-m
- Flexure (EIA-455-104) 2000 Cycles min.
- Min. Bend Radius Long Term – No Load 15x Cable diameter
- Min. Bend Radius Short Term – Load 20x Cable diameter
- Operating Temp. – –40°C to +70°C
- Installation Temp. – 0°C to +60°C
- Storage Temp. – –40°C to +80°C



### Options

- Available in 50 μm, 62.5 μm, single-mode, and hybrid constructions
- Available in colored jackets for indoor only installations
- Available with Interlock Armor

**Stocked items available! See page 58 for specific part numbers in our inventory.**

Part Number	Fiber Count	Fibers Per Tube	Outside Diameter		Weight		Min. Bend Radius				Max. Load (Installation)	
			mm	in.	kg/km	lbs/M'	Short Term		Long Term		Newton	lbs.
M9X202	6	6	6.7	.265	49	33	13.5	5.3	10.2	4.0	1423	320
M9X204	12	12	6.7	.265	49	33	13.5	5.3	10.2	4.0	1423	320
M9X205	24	12	9.12	.359	70	47	18.3	7.2	13.7	5.4	1801	405
M9X206	36	12	9.12	.359	70	47	18.3	7.2	13.7	5.4	1801	405
M9X207	48	12	9.12	.359	71	48	18.3	7.2	13.7	5.4	1801	405
M9X209	72	12	10.9	.429	107	72	21.8	8.6	16.3	6.4	3216	723
M9X211	96	12	12.73	.501	152	102	25.4	10.0	19.1	7.5	4017	903
M9X215	144	12	16.89	.665	284	191	33.8	13.3	25.4	10.0	5618	1263

For "X" in part number see optical characteristics on page 33.

See color chart C on page 59.

# Outside Plant Central Tube

AdvanceLife®

Outside Plant

### Recommended Applications

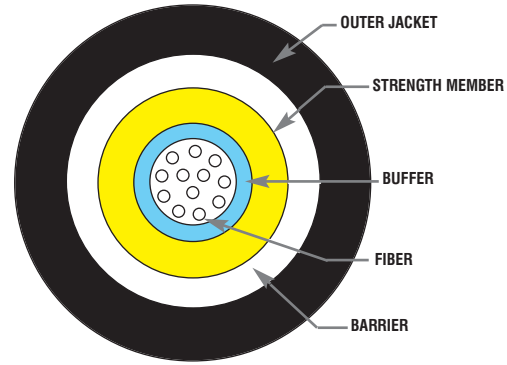
- Campus OSP backbones
- Drop cable
- Telecommunications and data trunk

### Product Features

- Economical option for low fiber counts
- Quick and easy end preparation
- Fully waterblocked
- No rods – easy handling

### Mechanical & Environmental Characteristics

- Crush Resistance (EIA-455-41) 250 N/cm
- Impact Resistance (EIA-455-25) 2000 Impacts  
w/1.6 N-m
- Min. Bend Radius Long Term 15x Cable
- Min. Bend Radius Short Term 20x Cable
- Operating Temp. – –40°C to +70°C
- Installation Temp. – –30°C to +60°C
- Storage Temp. – –40°C to +70°C



Stocked items available! See page 58 for specific part numbers in our inventory.

### Outdoor

Part Number	Fiber Count	Outside Diameter		Weight		Min. Bend Radius				Max. Load (Installation)	
		mm	in.	kg/km	lbs/M'	Short Term		Long Term		Newton	lbs.
M9X150	2	8.26	.325	52	35	16.5	6.5	12.45	4.9	2700	600
M9X151	4	8.26	.325	52	35	16.5	6.5	12.45	4.9	2700	600
M9X152	6	8.26	.325	52	35	16.5	6.5	12.45	4.9	2700	600
M9X153	8	8.26	.325	52	35	16.5	6.5	12.45	4.9	2700	600
M9X154	10	8.26	.325	52	35	16.5	6.5	12.45	4.9	2700	600
M9X155	12	8.26	.325	52	35	16.5	6.5	12.45	4.9	2700	600

### Outdoor Armored

Part Number	Fiber Count	Outside Diameter		Weight		Min. Bend Radius				Max. Load (Installation)	
		mm	in.	kg/km	lbs/M'	Short Term		Long Term		Newton	lbs.
M9X170	2	10.41	.410	101	68	20.8	8.2	15.6	6.15	2700	600
M9X171	4	10.41	.410	101	68	20.8	8.2	15.6	6.15	2700	600
M9X172	6	10.41	.410	101	68	20.8	8.2	15.6	6.15	2700	600
M9X173	8	10.41	.410	101	68	20.8	8.2	15.6	6.15	2700	600
M9X174	10	10.41	.410	101	68	20.8	8.2	15.6	6.15	2700	600
M9X175	12	10.41	.410	101	68	20.8	8.2	15.6	6.15	2700	600

For "X" in part number see optical characteristics on page 33.

See color chart C on page 59.

# Micro-Loose® Tube



## AdvanceLite®

### Mini-tube – (900 μm)

■ UL/c(UL) Type OFN / OFN FT1

■ UL/c(UL) Type OFNR / OFN FT4

#### Recommended Applications

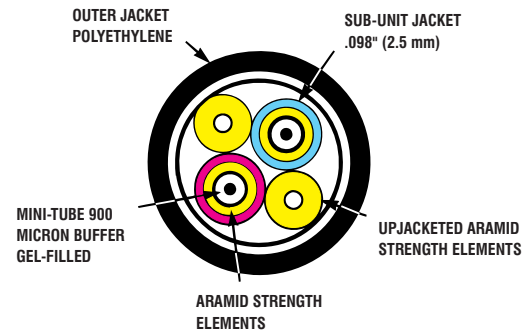
- Ducts between buildings
- Telecommunications and data trunk

#### Product Features

- Loose buffer dimensions compatible with standard connectors (900 μm)
- Waterblock gel for moisture protection
- Breakout kits not required for connectorization

#### Mechanical & Environmental Characteristics

- Crush Resistance (EIA-455-41) 600 N/cm
- Impact Resistance (EIA-455-25) 20 Impacts w/1.0 N-m
- Min. Bend Radius Long Term – No Load 15x Cable diameter
- Min. Bend Radius Short Term – Load 20x Cable diameter
- Operating Temp. – -20°C to +70°C
- Installation Temp. – -20°C to +60°C
- Storage Temp. – -40°C to +70°C



Part Number	Fiber Count	Outside Diameter		Weight		Min. Bend Radius				Max. Load (Installation)	
		mm	in.	kg/km	lbs/M'	Short Term		Long Term		Newton	lbs.
						cm	in.	cm	in.		
M9X700	1	9.14	.360	64	43	18.3	7.2	13.7	5.4	1668	375
M9X701	2	9.14	.360	61	41	18.3	7.2	13.7	5.4	1535	345
M9X702	4	9.14	.360	58	39	18.3	7.2	13.7	5.4	1267	285
M9X703	6	10.62	.418	80	54	21.2	8.4	15.9	6.3	1801	405
M9X704	8	12.14	.478	113	76	24.3	9.6	18.2	7.2	2700	600
M9X705	12	15.60	.614	192	129	31.2	12.3	23.4	9.2	2700	600
M9X720	1	9.25	.364	79	53	18.5	7.3	14.0	5.5	1668	375
M9X721	2	9.25	.364	76	51	18.5	7.3	14.0	5.5	1535	345
M9X722	4	9.25	.364	73	49	18.5	7.3	14.0	5.5	1267	285
M9X723	6	10.72	.424	101	68	21.2	8.4	15.9	6.3	1801	405
M9X724	8	12.24	.482	115	77	24.3	9.6	18.2	7.2	2700	600
M9X725	12	15.70	.618	193	130	31.5	12.4	23.6	9.3	2700	600
M9X740	1	9.45	.372	85	57	18.8	7.4	14.2	5.6	1668	375
M9X741	2	9.45	.372	82	55	18.8	7.4	14.2	5.6	1535	345
M9X742	4	9.45	.372	76	51	18.8	7.4	14.2	5.6	1267	285
M9X743	6	10.97	.432	110	74	21.8	8.6	16.5	6.5	1801	405
M9X744	8	12.45	.490	140	94	24.9	9.8	18.8	7.4	2700	600
M9X745	12	15.90	.626	229	154	31.8	12.5	23.9	9.4	2700	600

For "X" in part number see optical characteristics on page 33.

See color chart C on page 59.

# ArmorLite™

AdvanceLite®

Heavy Duty Interlock Armored  
Riser – UL/c(UL) Type OFCR / OFC FT4  
Plenum – UL/c(UL) Type OFCP / OFC FT6

### Recommended Applications

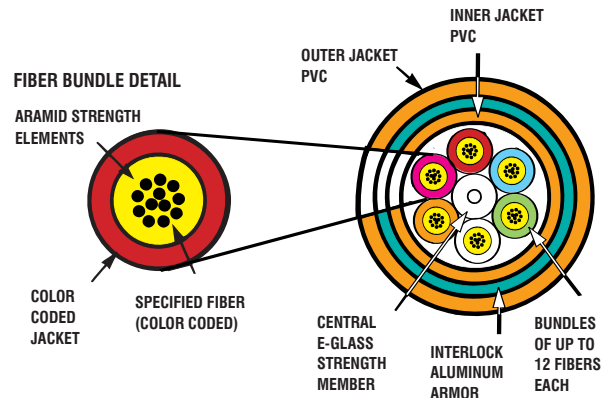
- Industrial environments
- Rugged installations
- Mining shafts
- Telecommunications and data trunk
- Replacement for innerduct

### Product Features

- Excellent mechanical protection
- Heavy duty construction
- Eliminates need for innerduct
- Versions available for outside plant
- Colored armor available

### Mechanical & Environmental Characteristics

- Crush Resistance (EIA-455-41) 2000 N/cm
- Impact Resistance (EIA-455-25) 2000 Impacts w/3 N-m
- Min. Bend Radius Long Term 15x Cable
- Min. Bend Radius Short Term 20x Cable
- Operating Temp. – -20°C to +70°C
- Installation Temp. – 0°C to +60°C
- Storage Temp. – -40°C to +70°C
- UL/c(UL) rated Type OFCR / OFC FT4
- Flame Resistance UL 1666 Passed
- UL/c(UL) Rated Type OFCP / OFC FT6
- Flame Resistance UL 910 Passed



Stocked items available! See page 58 for specific part numbers in our inventory.

### Plenum

Part Number	Fiber Count	Outside Diameter		Weight		Min. Bend Radius				Max. Load (Installation)	
		mm	in.	kg/km	lbs/M'	Short Term		Long Term		Newton	lbs.
						cm	in.	cm	in.		
M9X240	6	12.2	.481	134	90	24.4	9.6	18.3	7.2	1201	270
M9X241	12	12.85	.506	153	103	25.7	10.1	19.3	7.6	1334	300
M9X242	24	16.03	.631	225	151	32.0	12.6	24.1	9.5	1735	390
M9X243	24	19.84	.781	201	135	39.6	15.6	29.7	11.7	5618	1263
M9X244	36	22.38	.881	460	309	44.7	17.6	33.5	13.2	8509	1913
M9X245	48	22.38	.881	439	295	44.7	17.6	33.5	13.2	5538	1245
M9X246	72	26.19	1.031	644	433	52.3	20.6	39.4	15.5	9310	2093
M9X247	96	30.63	1.206	905	608	61.2	24.1	46.0	18.1	9608	2160
M9X248	144	33.81	1.331	1022	687	67.6	26.6	50.8	20.0	16213	3645

For "X" in part number see optical characteristics on page 33.

For Buffer colors see chart C on page 59.

# Simplex & Duplex

AdvanceLite®

2.9 mm diameter –  
 UL Type OFNR / c(UL) OFN FT4  
 UL Type OFNP / c(UL) OFN FT6  
 LSZH

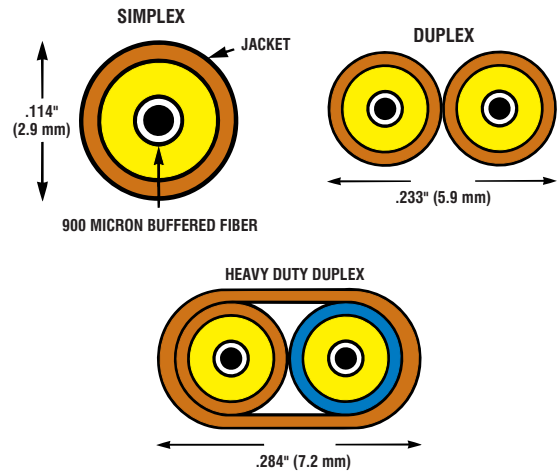


### Recommended Applications

- Patch cables
- Short run office cabling
- Computer room cabling
- Other sizes available

### Mechanical, Environmental & Flame Characteristics

- Crush Resistance (EIA-455-41) 200 N/cm
- Impact Resistance (EIA-455-25) 20 Impacts w/1.0 N-m
- Flexure (EIA-455-104) 100 cycles min.
- Min. Bend Radius Long Term – No Load 10x Cable diameter
- Min. Bend Radius Short Term – Load 15x Cable diameter
- Operating Temp. – -20°C to +70°C
- Installation Temp. – 0°C to +60°C
- Storage Temp. – -40°C to +70°C
- UL/c(UL) Rated Type OFNR / OFN FT4
- UL/c(UL) Rated Type OFNP / OFN FT6
- LSZH



Stocked items available! See page 58 for specific part numbers in our inventory.

Part Number	Type	Fiber Count	Weight		Min. Bend Radius				Max. Load (Installation)	
			kg/km	lbs/M'	Short Term		Long Term		Newton	lbs.
					cm	in.	cm	in.		

### Riser

M9X001	Simplex	1	9	6	4.3	1.7	2.9	1.1	400	90
M9X002	Duplex	2	18	12	4.3	1.7	2.9	1.1	801	180
M9X080	Heavy Duty Duplex	2	31	21	6.3	2.5	4.2	1.7	801	180

### Plenum

M9X003	Simplex	1	9	6	4.3	1.7	2.9	1.1	400	90
M9X004	Duplex	2	19	13	4.3	1.7	2.9	1.1	801	180
M9X081	Heavy Duty Duplex	2	28	19	5.6	2.2	3.8	1.5	801	180

For "X" in part number see optical characteristics on page 33.

### Low Smoke Zero Halogen

M96436	Simplex	1	9	6	4.3	1.7	2.9	1.1	400	90
M98177	Duplex	2	19	13	4.3	1.7	2.9	1.1	801	180
M95890	Heavy Duty Duplex	2	34	23	6.3	2.5	4.2	1.7	801	180

LSZH Cables contain 62.5/125 grade 2 fiber.

Also available with other fiber types.



# Tactical Cables

AdvanceLife®

## Fiber Optic Tactical Cables

### Recommended Applications

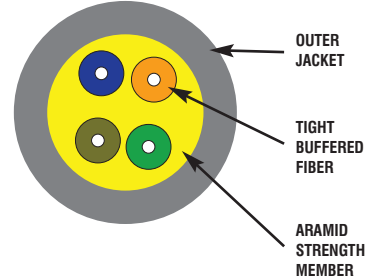
- ENG vehicles
- Outdoor events
- Re-deployable communications
- Digital camera transmission

### Product Features

- Rugged jacket
- Durable design for repeated handling
- Designed to military standards
- Superior level of crush resistance

### Mechanical & Environmental Characteristics

- Crush Resistance (EIA-455-41) 440 N/cm
- Impact Resistance (EIA-455-25) 200 Impacts w/2.2 N-m
- Flexure (EIA-455-104) 2000 Cycles min.
- Min. Bend Radius Long Term – 8x Cable diameter
- Min. Bend Radius Short Term – 15x Cable diameter Load
- Operating Temp. (EIA-455-3) –55°C to +85°C
- Storage Temp. (EIA-455-3) –70°C to +85°C



Stocked items available! See page 58 for specific part numbers in our inventory.

### Single-Mode

Part Number	Fiber Count	Nominal OD		Weight		Min. Bend Radius				Max. Load (Installation)	
		mm	in.	kg/km	lbs/M'	Short Term		Long Term		Newton	lbs.
M96566	2	5.3	.210	28	19	8.3	3.2	4.3	1.7	1468	330
M96639	4	5.7	.225	28	19	8.6	3.4	4.6	1.8	1468	330
M96567	6	6.1	.240	36	24	9.1	3.6	4.8	1.9	1468	330
M96568	8	6.3	.250	39	26	9.7	3.8	6.4	2.5	1468	330
M96569	10	6.7	.265	42	28	10.2	4.0	6.9	2.7	1468	330
M96570	12	6.5	.255	36	24	9.7	3.8	5.1	2.0	1468	330

### Multimode (62.5/125 Grade 2)

Part Number	Fiber Count	Nominal OD		Weight		Min. Bend Radius				Max. Load (Installation)	
		mm	in.	kg/km	lbs/M'	Short Term		Long Term		Newton	lbs.
M96571	2	5.3	.210	28	19	8.3	3.2	4.3	1.7	1468	330
M96551	4	5.7	.225	28	19	8.6	3.4	4.6	1.8	1468	330
M96572	6	6.1	.240	36	24	9.1	3.6	4.8	1.9	1468	330
M96573	8	6.3	.250	39	26	9.7	3.8	6.4	2.5	1468	330
M96574	10	6.7	.265	42	28	10.2	4.0	6.9	2.7	1468	330
M96575	12	6.5	.255	36	24	9.7	3.8	5.1	2.0	1468	330

Additional optical fiber versions also available – contact factory.

See optical characteristics on page 33.

For buffer colors see chart C on page 59.

# Optimax<sup>®</sup> System



## Recommended Applications

- Field termination of cable
- Storage network connections
- Switch to fiber distribution
- Panel connections

## Product Features

- **Pre-Polished Fiber Stub**  
Does not require polishing paper; less craft-sensitive
- **Safer, Simpler Installation**  
No epoxy, curing equipment or power needed
- **Precision Fiber Contact**  
Pre-radiused PC ceramic ferrule assures durable contact and optimum mechanical performance
- **Dramatic Reductions in:**  
Installation Time; Cost of Equipment and Materials;  
Expertise/Training Required

## Options

- Field-installable Multimode ST-type, SC or LC Fiber Optic Connectors

Part Number	Description
A0408835	900 $\mu$ m 62.5/125 ST connector
AX101075	900 $\mu$ m 50/125 ST connector
AX101791	900 $\mu$ m Single-Mode ST connector
AX101793	Additional parts for jacketed ST
AX100029	900 $\mu$ m 62.5/125 SC connector
AX101077	900 $\mu$ m 50/125 SC connector
AX101792	900 $\mu$ m Single-Mode SC connector
AX101794	Additional parts for jacketed SC
AX101981	900 $\mu$ m 62.5/125 LC connector
AX101982	900 $\mu$ m 50/125 LC connector
AX101983	900 $\mu$ m Single-Mode LC connector
AX101984	Additional parts for jacketed LC

The Optimax Connectors are reliable field installable optical fiber connectors that are easy to install. They do not require epoxy, curing or polishing. Their unique design incorporates a factory polished fiber stub in a splice mechanism which provides a fast, secure, and reliable termination on optical fiber cables. All critical steps are performed in the factory, ensuring a superior-quality connection every time. Only simple tools are required for installation, making Optimax a cost effective field termination.

Optimax Connectors are high-quality LC, SC and ST Compatible connectors that use a ceramic ferrule with a physical contact (PC) polish for Multimode and super physical contact (SPC) polish for Single-mode that ensures the best possible mating of optical fibers. Connectors are available for 62.5 or 50/125  $\mu$ m Multimode fiber and Single-mode fiber installations.

## Specifications

*Interconnection Compatibility:* All ST-type, SC and LC connectors and compatibles

*Field Assembly Time:* 1 minute for 900  $\mu$ m fiber; 3 minutes for jacketed fiber

*Insertion Loss (Attenuation):* 0.3 dB (typical)

*Durability:* <0.2 dB change, 500 cycles multimode; <0.3 dB change, 500 cycles single-mode

*Nominal Fiber OD:* 125  $\mu$ m

*Operating Temperature:* 0°C to +60°C (+32°F to +140°F)

*Storage Temperature:* -40°C to +65°C (-40°F to +149°F)

*Tensile Strength:* 12 lbs (54 N)

*Ferrule:* Zirconia ceramic

*Reflectance:* -30 dB (typical) multimode; -40 dB (guaranteed) single-mode

## Optimax<sup>®</sup> Tool Kit

Everything your field people need – and need to know – for expert installations is packaged in a small convenient carrying case: installation instructions and all the tools required to terminate 900  $\mu$ m buffered optical fiber and jacketed fiber.

Note: For installers already possessing basic fiber installation tools, dedicated tools can be purchased separately.

Part Number	Description
AX100947	Complete Tool Kit
AX102062	Installation Tool LC (does not include tool-clamp)
A0403634	Installation Tools ST Compatible & SC (Includes tool-clamp)
A0408829	Cleaver



# Plug & Play

## Pre-Terminated Cables for Plug & Play Installations

### Recommended Applications

- Intra-building installations
- Data centers

### Product Features

- **2 - 144 Fibers**
- **Maximum Density, Minimum Diameter**  
Fibers are grouped in sets of 12. Small diameter and bend radius facilitate installation in tight spaces.
- **Easy Identification and Installation**  
Subunits are color-coded for identification. All-dielectric construction eliminates the need for grounding. Fibers terminated in MPO connectors.

### Options

- Available in 50  $\mu\text{m}$ , 62.5  $\mu\text{m}$ , single-mode, and hybrid constructions.
- Available in colored jackets.



Mohawk's unique data center assemblies combine compact size with industry standard MPO terminations to facilitate quick installations with maximum flexibility. Cable diameters are reduced by as much as 35% to save space in cable management pathways. The MPO terminations allow the cables to plug into a variety of manufacturers' fiber cassettes which convert the MPO interface to an LC, SC, ST or other connector style. Factory terminations provide a pre-qualified high performance connection which removes the variability of field polishing from the link. All cables are plenum (OFNP) rated to allow them to be installed in any interior location. The fiber performance can be specified using Mohawk's grading system to match the application. Hybrid cables, combining different fiber types, can also be specified.

**MD - X CCC - LLLF**

Part No.

Example: **MD - C 024 - 200F**

(Grade 5 24-fiber cable, 200 foot assembly)

**MD** = Mini-Distribution Cable

**MA** = Mini-Distribution Interlock Armor Cable

**X** = Fiber Type

**CCC** = Fiber Count (12 - 144)

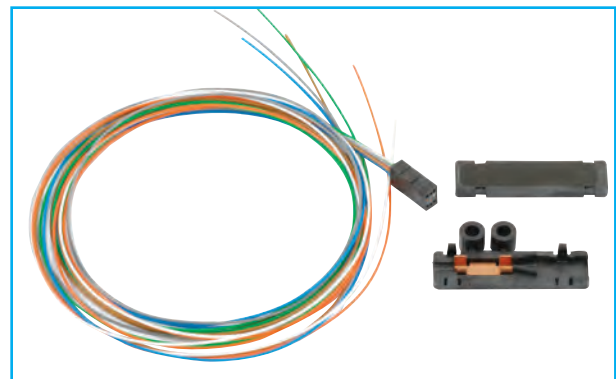
**LLL** = Length of Assembly (feet)

(For "X" in part number see optical characteristics on page 33.)

# Breakout Kit

This Field Breakout Kit is designed to attach to one tube of a loose tube cable and has either six or twelve 900  $\mu\text{m}$  tubes that hold each of the coated fibers. For each end of the cable, one kit is needed for every tube. For example, part number M9B511T has two tubes with six 62.5/125 fibers each. This cable requires four field breakout kits; two for each end of the cable.

The kit is available in two sizes to accommodate the two different tube sizes which are manufactured by Mohawk. For tubes containing one to six fibers, the diameter is 0.075" (1.9 mm) and for tubes containing seven to twelve fibers, the diameter is 0.110" (2.8 mm). Every kit is shipped with a complete set of instructions.



Part Number	Tube Diameter	Fibers/Tube
AX101100	0.075" (1.9 mm)	≤ 6
AX101101	0.110" (2.8 mm)	7-12

# Cross Reference

## Fiber Optic Cable Part # Cross Reference

Corning Cable	Berk-Tek	Mohawk	Fiber Size
<b>Riser Rated Patch Cables (OFNR)</b>			
001K31-31141-24	ICR001CB3510/25	<b>M92001</b>	62.5/125
002K51-31141-24	ICR0X0CB3510/25	<b>M95630</b>	62.5/125
002K81-31130-24	ICR002CB3510/25	<b>M9B037</b>	62.5/125
001C31-31131-24	ICR001LB3520/55	<b>M9A001</b>	50/125
002C51-31131-24	ICR0X0LB3520/55	<b>M9A002</b>	50/125
002C81-31131-24	ICR002BB3520/55	<b>M9A037</b>	50/125
001E31-31131-24	ICR001AB0707	<b>M9W001</b>	Single-Mode
002E51-31131-24	ICR0X0AB0707	<b>M9W002</b>	Single-Mode
002E81-31131-24	ICR002AB0707	<b>M9W037</b>	Single-Mode

Corning Cable	Berk-Tek	Mohawk	Fiber Size
<b>Plenum Rated Patch Cables (OFNP)</b>			
001K38-31141-29	ICP001CB3510/25	<b>M92003</b>	62.5/125
002K58-31141-29	ICP0X0CB3510/25	<b>M96232</b>	62.5/125
002K88-31130-29	ICP002CB3510/25	<b>M9B043</b>	62.5/125
001C38-31131-29	ICP001LB3520/55	<b>M9A003</b>	50/125
002C58-31131-29	ICP0X0LB3520/55	<b>M9A004</b>	50/125
002C88-31131-29	ICP002BB3520/55	<b>M9A043</b>	50/125
001E38-31131-29	ICP001AB0707	<b>M93003</b>	Single-Mode
002E58-31131-29	ICP0X0AB0707	<b>M93004</b>	Single-Mode
002E88-31131-29	ICP002AB0707	<b>M93043</b>	Single-Mode

Corning Cable	Berk-Tek	Mohawk	Fiber Size
<b>Riser Rated Distribution Cables (OFNR)</b>			
004K81-31130-24	ICR004CB3510/25	<b>M9B038</b>	62.5/125
006K81-31130-24	PDR006CB3510/25	<b>M9B039</b>	62.5/125
008K81-31130-24	PDR008CB3510/25	<b>M9B040</b>	62.5/125
012K81-33130-24	PDR012CB3510/25	<b>M9B042</b>	62.5/125
024K81-33130-24	PDR024CB3510/25	<b>M9B601</b>	62.5/125
036K81-61130-24	PDR6B036CB3510/25	<b>M9B604</b>	62.5/125
048K81-T3130-24	PDR12B048CB3510/25	<b>M9B606</b>	62.5/125
072K81-T3130-24	PDR12B072CB3510/25	<b>M9B609</b>	62.5/125
096K81-T3130-24	PDR12B096CB3510/25	<b>M9B622</b>	62.5/125
144K81-T3130-24	PDR12B144CB3510/25	<b>M9B619</b>	62.5/125
004C81-31131-24	ICR004LB3520/55	<b>M9A038</b>	50/125
006C81-31131-24	PDR006LB3520/55	<b>M9A039</b>	50/125
008C81-31131-24	PDR008LB3520/55	<b>M9A040</b>	50/125
012C81-33131-24	PDR012LB3520/55	<b>M9A042</b>	50/125
024C81-33131-24	PDR024LB3520/55	<b>M9A601</b>	50/125
036C81-61131-24	PDR6B036LB3520/55	<b>M9A604</b>	50/125
048C81-T3131-24	PDR12B048LB3520/55	<b>M9A606</b>	50/125
072C81-T3131-24	PDR12B072LB3520/55	<b>M9A609</b>	50/125
096C81-T3131-24	PDR12B096LB3520/55	<b>M9A622</b>	50/125
144C81-T3131-24	PDR12B144LB3520/55	<b>M9A619</b>	50/125

Corning Cable	Berk-Tek	Mohawk	Fiber Size
<b>Riser Rated Distribution Cables (OFNR) continued</b>			
004E81-31131-24	ICR004AB1010	<b>M9W038</b>	Single-Mode
006E81-31131-24	PDR006AB1010	<b>M9W039</b>	Single-Mode
008E81-31131-24	PDR008AB1010	<b>M9W040</b>	Single-Mode
012E81-33131-24	PDR012AB1010	<b>M9W042</b>	Single-Mode
024E81-33131-24	PDR024AB1010	<b>M9W601</b>	Single-Mode
036E81-61131-24	PDR6B036AB1010	<b>M9W604</b>	Single-Mode
048E81-T3131-24	PDR12B048AB1010	<b>M9W606</b>	Single-Mode
072E81-T3131-24	PDR12B072AB1010	<b>M9W609</b>	Single-Mode
096E81-T3131-24	PDR12B096AB1010	<b>M9W622</b>	Single-Mode
144E81-T3131-24	PDR12B144AB1010	<b>M9W619</b>	Single-Mode

Corning Cable	Berk-Tek	Mohawk	Fiber Size
<b>Plenum Rated Distribution Cables (OFNP)</b>			
004K88-31130-29	ICP004CB3510/25	<b>M9B044</b>	62.5/125
006K88-31130-29	PDP006CB3510/25	<b>M9B045</b>	62.5/125
008K88-31130-29	PDP008CB3510/25	<b>M9B046</b>	62.5/125
012K88-33130-29	PDP012CB3510/25	<b>M9B048</b>	62.5/125
024K88-33130-29	PDP024CB3510/25	<b>M9B611</b>	62.5/125
036K88-61130-29	PDP6B036CB3510/25	<b>M9B614</b>	62.5/125
048K88-T3130-29	PDP12B048CB3510/25	<b>M9B616</b>	62.5/125
072K88-T3130-29	PDP12B072CB3510/25	<b>M9B620</b>	62.5/125
096K88-T3130-29	PDP12B096CB3510/25	<b>M9B623</b>	62.5/125
144K88-T3130-29	PDP12B144CB3510/25	<b>M9B621</b>	62.5/125
004C88-31131-29	ICP004LB3520/55	<b>M9A044</b>	50/125
006C88-31131-29	ICP006LB3520/55	<b>M9A045</b>	50/125
008C88-31131-29	ICP008LB3520/55	<b>M9A046</b>	50/125
012C88-33131-29	ICP012LB3520/55	<b>M9A048</b>	50/125
024C88-33131-29	ICP024LB3520/55	<b>M9A611</b>	50/125
036C88-61131-29	ICP6B036LB3520/55	<b>M9A614</b>	50/125
048C88-T3131-29	ICP12B048LB3520/55	<b>M9A616</b>	50/125
072C88-T3131-29	ICP12B072LB3520/55	<b>M9A620</b>	50/125
096C88-T3131-29	ICP12B096LB3520/55	<b>M9A623</b>	50/125
144C88-T3131-29	ICP12B144LB3520/55	<b>M9A621</b>	50/125
004E88-31131-29	ICP004AB1010	<b>M9W044</b>	Single-Mode
006E88-31131-29	PDP006AB1010	<b>M9W045</b>	Single-Mode
008E88-31131-29	PDP008AB1010	<b>M9W046</b>	Single-Mode
012E88-33131-29	PDP012AB1010	<b>M9W048</b>	Single-Mode
024E88-33131-29	PDP024AB1010	<b>M9W611</b>	Single-Mode
036E88-61131-29	PDP6B036AB1010	<b>M9W614</b>	Single-Mode
048E88-T3131-29	PDP12B048AB1010	<b>M9W616</b>	Single-Mode
072E88-T3131-29	PDP12B072AB1010	<b>M9W620</b>	Single-Mode
096E88-T3131-29	PDP12B096AB1010	<b>M9W623</b>	Single-Mode
144E88-T3131-29	PDP12B144AB1010	<b>M9W621</b>	Single-Mode

# Cross Reference

## Fiber Optic Cable Part # Cross Reference

Corning Cable	Berk-Tek	Mohawk	Fiber Size
<b>ArmorLite™ Plenum Rated Distribution Cables</b>			
006K88-31130-A3	PDPK006CB3510/25	<b>M9B240</b>	62.5/125
012K88-33130-A3	PDPK012CB3510/25	<b>M9B241</b>	62.5/125
024K88-33130-A3	PDPK024CB3510/25	<b>M9B242</b>	62.5/125
006C88-31131-A3	PDPK006BB3520/55	<b>M9A240</b>	50/125
012C88-33131-A3	PDPK012BB3520/55	<b>M9A241</b>	50/125
024C88-33131-A3	PDPK024BB3520/55	<b>M9A242</b>	50/125
006E88-31131-A3	PDPK006AB1010	<b>M9W240</b>	Single-Mode
012E88-33131-A3	PDPK012AB1010	<b>M9W241</b>	Single-Mode
024E88-33131-A3	PDPK024AB1010	<b>M9W242</b>	Single-Mode
<b>Riser Rated Breakout Cables (OFNR)</b>			
002K61-31330-24	HDR002CB3510/25	<b>M9B005</b>	62.5/125
004K61-31330-24	HDR004CB3510/25	<b>M9B006</b>	62.5/125
006K61-31330-24	HDR006CB3510/25	<b>M9B007</b>	62.5/125
008K61-31330-24	HDR008CB3510/25	<b>M9B008</b>	62.5/125
012K61-31330-24	HDR012CB3510/25	<b>M9B010</b>	62.5/125
024K61-31330-24	HDR024CB3510/25	<b>M9B012</b>	62.5/125
036K61-31330-24	HDR036CB3510/25	<b>M9B083</b>	62.5/125
002C61-31331-24	HDR002BB3520/55	<b>M9A005</b>	50/125
004C61-31331-24	HDR004BB3520/55	<b>M9A006</b>	50/125
006C61-31331-24	HDR006BB3520/55	<b>M9A007</b>	50/125
008C61-31331-24	HDR008BB3520/55	<b>M9A008</b>	50/125
012C61-31331-24	HDR012BB3520/55	<b>M9A010</b>	50/125
024C61-31331-24	HDR024BB3520/55	<b>M9A012</b>	50/125
036C61-31331-24	HDR036BB3520/55	<b>M9A083</b>	50/125
002R61-31331-24	HDR002AB1010	<b>M9W005</b>	Single-Mode
004R61-31331-24	HDR004AB1010	<b>M9W006</b>	Single-Mode
006R61-31331-24	HDR006AB1010	<b>M9W007</b>	Single-Mode
008R61-31331-24	HDR008AB1010	<b>M9W008</b>	Single-Mode
012R61-31331-24	HDR012AB1010	<b>M9W010</b>	Single-Mode
024R61-31331-24	HDR024AB1010	<b>M9W012</b>	Single-Mode
036R61-31331-24	HDR036AB1010	<b>M9W083</b>	Single-Mode
<b>Plenum Rated Breakout Cables (OFNP)</b>			
002K68-31330-29	HDP002CB3510/25	<b>M9B013</b>	62.5/125
004K68-31330-29	HDP004CB3510/25	<b>M9B014</b>	62.5/125
006K68-31330-29	HDP006CB3510/25	<b>M9B015</b>	62.5/125
008K68-31330-29	HDP008CB3510/25	<b>M9B016</b>	62.5/125

Corning Cable	Berk-Tek	Mohawk	Fiber Size
<b>Plenum Rated Breakout Cables (OFNP) continued</b>			
012K68-31330-29	HDP012CB3510/25	<b>M9B018</b>	62.5/125
024K68-31330-29	HDP024CB3510/25	<b>M9B020</b>	62.5/125
036K68-31330-29	HDP036CB3510/25	<b>M9B082</b>	62.5/125
002C68-31331-29	HDP002BB3520/55	<b>M9A013</b>	50/125
004C68-31331-29	HDP004BB3520/55	<b>M9A014</b>	50/125
006C68-31331-29	HDP006BB3520/55	<b>M9A015</b>	50/125
008C68-31331-29	HDP008BB3520/55	<b>M9A016</b>	50/125
012C68-31331-29	HDP012BB3520/55	<b>M9A018</b>	50/125
024C68-31331-29	HDP024BB3520/55	<b>M9A020</b>	50/125
036C68-31331-29	HDP036BB3520/55	<b>M9A082</b>	50/125
002R68-31331-29	HDP002AB1010	<b>M9W013</b>	Single-Mode
004R68-31331-29	HDP004AB1010	<b>M9W014</b>	Single-Mode
006R68-31331-29	HDP006AB1010	<b>M9W015</b>	Single-Mode
008R68-31331-29	HDP008AB1010	<b>M9W016</b>	Single-Mode
012R68-31331-29	HDP012AB1010	<b>M9W018</b>	Single-Mode
024R68-31331-29	HDP024AB1010	<b>M9W020</b>	Single-Mode
036R68-31331-29	HDP036AB1010	<b>M9W082</b>	Single-Mode
<b>Loose Tube Cables</b>			
002KW4-T3130A20	OPDD1B002CB3510/25	<b>M9B058T</b>	62.5/125
004KW4-T3130A20	OPDD2B004CB3510/25	<b>M9B063T</b>	62.5/125
006KW4-T3130A20	OPDD6B006CB3510/25	<b>M9B510T</b>	62.5/125
008KW4-T3130A20	OPDD2B008CB3510/25	<b>M9B065T</b>	62.5/125
012KW4-T3130A20	OPDD6B012CB3510/25	<b>M9B511T</b>	62.5/125
018KW4-T3130A20	OPDD6B018CB3510/25	<b>M9B512T</b>	62.5/125
024KW4-T3130A20	OPDD6B024CB3510/25	<b>M9B500T</b>	62.5/125
036KW4-T3130A20	OPDD6B036CB3510/25	<b>M9B502T</b>	62.5/125
048KW4-T3130A20	OPDD12B048CB3510/25	<b>M9B505T</b>	62.5/125
072KW4-T3130A20	OPDD12B072CB3510/25	<b>M9B507T</b>	62.5/125
096KW4-T3130A20	OPDD12B096CB3510/25	<b>M9B513T</b>	62.5/125
144KW4-T3130A20	OPDD12B144CB3510/25	<b>M9B509T</b>	62.5/125
216KW4-T3130A20	OPDD12B216CB3510/25	<b>M9B520T</b>	62.5/125
002CW4-T3131A20	OPDD1B002BB3520/55	<b>M9A058T</b>	50/125
004CW4-T3131A20	OPDD2B004BB3520/55	<b>M9A063T</b>	50/125
006CW4-T3131A20	OPDD6B006BB3520/55	<b>M9A510T</b>	50/125
008CW4-T3131A20	OPDD2B008BB3520/55	<b>M9A065T</b>	50/125
012CW4-T3131A20	OPDD6B012BB3520/55	<b>M9A511T</b>	50/125
018CW4-T3131A20	OPDD6B018BB3520/55	<b>M9A512T</b>	50/125

This cross reference should be used in conjunction with Mohawk's Fiber Optic section. It should be used for suggested alternative items which are functionally equal. Mohawk is not responsible for variances due to competitors' construction changes. Consult your local Mohawk representative or the factory for items not listed or for special cable constructions.



# Cross Reference

## Fiber Optic Cable Part # Cross Reference

Corning Cable	Berk-Tek	Mohawk	Fiber Size
<b>Loose Tube Cables <i>continued</i></b>			
024CW4-T3131A20	OPDD6B024BB3520/55	<b>M9A500T</b>	50/125
036CW4-T3131A20	OPDD6B036BB3520/55	<b>M9A502T</b>	50/125
048CW4-T3131A20	OPDD12B048BB3520/55	<b>M9A505T</b>	50/125
072CW4-T3131A20	OPDD12B072BB3520/55	<b>M9A507T</b>	50/125
096CW4-T3131A20	OPDD12B096BB3520/55	<b>M9A513T</b>	50/125
144CW4-T3131A20	OPDD12B144BB3520/55	<b>M9A509T</b>	50/125
216CW4-T3131A20	OPDD12B216BB3520/55	<b>M9A520T</b>	50/125
002EW4-T3101A20	OPDD1B002AB0504	<b>M9W058T</b>	Single-Mode
004EW4-T3101A20	OPDD2B004AB0504	<b>M9W063T</b>	Single-Mode
006EW4-T3101A20	OPDD6B006AB0504	<b>M9W510T</b>	Single-Mode
008EW4-T3101A20	OPDD2B008AB0504	<b>M9W065T</b>	Single-Mode
012EW4-T3101A20	OPDD6B012AB0504	<b>M9W511T</b>	Single-Mode
018EW4-T3101A20	OPDD6B018AB0504	<b>M9W512T</b>	Single-Mode
024EW4-T3101A20	OPDD6B024AB0504	<b>M9W500T</b>	Single-Mode
036EW4-T3101A20	OPDD6B036AB0504	<b>M9W502T</b>	Single-Mode
048EW4-T3101A20	OPDD12B048AB0504	<b>M9W505T</b>	Single-Mode
072EW4-T3101A20	OPDD12B072AB0504	<b>M9W507T</b>	Single-Mode
096EW4-T3101A20	OPDD12B096AB0504	<b>M9W513T</b>	Single-Mode
144EW4-T3101A20	OPDD12B144AB0504	<b>M9W509T</b>	Single-Mode
216EW4-T3101A20	OPDD12B216AB0504	<b>M9W520T</b>	Single-Mode

### Armored Loose Tube Cables

002KW5-T3130A20	OPAD1B002CB3510/25	<b>M9B358T</b>	62.5/125
004KW5-T3130A20	OPAD2B004CB3510/25	<b>M9B363T</b>	62.5/125
006KW5-T3130A20	OPAD6B006CB3510/25	<b>M9B381T</b>	62.5/125
008KW5-T3130A20	OPAD2B008CB3510/25	<b>M9B365T</b>	62.5/125
012KW5-T3130A20	OPAD6B012CB3510/25	<b>M9B382T</b>	62.5/125
018KW5-T3130A20	OPAD6B018CB3510/25	<b>M9B383T</b>	62.5/125
024KW5-T3130A20	OPAD6B024CB3510/25	<b>M9B384T</b>	62.5/125
036KW5-T3130A20	OPAD6B036CB3510/25	<b>M9B386T</b>	62.5/125
048KW5-T3130A20	OPAD12B048CB3510/25	<b>M9B389T</b>	62.5/125
072KW5-T3130A20	OPAD12B072CB3510/25	<b>M9B391T</b>	62.5/125
096KW5-T3130A20	OPAD12B096CB3510/25	<b>M9B398T</b>	62.5/125
144KW5-T3130A20	OPAD12B144CB3510/25	<b>M9B393T</b>	62.5/125
216KW5-T3130A20	OPAD12B216CB3510/25	<b>M9B400T</b>	62.5/125
002CW5-T3131A20	OPAD1B002BB3520/55	<b>M9A358T</b>	50/125
004CW5-T3131A20	OPAD2B004BB3520/55	<b>M9A363T</b>	50/125
006CW5-T3131A20	OPAD6B006BB3520/55	<b>M9A381T</b>	50/125
008CW5-T3131A20	OPAD2B008BB3520/55	<b>M9A365T</b>	50/125
012CW5-T3131A20	OPAD6B012BB3520/55	<b>M9A382T</b>	50/125
018CW5-T3131A20	OPAD6B018BB3520/55	<b>M9A383T</b>	50/125
024CW5-T3131A20	OPAD6B024BB3520/55	<b>M9A384T</b>	50/125
036CW5-T3131A20	OPAD6B036BB3520/55	<b>M9A386T</b>	50/125

Corning Cable	Berk-Tek	Mohawk	Fiber Size
<b>Armored Loose Tube Cables <i>continued</i></b>			
048CW5-T3131A20	OPAD12B048BB3520/55	<b>M9A389T</b>	50/125
072CW5-T3131A20	OPAD12B072BB3520/55	<b>M9A391T</b>	50/125
096CW5-T3131A20	OPAD12B096BB3520/55	<b>M9A398T</b>	50/125
144CW5-T3131A20	OPAD12B144BB3520/55	<b>M9A393T</b>	50/125
216CW5-T3131A20	OPAD12B216BB3520/55	<b>M9A400T</b>	50/125
002EW5-T3101A20	OPAD1B002AB0504	<b>M9W358T</b>	Single-Mode
004EW5-T3101A20	OPAD2B004AB0504	<b>M9W363T</b>	Single-Mode
006EW5-T3101A20	OPAD6B006AB0504	<b>M9W381T</b>	Single-Mode
008EW5-T3101A20	OPAD2B008AB0504	<b>M9W365T</b>	Single-Mode
012EW5-T3101A20	OPAD6B012AB0504	<b>M9W382T</b>	Single-Mode
018EW5-T3101A20	OPAD6B018AB0504	<b>M9W383T</b>	Single-Mode
024EW5-T3101A20	OPAD6B024AB0504	<b>M9W384T</b>	Single-Mode
036EW5-T3101A20	OPAD6B036AB0504	<b>M9W386T</b>	Single-Mode
048EW5-T3101A20	OPAD12B048AB0504	<b>M9W389T</b>	Single-Mode
072EW5-T3101A20	OPAD12B072AB0504	<b>M9W391T</b>	Single-Mode
096EW5-T3101A20	OPAD12B096AB0504	<b>M9W398T</b>	Single-Mode
144EW5-T3101A20	OPAD12B144AB0504	<b>M9W393T</b>	Single-Mode
216EW5-T3101A20	OPAD12B216AB0504	<b>M9W400T</b>	Single-Mode

### RiserLite® Loose Tube Cables

006KWF-T4130A20	LTR6B006CB3510/25	<b>M9B810</b>	62.5/125
012KWF-T4130A20	LTR6B012CB3510/25	<b>M9B811</b>	62.5/125
024KWF-T4130A20	LTR6B024CB3510/25	<b>M9B812</b>	62.5/125
036KWF-T4130A20	LTR6B036CB3510/25	<b>M9B813</b>	62.5/125
048KWF-T4130A20	LTR12B048CB3510/25	<b>M9B814</b>	62.5/125
072KWF-T4130A20	LTR12B072CB3510/25	<b>M9B815</b>	62.5/125
096KWF-T4130A20	LTR12B096CB3510/25	<b>M9B816</b>	62.5/125
144KWF-T4130A20	LTR12B144CB3510/25	<b>M9B817</b>	62.5/125
006CWF-T4131A20	LTR6B006BB3520/55	<b>M9A810</b>	50/125
012CWF-T4131A20	LTR6B012BB3520/55	<b>M9A811</b>	50/125
024CWF-T4131A20	LTR6B024BB3520/55	<b>M9A812</b>	50/125
036CWF-T4131A20	LTR6B036BB3520/55	<b>M9A813</b>	50/125
048CWF-T4131A20	LTR12B048BB3520/55	<b>M9A814</b>	50/125
072CWF-T4131A20	LTR12B072BB3520/55	<b>M9A815</b>	50/125
096CWF-T4131A20	LTR12B096BB3520/55	<b>M9A816</b>	50/125
144CWF-T4131A20	LTR12B144BB3520/55	<b>M9A817</b>	50/125
006EWF-T4103A20	LTR6B006AB0504	<b>M9W810</b>	Single-Mode
012EWF-T4103A20	LTR6B012AB0504	<b>M9W811</b>	Single-Mode
024EWF-T4103A20	LTR6B024AB0504	<b>M9W812</b>	Single-Mode
036EWF-T4103A20	LTR6B036AB0504	<b>M9W813</b>	Single-Mode
048EWF-T4103A20	LTR12B048AB0504	<b>M9W814</b>	Single-Mode
072EWF-T4103A20	LTR12B072AB0504	<b>M9W815</b>	Single-Mode
096EWF-T4103A20	LTR12B096AB0504	<b>M9W816</b>	Single-Mode
144EWF-T4103A20	LTR12B144AB0504	<b>M9W817</b>	Single-Mode

# Cross Reference

## Fiber Optic Cable Part # Cross Reference

Corning Cable	Berk-Tek	Mohawk	Fiber Size
<b>RiserLite® Armored Loose Tube Cables</b>			
006KWG-T3130A20	LTRA6B006CB3510/25	<b>M9B890</b>	62.5/125
012KWG-T3130A20	LTRA6B012CB3510/25	<b>M9B891</b>	62.5/125
024KWG-T3130A20	LTRA6B024CB3510/25	<b>M9B892</b>	62.5/125
036KWG-T3130A20	LTRA6B036CB3510/25	<b>M9B893</b>	62.5/125
048KWG-T3130A20	LTRA12B048CB3510/25	<b>M9B894</b>	62.5/125
072KWG-T3130A20	LTRA12B072CB3510/25	<b>M9B895</b>	62.5/125
096KWG-T3130A20	LTRA12B096CB3510/25	<b>M9B896</b>	62.5/125
144KWG-T3130A20	LTRA12B144CB3510/25	<b>M9B897</b>	62.5/125
006CWG-T3131A20	LTRA6B006BB3520/55	<b>M9A890</b>	50/125
012CWG-T3131A20	LTRA6B012BB3520/55	<b>M9A891</b>	50/125
024CWG-T3131A20	LTRA6B024BB3520/55	<b>M9A892</b>	50/125
036CWG-T3131A20	LTRA6B036BB3520/55	<b>M9A893</b>	50/125
048CWG-T3131A20	LTRA12B048BB3520/55	<b>M9A894</b>	50/125
072CWG-T3131A20	LTRA12B072BB3520/55	<b>M9A895</b>	50/125
096CWG-T3131A20	LTRA12B096BB3520/55	<b>M9A896</b>	50/125
144CWG-T3131A20	LTRA12B144BB3520/55	<b>M9A897</b>	50/125
006RWG-T3101A20	LTRA6B006AB0504	<b>M9W890</b>	Single-Mode
012RWG-T3101A20	LTRA6B012AB0504	<b>M9W891</b>	Single-Mode
024RWG-T3101A20	LTRA6B024AB0504	<b>M9W892</b>	Single-Mode
036RWG-T3101A20	LTRA6B036AB0504	<b>M9W893</b>	Single-Mode
048RWG-T3101A20	LTRA12B048AB0504	<b>M9W894</b>	Single-Mode
072RWG-T3101A20	LTRA12B072AB0504	<b>M9W895</b>	Single-Mode
096RWG-T3101A20	LTRA12B096AB0504	<b>M9W896</b>	Single-Mode
144RWG-T3101A20	LTRA12B144AB0504	<b>M9W897</b>	Single-Mode

### VersaLite™ Loose Tube Cables

-	LTP006CB3510/25	<b>M9B202</b>	62.5/125
-	LTP012CB3510/25	<b>M9B204</b>	62.5/125
-	LTP12B024CB3510/25	<b>M9B205</b>	62.5/125
-	LTP12B036CB3510/25	<b>M9B206</b>	62.5/125
-	LTP12B048CB3510/25	<b>M9B207</b>	62.5/125
-	LTP12B072CB3510/25	<b>M9B209</b>	62.5/125
-	LTP12B096CB3510/25	<b>M9B211</b>	62.5/125
-	LTP12B144CB3510/25	<b>M9B215</b>	62.5/125
-	LTP006BB3520/55	<b>M9A202</b>	50/125
-	LTP012BB3520/55	<b>M9A204</b>	50/125
-	LTP12B024BB3520/55	<b>M9A205</b>	50/125
-	LTP12B036BB3520/55	<b>M9A206</b>	50/125
-	LTP12B048BB3520/55	<b>M9A207</b>	50/125

Corning Cable	Berk-Tek	Mohawk	Fiber Size
<b>VersaLite™ Loose Tube Cables <i>continued</i></b>			
-	LTP12B072BB3520/55	<b>M9A209</b>	50/125
-	LTP12B096BB3520/55	<b>M9A211</b>	50/125
-	LTP12B144BB3520/55	<b>M9A215</b>	50/125
-	LTP006AB0504	<b>M9W202</b>	Single-Mode
-	LTP012AB0504	<b>M9W204</b>	Single-Mode
-	LTP12B024AB0504	<b>M9W205</b>	Single-Mode
-	LTP12B036AB0504	<b>M9W206</b>	Single-Mode
-	LTP12B048AB0504	<b>M9W207</b>	Single-Mode
-	LTP12B072AB0504	<b>M9W209</b>	Single-Mode
-	LTP12B096AB0504	<b>M9W211</b>	Single-Mode
-	LTP12B144AB0504	<b>M9W215</b>	Single-Mode

### Riser Rated Ribbon Cables

002KJ1-21140-0F	-	<b>M9B630</b>	62.5/125
004KJ1-41140-0F	-	<b>M9B631</b>	62.5/125
008KJ1-81140-0F	-	<b>M9B633</b>	62.5/125
012KJ1-T3140-0F	RDR012CB3510/25	<b>M9B634</b>	62.5/125
002CJ1-21111-0F	-	<b>M9A630</b>	50/125
004CJ1-41111-0F	-	<b>M9A631</b>	50/125
008CJ1-81111-0F	-	<b>M9A633</b>	50/125
012CJ1-T3111-0F	RDR012BB3520/55	<b>M9A634</b>	50/125
002RJ1-21131-0F	-	<b>M9W630</b>	Single-Mode
004RJ1-41131-0F	-	<b>M9W631</b>	Single-Mode
008RJ1-81131-0F	-	<b>M9W633</b>	Single-Mode
012RJ1-T3131-0F	RDR012AB0707	<b>M9W634</b>	Single-Mode

### Plenum Rated Ribbon Cables

002KJ8-21140-0F	-	<b>M9B640</b>	62.5/125
004KJ8-41140-0F	-	<b>M9B641</b>	62.5/125
008KJ8-81140-0F	-	<b>M9B643</b>	62.5/125
012KJ8-T3140-0F	RDP012CB3510/25	<b>M9B644</b>	62.5/125
002CJ8-21111-0F	-	<b>M9A640</b>	50/125
004CJ8-41111-0F	-	<b>M9A641</b>	50/125
008CJ8-81111-0F	-	<b>M9A643</b>	50/125
012CJ8-T3111-0F	RDP012BB3520/55	<b>M9A644</b>	50/125
002RJ8-21131-0F	-	<b>M9W640</b>	Single-Mode
004RJ8-41131-0F	-	<b>M9W641</b>	Single-Mode
008RJ8-81131-0F	-	<b>M9W643</b>	Single-Mode
012RJ8-T3131-0F	RDP012AB0707	<b>M9W644</b>	Single-Mode

This cross reference should be used in conjunction with Mohawk's Fiber Optic section. It should be used for suggested alternative items which are functionally equal. Mohawk is not responsible for variances due to competitors' construction changes. Consult your local Mohawk representative or the factory for items not listed or for special cable constructions.

# Fiber Optic Inventory

## Multimode Grade 2 62.5/125

Simplex/Duplex .....p. 50  
**Riser** **Plenum**  
 M9B002 M9B004

Distribution .....p. 34  
**Riser** **Plenum**  
 M9B037 M9B043  
 M9B038 M9B044  
 M9B039 M9B045  
 M9B040 M9B046  
 M9B042 M9B048  
 M9B602 M9B611  
 M9B604 M9B612  
 M9B606 M9B616  
 M9B620

Ribbon .....p. 37  
**Plenum**  
 M9B644

ArmorLite™ .....p. 49  
**Plenum**  
 M9B240  
 M9B241  
 M9B242

Breakout .....p. 38  
**Riser** **Plenum**  
 M9B005 M9B013  
 M9B006 M9B015  
 M9B007  
 M9B010

RiserLite® Indoor/Outdoor.....p. 44  
**Riser** **Riser Armored**  
 M9B810 M9B890  
 M9B811 M9B891  
 M9B812

VersaLite™ Indoor/Outdoor.....p. 46  
**Plenum**  
 M9B202  
 M9B204  
 M9B205

Loose Tube .....p. 42  
**OSP** **OSP Armored**  
 M9B058T M9B363T  
 M9B063T M9B381T  
 M9B510T M9B382T  
 M9B511T M9B384T  
 M9B500T  
 M9B502T  
 M9B505T

Central Loose Tube .....p. 47  
**OSP**  
 M9B150  
 M9B152  
 M9B155

**Mohawk's inventoried fiber optic cables are listed here. Look for the part number you require under the appropriate grade of fiber to find if it is a stocked item.\* Please consult the factory for quantities available.**

## Multimode Grade 4 50/125

Simplex/Duplex .....p. 50  
**Riser** **Plenum**  
 M9A002 M9A004

Distribution .....p. 34  
**Riser** **Plenum**  
 M9A037 M9A043  
 M9A038 M9A044  
 M9A039 M9A045  
 M9A048  
 M9A611  
 M9A612  
 M9A616

ArmorLite™ .....p. 49  
**Plenum**  
 M9A240  
 M9A241  
 M9A242  
 M9A243

Breakout .....p. 38  
**Riser**  
 M9A007  
 M9A010

RiserLite® Indoor/Outdoor.....p. 44  
**Riser**  
 M9A810  
 M9A811  
 M9A812

VersaLite™ Indoor/Outdoor.....p. 46  
**Plenum**  
 M9A202  
 M9A204  
 M9A205

Loose Tube .....p. 42  
**OSP** **OSP Armored**  
 M9A510T M9A381T  
 M9A511T M9A382T  
 M9A500T M9A384T

Central Loose Tube .....p. 47  
**OSP**  
 M9A150  
 M9A152  
 M9A155

## Multimode Grade 5 50/125

Simplex/Duplex .....p. 50  
**Riser** **Plenum**  
 M9C002 M9C004

Distribution .....p. 34  
**Riser** **Plenum**  
 M9C037 M9C043  
 M9C038 M9C044  
 M9C039 M9C045  
 M9C042 M9C048  
 M9C602 M9C611  
 M9C604 M9C612  
 M9C616

ArmorLite™ .....p. 49  
**Plenum**  
 M9C241

Breakout .....p. 38  
**Riser**  
 M9C007  
 M9C010

RiserLite® Indoor/Outdoor.....p. 44  
**Riser**  
 M9C810  
 M9C811  
 M9C812

VersaLite™ Indoor/Outdoor.....p. 46  
**Plenum**  
 M9C202  
 M9C204  
 M9C205

Loose Tube .....p. 42  
**OSP** **OSP Armored**  
 M9C510T M9C381T  
 M9C511T M9C382T  
 M9C500T M9C384T

Central Loose Tube .....p. 47  
**OSP**  
 M9C150  
 M9C152  
 M9C155



## Single-Mode

Simplex/Duplex .....p. 50  
**Riser** **Plenum**  
 M9W001 M9W004  
 M9W002

Distribution .....p. 34  
**Riser** **Plenum**  
 M9W037 M9W043  
 M9W038 M9W045  
 M9W039 M9W048  
 M9W042 M9W612  
 M9W602 M9W616  
 M9W604  
 M9W606

ArmorLite™ .....p. 49  
**Plenum**  
 M9W240  
 M9W241  
 M9W242

RiserLite® Indoor/Outdoor.....p. 44  
**Riser**  
 M9W810  
 M9W811  
 M9W812

VersaLite™ Indoor/Outdoor.....p. 46  
**Plenum**  
 M9W204  
 M9W205

Loose Tube .....p. 42  
**OSP** **OSP Armored**  
 M9W510T M9W381T  
 M9W511T M9W382T  
 M9W500T M9W384T  
 M9W502T  
 M9W505T

Central Loose Tube .....p. 47  
**OSP**  
 M9W152  
 M9W155

Tactical Cable .....p. 51  
 M96639  
 M96570

\*Mohawk reserves the right to modify managed inventory items at any time with or without notice.

# Color Code Charts

**Chart A**

Pair No.	Pair Color Code
1	White/Blue & Blue
2	White/Orange & Orange
3	White/Green & Green
4	White/Brown & Brown

**Chart C**

Fiber	Color	Fiber	Color
1	Blue	7	Red
2	Orange	8	Black
3	Green	9	Yellow
4	Brown	10	Violet
5	Slate	11	Pink
6	White	12	Aqua

**Chart B**

Pair No.	Pair Color Code
1	White/Blue & Blue/White
2	White/Orange & Orange/White
3	White/Green & Green/White
4	White/Brown & Brown/White
5	White/Slate & Slate/White
6	Red/Blue & Blue/Red
7	Red/Orange & Orange/Red
8	Red/Green & Green/Red
9	Red/Brown & Brown/Red
10	Red/Slate & Slate/Red
11	Black/Blue & Blue/Black
12	Black/Orange & Orange/Black
13	Black/Green & Green/Black
14	Black/Brown & Brown/Black
15	Black/Slate & Slate/Black
16	Yellow/Blue & Blue/Yellow
17	Yellow/Orange & Orange/Yellow
18	Yellow/Green & Green/Yellow
19	Yellow/Brown & Brown/Yellow
20	Yellow/Slate & Slate/Yellow
21	Violet/Blue & Blue/Violet
22	Violet/Orange & Orange/Violet
23	Violet/Green & Green/Violet
24	Violet/Brown & Brown/Violet
25	Violet/Slate & Slate/Violet

COLOR CODE REPEATS FOR EACH GROUP OF 25 PAIRS.

For cables containing multiple groups of 25 pairs, each group will be identified by a color coded binder following the above color chart.

Example: 50 pair cable will have 2 groups of 25 pairs; first binder color is white/blue, second binder is white/orange.

**Chart D**

Pair or Group Number	Pair & Binder Color Code	
	Tip Color	Ring Color
1	White	Blue
2	White	Orange
3	White	Green
4	White	Brown
5	White	Slate
6	Red	Blue
7	Red	Orange
8	Red	Green
9	Red	Brown
10	Red	Slate
11	Black	Blue
12	Black	Orange
13	Black	Green
14	Black	Brown
15	Black	Slate
16	Yellow	Blue
17	Yellow	Orange
18	Yellow	Green
19	Yellow	Brown
20	Yellow	Slate
21	Violet	Blue
22	Violet	Orange
23	Violet	Green
24	Violet	Brown
25	Violet	Slate

COLOR CODE REPEATS FOR EACH GROUP OF 25 PAIRS.

For cables containing multiple groups of 25 pairs, each group will be identified by a color coded binder following the above color chart.

Example: 50 pair cable will have 2 groups of 25 pairs; first binder color is white/blue, second binder is white/orange.

# Insulations

## Comparative Properties of Insulations

Property Considered	Cellular Polyethylene	Polyethylene	Nylon	Polypropylene	Polyurethane	PVC	FEP
Acid Resistance	G to E	G to E	P to F	E	F	G to E	E
Abrasion Resistance	G	F to G	E	F to G	O	F to G	G to E
Alcohol Resistance	E	E	P	E	P	G	E
Alkali Resistance	G to E	G to E	E	E	F	G	E
Benzol (Aromatic Hydrocarbons) Resistance	P	P	G	P to F	P	P to F	E
Degreaser Solvents (Halogenated Hydrocarbons)	P	P	G	P	P	P to F	E
Electrical Properties	E	E	F	E	P to F	F to G	E
Flame Resistance	P	P	P	P	P	E	O
Gasoline, Kerosene (Aliphatic Hydrocarbons) Resistance	P to F	P to F	G	P to F	F	P	E
Heat Resistance	G to E	G	E	E	G	G to E	O
Low Temperature Flexibility	E	G to E	G	P	G	P to G	O
Nuclear Radiation Resistance	G	G	P to F	F	G	P to G	O
Oil Resistance	G to E	G to E	E	E	E	P	O
Oxidation Resistance	E	E	E	E	E	E	O
Ozone Resistance	E	E	E	E	E	E	E
Water Resistance	E	E	P to F	E	P	E	E
Weather – Sun Resistance	E	E	E	E	F to G	G to E	O

P = Poor F = Fair G = Good E = Excellent O = Outstanding

Above ratings are based on average performance of compounds. Any specific property can often be improved by the use of selective compounding.

## Current Carrying Capacity of Insulated Copper Conductors

Amps	PE, Polyurethane PVC (Semi-Rigid)	Polypropylene PVC	Nylon PVC	PVDF PE (X-linked) Thermoplastic Elastomers	FEP
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### Temperature Rating

Size AWG	80°C	90°C	105°C	125°C	200°C
30	2	3	3	3	4
28	3	4	4	5	6
26	4	6	5	6	7
24	6	7	7	8	10
22	8	9	10	11	13
20	10	12	13	14	17
18	15	17	18	20	24
16	19	22	24	26	32
14	27	30	33	40	45
12	36	40	45	50	55
10	47	55	58	70	75
8	65	70	75	90	100
6	95	100	105	125	135
4	125	135	145	170	180
2	170	180	200	225	240

Single Conductor in Free Air 30° Ambient Temp.

## Dielectric Constants of Insulations

Insulation Materials	Nominal
PVDF	6.4
Nylon	4.0
Polyester	2.80
Polyethylene (Cellular)	1.50
Polyethylene (High Density)	2.34
Polyethylene (Low Density)	2.28
Polypropylene	2.24
Polyvinyl Chloride (Semi-Rigid)	4.3
Teflon FEP	2.15
Teflon TFE	2.15
Tefzel, Halar	2.6
FEP (Cellular)	1.5



# UTP Installation Guide

- Category 5e
- Category 6

UTP cables were developed and designed to be used independent of the system application. Set transmission performance criteria (Categories) have been established for the various grades of UTP cables.

## What are these Categories?

Categories are a method of classifying UTP cables and related hardware within specific performance criteria.

Category 5e - Specifies cable and connecting hardware with transmission characteristics up to 100 MHz. It differs from Category 5 by having 3 dB tighter NEXT requirements and additional requirements for PS NEXT, ELFEXT, PS ELFEXT, and RL.

Category 6 - This document specifies cable and connecting hardware with transmission characteristics up to 250 MHz. In addition Category 6 has tighter insertion loss, NEXT, PS NEXT, ELFEXT and PS ELFEXT over Category 5e.

## Cable Handling

### Length

The maximum horizontal cable length is 90 meters (295 feet). Ten meters is allowed for cords in the work area, and for patch cords or jumpers in the telecommunications closet.

The maximum backbone cable length is 90 meters (295 feet). This 90 meter length assumes that 5 meters (16 feet) are needed at each end for equipment cables connecting to the backbone.

### Pulling Tension

Maximum pulling tension for a 4 pair horizontal cable is 25 lbf. Excessive pulling tensions may occur during installation. Once the damage is done, reversing the effect may not be sufficient enough to correct the problem and cable replacement is recommended. Intermediate cable pulls within the overall cable run may be necessary to avoid exceeding the maximum pulling force.

### Minimum Bend Radius

4 pair UTP cables have a 1" Min. Bend Radius.

**CAUTION:** Exceeding the minimum bend radius can distort the cable geometry and result in degrading of transmission performance.

Repositioning of the cable to the proper bend radii may not correct the fault. Once the damage is done, the best option is replacement of the damaged run.

There are two common places where exceeding the minimum bend may occur:

- At the workstation wall outlet. After the cable is terminated, too often the remaining cable is jammed into the wall outlet, or worse, wrapped around itself and shoved into the outlet. A better practice would be to gently work the excess cable length back through the wall outlet into the wall.
- At the wiring closet, during routing of the cable to the terminal block or patch panel. Prior cable placement practices may have encouraged making the cable appear as formfitting or tight against the routing structure (cable tray or rack) as possible. A better practice would be to incorporate gently sweeping curves along the cable path avoiding sharp bends or changes in direction. Every effort should be made to ensure the path the cable follows has smooth gradual sweeps at any transition point.

## Installation in Temperatures Below Freezing

The minimum installation temperature for plenum cables is 0° C (32° F). If the cable has to be installed when the temperature is below 32° F the following precautions should be taken to ensure that the jacket will not crack:

- Store the cable in a heated area whose temperature is above 50° F for 24 hours before installation.
- Transfer only enough cable to the job site for 4 hours work. The cable will retain enough heat to prevent cracking. Cable

that has not been installed after 4 hours should be returned to a heated area.

- Coil service loops in 10" to 12" loops. A tight coil could cause the cable to crack.
- Normally the cables are terminated after the site is enclosed and heated. Do not attempt to terminate the cables when the temperature is below freezing.

## Over Stressing

Eliminate cable stress caused by tension in suspended cable runs and tightly cinched cable bundles

Excessive cable loading or stress can also occur if a cable is incorrectly suspended in a cable run. A recommended cable support spacing is 48" to 60" centers.

Avoid twisting of cable during installation. Excessive twisting may result in distortion of cable geometry, and in severe cases tears in the jacket.

In addition to the above guidelines extracted from TIA/EIA-568, Mohawk strongly recommends the following supplementary installation tips:

- Do not walk or step on high performance cable. Do not run over high performance cable with hand trucks or forklifts. This will exert excessive force on the cable, distorting the geometry and/or crushing the pairs, resulting in electrical shorts.
- Do not use staples, either from a staple gun or mounting in a traditional manner with a hammer. Staples can exert excessive force on the cable and distort the pair geometry.
- D-Rings, nail on clamps or Velcro straps offer acceptable cable management techniques without compressing the cable.
- Do not run cable near sources of heat, as this may negatively impact cable attenuation.
- Maintain a 6" minimum spacing between cables and sources of EMV, such as fluorescent lights or unshielded power lines.

## Termination

The installer must be acquainted with the Connector Manufacturer's installation instructions. The correct tools, wire layout and untwist length are critical, especially in Category 6 installations. Modular jacks usually have the Pair color code marked on the jack. The color code can be either T568A or T568B wiring methods. Maintain the same pin to pair combination throughout the installation. Changing pin pair assignment can result in crossed pairs. Modular jacks and cross-connect blocks employ IDC connectors to complete the circuit between the cable and the hardware. The manufacturer will recommend the tools needed to terminate the cable.

Terminate with connecting hardware of the same category or higher. Any link that has substituted a lower category component is automatically classified to that lower category.

The maximum allowable amount of untwisting during cable termination to connecting hardware is 0.5" for Category 5e and Category 6 cables. Exceeding the recommended length of untwisting may cause performance problems. The same techniques should be employed when terminating cross-connect blocks. Maintaining jacket integrity to the point of termination aids in maintaining cable geometry and NEXT isolation from adjacent cable pairs.

Bridged taps and splices are not permitted as part of copper horizontal cabling requirements.

## Testing

It is best to determine the lengths of several representative cable runs and adjust the NVP to correspond to the known cable lengths. If the readout for the cable length is longer than the known length, the NVP should be decreased. Conversely, if the readout for the cable length is shorter than the known length the NVP should be increased.

The NVP values for Mohawk's products are as follows:

	Non-Plenum	Plenum
Category 5e	68%	72%
Category 6	68%	72%

## A Note of Caution:

Level II or Level III Testers will be required to accurately measure Category 5e and 6 permanent links and channels. Consult the manufacturer of your test set for clarification.

## Category 5e and 6 - Permanent Link Requirements at Specific Frequencies

Freq (MHz)	Insertion Loss		NEXT	
	5e	6	5e	6
1.0	2.1	1.9	60.0	65.0
4.0	3.9	3.5	54.8	64.1
10.0	6.2	5.6	48.5	57.8
20.0	8.9	7.9	43.7	53.1
25.0	10.0	8.9	42.1	51.5
31.25	11.2	10.0	40.5	50.0
62.5	16.2	14.4	35.7	45.1
100.0	21.0	18.6	32.3	41.8
200.0	--	27.4	--	36.9
250.0	--	31.1	--	35.3

Freq (MHz)	ELFEXT		RL	
	5e	6	5e	6
1.0	58.6	64.2	19.0	19.1
4.0	46.6	52.1	19.0	21.0
10.0	38.6	44.2	19.0	21.0
20.0	32.6	38.2	19.0	21.0
25.0	30.7	36.2	18.0	19.5
31.25	28.7	34.3	17.1	18.5
62.5	22.7	28.3	14.1	16.0
100.0	18.6	24.2	12.0	14.0
200.0	--	18.2	--	11.0
250.0	--	16.2	--	10.0

The Permanent Link requirements include 90 meters of horizontal cable and the connectors at each end. The cables to the test equipment are not part of the permanent link and are subtracted out by the test equipment

Channel requirements include 90 meters of horizontal cable and 10 meters of equipment cords, patch cords and jumpers. The maximum length of cross-connect jumpers and patch cords in the cross-connect facility should not exceed 5 meters.

For additional information and an ANSI referenced list, please contact: GLOBAL ENGINEERING DOCUMENTS at 1-800-854-7179.

For additional information on cable selection, please call 1-800-422-9961 or email to techsupport@mohawk-cable.com.

These guides have been prepared by Mohawk as an aid for installers of Mohawk Category and Fiber Optic Cables and are not a warranty by Mohawk and should not be construed as such.

Mohawk's sole warranty with respect to its cables is set forth in the document entitled "Mohawk Warranty," which has been or will be provided separately to installers of Mohawk Category and Fiber Optic Cables.

# Fiber Installation Guide

## FOREWORD

It is assumed that the reader has a general understanding of fiber optic cable constructions and terminology. BICSI ([www.bicsi.org](http://www.bicsi.org)) is an excellent resource for general information.

## SAFETY PRECAUTIONS

- When installed on a live system, invisible laser radiation may be present. Do not stare into connector endface or view directly with optical instruments.
- Wear safety glasses when working with optical fiber.
- Dispose of all scrap fibers to avoid getting fiber slivers.

## Scope

The following guidelines are intended as a general overview of important issues related to the installation of fiber optic cable.

## INSTALLATION SPECIFICATIONS

For a proper cable installation, it is important to understand the cable specification. The two most important specifications are the tensile loading and bend radius specifications. It is very important to adhere to these limits.

### Tensile loading

Although there are two different types of tension in fiber optic cables, the important tension for the installation is the maximum load the cable can be subjected to without causing permanent damage. We call it the “maximum load installation” and it is measured in Newton or pounds. The “maximum load installation” can also be known as “short term tension”, “dynamic load”, “installation load” or “installation tension”.

Whenever possible, the tension of the installation should be monitored. The tension can be measured with a dynamometer, or with a pulling wheel. Breakaway pulling eyes are available which separate if the tension reaches a preset level. The use of a swivel is recommended when pulling the cable in tray. The swivel allows the cable and pulling rope to twist independently.

If pulling a cable in an outside plant conduit, the use of approved lubricants can help minimize friction. The use of corrugated innerducts can also help reduce the amount of tension needed to pull the cable. When installing

loose-tube cables, the use of sealer is recommended to prevent gel migration.

If a run is too long, or if several bends are in the conduit, intermediate pull boxes should be used to separate one pull into two or more shorter pulls. A cable should not be pulled through more than two 90° bends at one time. If three or more 90° bends in a continuous run are unavoidable, the cable should be installed from a central point, unreeled into a figure-eight, and then backfed to complete the installation. Sharp bends may increase cable tension, so it is best to install cable in sequences that minimize stress and labor costs.

When running cable vertically, take note of the cable weight. Install cables in a sequence that applies the least amount of strain on the cable. For example, most vertical chasers in buildings tend to be congested at the lower floors; instead, try to start your installation at the top and work down the building, thereby eliminating most of the cable installation by the time you reach the lower floors. After installation, the strength member of the cable will need to support the hanging cable. If a long vertical run is necessary, cable should be secured at each floor and service loops should be placed every three floors, at a minimum. This procedure will help distribute the weight of the cable vertically and will facilitate access to moves, adds and changes (MACs), if needed at a later date.

### Bend radius

There are two types of bend radius:

- The short term minimum bend radius, or dynamic bend radius, is the tightest recommended bend while installing cable at the maximum rated tension. It is the larger of the two specified bend radii. Throughout the pull, the minimum bend radius must be strictly followed. If a location exists in the middle of a run where a relatively tight bend is unavoidable, the cable should be hand-fed around the bend or a pulley can be used.
- The long term bend radius, or static bend radius, is the tightest recommended bend while the cable is under a minimum tension. It is the smaller of the two specified bend radii. After the pull is complete, the cable can be bent more tightly to fit into existing space, but not to exceed the long term minimum bend radius.

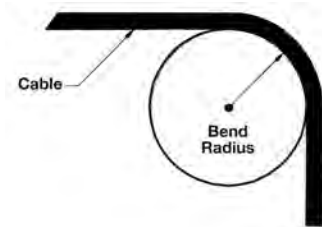


Figure 1: Bend Radius

Table 1: Typical Bend Radius Specification

	Short Term (Installation)	Long Term (Installed)
Outside Plant Cable	20x Cable Diameter	15x Cable Diameter
Premise Cable	15x Cable Diameter	10x Cable Diameter

Always follow the manufacturer’s guidelines for minimum bend radius and tension. Failure to do so may result in high attenuation (macrobends) and possible damage to the cable and fiber. Guidelines are normally supplied with the cable manufacturer specification sheets. If the bend radius specifications are unknown, the industry de facto standard is to maintain a minimum radius of 20X the diameter of the cable.

The minimum bend radius must also be adhered to when using service loops. Fiber optic splice trays and patch panels are designed to accommodate the bend radii of the individual fibers, but outside of the hardware, extra care must be taken.

## INSTALLATION TOOLS

### Gripping Techniques

#### General

To effectively utilize all of the available strength in the cable, the strength member must be used. The manufacturer’s specification will identify the strength member(s) in the cable.

#### Cables with aramid yarn as the strength member

For cables using aramid yarn alone as the strength member, the jacket can be removed exposing the aramid. The aramid should be tied in a knot with the pull rope, so that the jacket will not be inadvertently used for strength.

Optionally, the jacket can be tied into a tight knot before pulling. After pulling, the knot should be cut off.

# Fiber Installation Guide



Figure 2: Distribution Cable Tied in a Knot

## Cables with aramid yarn and an e-glass central member

For cables using aramid yarn and an e-glass central member, a pulling grip should be used. The strength member(s) should be attached independently. This can be accomplished by weaving the strength member into the fingers of the grip, and then taping it together. All strength members should be gripped equally to ensure a proper distribution of tension.



Figure 3: Pulling Grip

## Pre-terminated Fiber Optic Cable Assemblies

### General

The factory pre-terminated fiber optic cable assemblies may be specified in project environments such as Data Centers. The assemblies can be ordered in either indoor (plenum) or outdoor versions, and different fiber counts, and in multimode or single-mode. A pulling eye can be factory installed on either end or on both ends of the cable. The pulling eye (and associated cable netting) will protect the pre-terminated ends during the pull. This product is a great time saver ensuring quality connections every time.

### Pulling eye

The pulling eyes (and associated cable netting) are highly recommended. The pulling eye will facilitate the installation as well as protecting the pre-terminated ends during the pull.

For both regular and pre-connectorized cables, the maximum pull force is identified with the "installation maximum load" cable specification on our Datasheets.

In many cases, pulling is not done from point to point, but rather from an intermediate point pulling back in each direction to each termination location. It is then important to make sure that the cable is ordered with two pulling eyes, one at each end.

The installation of a cable, which is pre-connectorized on both ends, requires special

raceway considerations and pulling grips. A typical fiber optic connector is 0.5 in. (1.25 cm) in diameter, has a limited pull-off rating and must be protected during cable placement. A pulling grip for a pre-connectorized cable must successfully isolate the connectors from any tensile load by placing the load on the cable itself. The pulling grip must also protect the connectors from abrasion and damage. In medium fiber counts (6 to 24 fibers) the connectors must be staggered when installed to reduce the diameter of the pulling grip. In high-fiber counts (greater than 24 fibers), installation of a connectorized cable may not be possible due to the conduit size that would be required.

## INSTALLATION GUIDELINES

### Prior to installation

All optical fiber cables are tested before leaving our manufacturing plant. Before installing the cable, we recommend testing the cable on the reel for continuity. This is to ensure that no damage occurred during shipment. Since the cost of installation is usually higher than the cost of materials, testing the fibers before installation can avoid unnecessary additional expenses and help meeting important deadlines. At a minimum, continuity testing can be done on the reel with a visual fault locator or a simple fiber tracer such as a flashlight, a modified flashlight to properly hold the fibers, a microscope or a bright red light (LED lookalike). With this simple test, you should be able to identify broken fibers, if any, within the optical fiber cable.

Also, it is recommended to double-check the actual fiber count and the actual cable length, to avoid any inconvenience.

It is preferable to use Velcro wraps instead of tie-wraps. Remember not to distort the shape of the cable, as this adds pressure onto the optical fibers and may affect performance.

Fiber optic cables can be installed in innerducts. The use of innerducts tends to reduce the pulling tension required. Ensure that the properly rated innerduct is being installed.

A 3 to 6 m (10 to 20 ft) of cable slack should be stored in enclosure or on the wall to allow repairs and/or relocation needs.

### Installation in Temperatures Below Freezing

The minimum installation temperature for plenum cables is 0° C (32° F). If the cable has to be installed when the temperature is below 32° F the following precautions should be taken to

ensure that the jacket will not crack:

- Store the cable in a heated area whose temperature is above 50° F for 24 hours before installation.
- Transfer only enough cable to the job site for 4 hours work. The cable will retain enough heat to prevent cracking. Cable that has not been installed after 4 hours should be returned to a heated area.
- Coil service loops in 10" to 12" loops. A tight coil could cause the cable to crack.
- Normally the cables are terminated after the site is enclosed and heated. Do not attempt to terminate the cables when the temperature is below freezing.

## OUTSIDE PLANT CABLE INSTALLATION

### General

Protect exposed cables from vehicular and public traffic.

### Underground Installation

For underground installation, center pull long cables. Store excess cable in vaults and manholes, and identify optical cables with markers.

### Aerial Installation

Use proper hardware matching cable, span and tension requirements. Use correct cable jacket.

### Buried Cable Installations

Identify cable locations with surface markers. Anticipate obstructions.

### Administration

A unique identifier shall be assigned to each backbone cable and shall be marked on each end. Reference should be made as per the ANSI/TIA/EIA-606-A standard.

## TERMINATION

### General

Before termination, the cable should be properly secured to provide a tension-free length of fiber. When splicing fibers, mechanical or fusion, a splice tray is needed to properly store the completed splices. If connectors are to be used, trays or shelves should be used to support the fiber behind the connector. Proper strain relief sleeves provided with the connectors should always be used to prevent excessive bending of fiber. No shelf is necessary if terminating a breakout style cable with connectors.

# Fiber Installation Guide

## CABLE PREPARATION FOR THE TERMINATION

### General

It is acceptable to directly terminate the 900  $\mu\text{m}$  tight buffer from a distribution cable with a connector, if the above precautions are taken. It can be acceptable to directly terminate the 250  $\mu\text{m}$  coated fiber from a loose buffer tube with a connector in certain applications. However, it is usually recommended to use a breakout kit which converts a six or twelve fiber loose buffer tube to a six or twelve fiber 900  $\mu\text{m}$  distribution style ready for termination.

If outside plant cables are used, the gel flooding material needs to be cleaned with the appropriate solvent (please consult the cable manufacturer for recommendation on the choice of solvent). The more thorough the cleaning, the easier the termination procedure will be.

### Cable preparation

To prepare the cable for termination, the outer jacket must be properly stripped. Two ring cuts should be made in the jacket; one about 2" from the end and the second at the point where the jacket is to be removed. Care must be taken not to cut all the way through the jacket and into the core. The 2" piece is removed from the end of the cable exposing the core and the aramid ripcord. Make a notch in the jacket alongside the ripcord (do not cut the ripcord!). Pull the ripcord with a needle-nose pliers, or similar, until it reaches the second ring cut. Remove the core from the sliced jacket and pull the jacket to tear it at the ring cut.

Once the fiber optic cable is ready for termination, follow the termination installation instructions.

## TESTING

### General

Once the cable plant is installed and terminated, it is recommended to test the fiber optic segment. The testing should be done according to TIA TSB-140. This document provides guidelines for field-testing length, loss and polarity of a completed fiber optic link.

It is necessary to perform an end-to-end attenuation test to verify the quality of installations and to ensure high quality system

performance. The best way to verify whether an end-to-end link meets the link loss budget is to divide the end-to-end link into segments at each cross-connect and measure the attenuation of each link segment. In order for the system to operate properly, the sum of the attenuation for the multiple link segments that form an end-to-end link must be less than the link loss budget calculated in the design phase.

### Test equipment

Various types of testing equipment are available on the market, such as Optical Loss Test Set (OLTS), Visual Fault Locator (VFL) sets or the Optical Time Domain Reflectometer. For troubleshooting, the OTDR is recommended.

### Optical Loss Test Set (OLTS)

The OLTS consists of a light source and an optical power meter. The main function of this equipment is to measure the optical power or loss.

### Visual Fault Locator (VFL) or tracer

The VFL is a red laser source; the tracer is an LED source. Either instrument can be used to trace fibers and troubleshoot faults on optical fiber cables. The main function of this equipment is to check continuity of the fiber, as well as to identify fibers and connectors in patch panels or outlets.

### Optical Time Domain Reflectometer (OTDR)

The OTDR is a more sophisticated measurement instrument. It uses a technology that injects a series of optical pulses into the fiber under test and analyzes the light scattering and the light reflection. This allows the instrument to measure the intensity of the return pulse in functions of time and fiber length. The OTDR is used to measure the optical power loss and the fiber length, as well as to locate all faults resulting from fiber breaks, splices or connectors.

### Fiber testing guidelines

The following testing guidelines promote efficient and accurate testing:

- Clean all connections and adapters at the optical test points prior to taking measurements, as per ANSI/TIA/EIA-526-14A.
- The light source or OTDR (Optical Time Domain Reflectometer) must operate within the range of  $850 \pm 30$  nm, or  $1300 \pm 20$  nm for multimode testing.

- Test jumpers must be of the same fiber core size, performance and connector type as the cable system (e.g., 50/125  $\mu\text{m}$  jumpers for a 50/125  $\mu\text{m}$  optical fiber system) and shall be one to five meters long.

ANSI/TIA/EIA-568-B.1 is the recommended test method.

**Every reel** of fiber optic cable shipped from Mohawk has a test report attached showing the attenuation of all the fibers in the cable. Typical values for a multimode cable are 2.7 dB/km when measured at 850 nm and 0.7 dB/km when measured at 1300 nm. Therefore, for a run of 100 meters (328 feet), the typical cable attenuation is only 0.27 dB at 850 nm and 0.07 dB at 1300 nm.

Most fiber optic connectors are specified as having an insertion loss of less than 0.5 dB. Since there are two connections for each fiber, up to 1 dB of attenuation can be expected to be added to the installed cable. As the cable runs get shorter, the cable attenuation becomes lower, but the connector insertion loss remains the same. If the cable is installed properly, most of the measured attenuation will come from the connectors.

If several fibers off of the same cable show high attenuation, or if a single fiber attenuation remains high after retermination, an OTDR should be used to isolate the problem. An OTDR is an excellent tool for troubleshooting a failing link by identifying the location of the faulty component.

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# Slide Guides



## LAN Cable Selector Guide

Match your application to the corresponding cable category. Use the selector guide to determine which copper product best suits your needs. From legacy 10BASE-T to Gigabit Ethernet to emerging networking protocols, the applications are identified. Worst-case performance is stated at two frequencies for all categories of performance, from minimally compliant Category 5e to our Category 6A GigaLAN 10.

## Multimode Fiber Grade Selector

Short Wavelength or Long Wavelength, 50/125 micron or 62.5/125 micron, we have a solution for you. Mohawk has designed our Fiber Grade Selector to help you determine which multimode fiber type best suits your application. Legacy installations to emerging networking protocols are identified and the guaranteed performance of each fiber is given along with the appropriate optical specifications.

## Plenum & Non-Plenum Conduit Fill Guide

This rotary style guide lets you determine the number of cables, from Category 3 to Augmented Category 6, that will fill a trade size conduit. Either plenum or non-plenum.



### Tight Buffer for Outdoor Considerations

There are two standard types of fiber optic cables for data/voice communications: tight buffered and loose tube. As a rule, tight buffered cables are used indoors (intrabuilding, premise) and loose tube cables are used outdoors (interbuilding, outside plant).

Loose tube cables should be utilized in outside plant installations whenever possible, due to their long history with the various telephone companies, superior UV resistance, and exceptional resistance to moisture. Many studies have shown that the long term reliability of optical fiber is highest when the fiber is contained in a loose tube design. Loose tube cables may be ordered in a “dry block” version for easier termination, thus avoiding the gel flooding which some consider to be a problem.

Tight buffered cables utilize a 900  $\mu\text{m}$  buffer over each individual fiber to provide ease of handling and a color code. These cables typically have a flame retardant jacket, such as PVC, in order to meet the code requirements necessary for installation in a building. The combination of the tight buffers with the PVC jacket results in a flexible design that is easy to work with. When used in an outdoor environment, a tight buffer cannot provide the same level of protection to the optical fiber as a loose tube.

RiserLite® cables are designed to bridge the gap between standard loose tube and tight buffered cables. RiserLite cables are gel-filled, “dry blocked” loose tube cables which allow them to be installed in outdoor applications. They also have a UL OFNR and c(UL) OFN FT4 rating, which allows them to be installed in the building riser, as well.

Many installers prefer to use tight buffered cables in the outside plant because of the relative ease of termination. If tight buffered cable is to be used in an outside environment, then special care must be taken. The cable must not be installed in aerial lashed, self-support, or direct buried applications. The cable must be installed below the frost line and in a “dry” conduit. As an alternative, a product from American Polywater ([www.polywater.com](http://www.polywater.com)) called “IceFree” can help keep the conduit dry and prevent water from freezing and damaging the fiber. Proper pulling techniques must also be followed, as tight buffered cables typically have lower pulling tensions than loose tube cables.

If questions arise concerning a particular application, call the Technical Support Group of Mohawk at (800) 422-9961.

# MAC Certification

## MAC Warranty Program



### MAC Warranty Program

Several years ago Mohawk developed a standards based BiCSi accredited training program. This program is geared primarily towards contractors, but is also offered to consultants and end-users. After successfully completing the training program the individual is eligible to receive 7 BiCSi credits.

There are two options available to become a Mohawk Accredited Contractor (MAC). First, you may elect to be trained by one of Mohawk's on staff RCDD instructors. This would enable you to be eligible to receive the 7 BiCSi credits. Second, you may choose to be grandfathered into the MAC program by having successfully completed an approved training program offered by one of our connectivity partners.

The major benefit of being a MAC is to enable the contractor to offer an extended warranty to the end-user on Mohawk products.

The Mohawk ChannelMATE® Cabling System Warranty period offered by a MAC is from 15 years to lifetime. It encompasses Mohawk's copper products from Category 5e through Augmented Category 6, including high pair count cables, copper backbone, and all fiber optic cables.

Additional benefits of being a MAC contractor include the backing of Mohawk's comprehensive technical support group for product information, installation troubleshooting and industry updates on the latest standards and applications guidelines. MAC contractors may also be eligible for a product rebate based on their qualified purchases. All backed by the strength of Belden's financial and managerial resources.

# Packaging

## Color Coded Cartons for Ease of Category Identification



### Easybox™ For Category 3–6e+ UTP Cables

The cable is packaged directly in the box and dispenses in a tangle-free payout, as if on a reel, in 1000 ft. lengths.

### Cable Caddy™ — Reel-in-a-box For Category 3–6e+ UTP Cables

The 1000 ft. length of cable is placed on a plastic reel and is dispensed from the front of the Cable Caddy.

Category 3–6e+ cables are also available on standard 1000 ft. reels.

### Reels

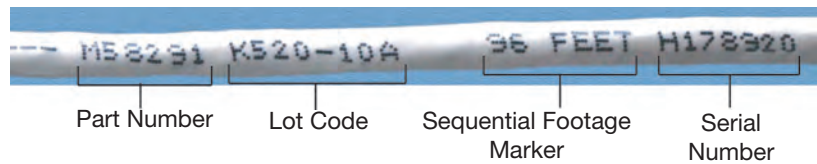
Mohawk's standard UTP and ScTP copper cables are available on 1000 ft. reels from inventory. Non-standard cables are available in customer specified lengths as well as 1000 ft. reels.

### Fiber Optic Cables

Mohawk's fiber optic cable is supplied on reels only and is available in specified lengths with a  $-0+10\%$  tolerance on standard size reels. Non-standard put-ups are available on request.

### Smart Legend®

Mohawk's Smart Legend designation has been implemented to assist installers with cable identification. A serial number is printed every two feet on all 4 pair cables (excluding OSP cables) at final packaging. This allows for easy identification of reels, saving installers the time of labeling each run. For multiple runs off the same spool, only the addition of a single-character identifier is required, saving time wasted on a lengthy identification scheme.



# Shipping & Packaging Guide

## Cat 5e 5e LAN® • Cat 5E+ MegaLAN®

Package	Number Per Pallet	Size of Pallet
12" Reels	60	38" X 48"
Boxes (13 $\frac{5}{8}$ "W x 10 $\frac{1}{4}$ "D x 12 $\frac{1}{2}$ "H)	36	44" X 44"
Reel in a Box (11 $\frac{7}{8}$ "W x 11 $\frac{3}{8}$ "D x 11 $\frac{7}{8}$ "H)	36	38" X 48"
5e PVC Box (14 $\frac{1}{4}$ "W x 14 $\frac{1}{4}$ "D x 7 $\frac{3}{8}$ "H)	45	42" X 48"

## Cat 6 6 LAN™ • Cat 6e AdvanceNet® Cat 6e+ GigaLAN®

14" Reels	36	42" X 42"
Boxes (15 $\frac{1}{2}$ "W x 11 $\frac{1}{4}$ "D x 14 $\frac{1}{4}$ "H)	33	45" X 48"
Reel in a Box (12 $\frac{3}{4}$ "W x 12 $\frac{3}{4}$ "D x 12 $\frac{3}{8}$ "H)	27	42" X 42"

## Augmented Cat 6 • GigaLAN10™

Package	Number Per Pallet	Size of Pallet
18" Reels	15	44" X 44"

### Additional Reel Sizes

16"	27	48" X 48"
18"	15	44" X 44"
20"	8	42" X 42"
22"	8	42" X 42"
24"	8	48" X 48"

## High Pair Count Reel Put-ups

### Cat 3 Non-Plenum

25 pair	Gross Weight	50 pair	Gross Weight	100 pair	Gross Weight
20" Reel 1000 ft	123 lbs	22" Reel 1000 ft	224 lbs	30" Reel 1000 ft	467 lbs
24" Reel 2000 ft	246 lbs	30" Reel 2000 ft	455 lbs	36" Reel 2000 ft	950 lbs
36" Reel 5000 ft	620 lbs	48" Reel 5000 ft	1,160 lbs	42" Reel 2500 ft	1,167 lbs
36" Reel 6500 ft	805 lbs			48" Reel 4000 ft	1,910 lbs
				54" Reel 5000 ft	2,400 lbs

### Cat 3 Plenum

200 pair	Gross Weight	300 pair	Gross Weight	400 pair	Gross Weight
42" Reel 1000 ft	814 lbs	48" Reel 1000 ft	1,897 lbs	54" Reel 1000 ft	1,900 lbs
54" Reel 2000 ft	1,680 lbs	54" Reel 2000 ft	2,800 lbs	72" Reel 2000 ft	3,900 lbs
72" Reel 5000 ft	4,300 lbs	60" Reel 3000 ft	4,200 lbs		
		72" Reel 4000 ft	5,600 lbs		

## 25 pair Cat 5 & 5e Power Sum

Plenum	Gross Weight	Riser	Gross Weight
22" Reel 1000 ft	131 lbs	24" Reel 1000 ft	119 lbs
30" Reel 2000 ft	262 lbs	36" Reel 2000 ft	245 lbs
36" Reel 5000 ft	655 lbs	48" Reel 5000 ft	640 lbs

# Locator

Mohawk P/N	Page	Mohawk P/N	Page	Mohawk P/N	Page	Mohawk P/N	Page	Mohawk P/N	Page
M52995	15	M56746	13	M57277	21	M57553	14	M58128	24
M53639	21	M56753	22	M57322	19	M57554	14	M58129	24
M54568	15	M56760	21	M57360	19	M57555	14	M58130	24
M54708	21	M56773	22	M57361	19	M57556	14	M58131	24
M54783	21	M56801	23	M57362	19	M57557	14	M58132	24
M54785	15	M56809	21	M57363	19	M57561	26	M58133	24
M54998	15	M56823	21	M57364	19	M57562	26	M58134	24
M55073	23	M56832	22	M57365	19	M57564	21	M58135	24
M55082	21	M56871	26	M57366	19	M57570	24	M58141	22
M55211	23	M56876	13	M57367	19	M57620	7	M58142	22
M55212	23	M56877	13	M57370	19	M57621	7	M58143	21
M55216	23	M56878	13	M57371	19	M57622	26	M58144	20
M55436	15	M56882	13	M57372	19	M57623	26	M58145	20
M55477	15	M56889	9	M57373	19	M57626	30	M58155	17
M55530	15	M56905	9	M57374	19	M57627	30	M58156	17
M55586	15	M56912	21	M57375	19	M57628	30	M58157	17
M55700	23	M56954	13	M57376	19	M57629	30	M58158	17
M55704	23	M56985	24	M57377	19	M57630	30	M58159	17
M55721	15	M57009	21	M57378	19	M57631	30	M58160	17
M55760	15	M57040	22	M57404	30	M57634	24	M58161	17
M55837	15	M57041	26	M57407	30	M57635	24	M58162	17
M55900	15	M57042	26	M57408	30	M57636	24	M58163	17
M55901	15	M57048	13	M57409	30	M57637	24	M58164	17
M55902	15	M57071	24	M57410	30	M57638	24	M58175	17
M55915	15	M57073	24	M57411	30	M57639	24	M58176	17
M55916	15	M57074	24	M57413	7	M57640	24	M58177	17
M55959	15	M57075	24	M57414	7	M57641	24	M58178	17
M55980	15	M57076	24	M57415	7	M57642	24	M58179	17
M55986	19	M57077	24	M57416	7	M57656	26	M58180	17
M55987	19	M57098	23	M57417	7	M57662	21	M58181	17
M55988	13	M57113	13	M57418	7	M57750	7	M58182	17
M55989	13	M57116	21	M57419	7	M57761	14	M58183	17
M55994	15	M57129	13	M57420	7	M57770	24	M58184	17
M55995	15	M57193	9	M57421	7	M57850	21	M58185	20
M56009	15	M57194	9	M57422	7	M57860	7	M58186	20
M56072	13	M57195	9	M57507	24	M57861	7	M58187	20
M56092	13	M57196	9	M57508	24	M57866	7	M58188	20
M56093	13	M57197	9	M57509	24	M57867	7	M58189	20
M56094	13	M57198	9	M57511	24	M57868	7	M58190	20
M56095	13	M57199	9	M57512	24	M57869	7	M58191	20
M56126	23	M57200	9	M57517	24	M57870	7	M58192	20
M56128	23	M57201	9	M57518	24	M57887	14	M58193	20
M56129	23	M57202	9	M57519	24	M57924	14	M58195	20
M56165	13	M57203	9	M57520	24	M57936	14	M58196	20
M56166	13	M57204	9	M57542	24	M57996	23	M58197	20
M56167	13	M57205	9	M57543	24	M58007	14	M58198	20
M56168	13	M57206	9	M57544	24	M58008	14	M58199	20
M56210	15	M57207	9	M57545	14	M58009	14	M58200	20
M56230	15	M57208	9	M57546	14	M58010	14	M58201	20
M56256	15	M57209	9	M57547	14	M58103	13	M58202	20
M56669	21	M57210	9	M57548	14	M58104	14	M58203	20
M56670	13	M57211	23	M57550	14	M58116	28	M58204	24
M56700	22	M57216	24	M57551	14	M58126	24	M58205	24
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M58210	24	M58629	29	M9X017	39	M9X207	46	M9X700	48
M58211	24	M58630	29	M9X018	39	M9X209	46	M9X701	48
M58212	24	M58650	5	M9X019	39	M9X211	46	M9X702	48
M58213	24	M58651	5	M9X020	39	M9X215	46	M9X703	48
M58214	24	M58652	5	M9X021	40	M9X240	49	M9X704	48
M58215	24	M58653	5	M9X022	40	M9X241	49	M9X705	48
M58216	24	M58646	5	M9X023	40	M9X242	49	M9X720	48
M58217	24	M58647	5	M9X024	40	M9X243	49	M9X721	48
M58218	24	M58648	5	M9X025	40	M9X244	49	M9X722	48
M58219	24	M58649	5	M9X026	40	M9X245	49	M9X723	48
M58220	24	M58762	27	M9X027	40	M9X246	49	M9X724	48
M58221	24	M58772	27	M9X028	40	M9X247	49	M9X725	48
M58222	24	M92000s	see M9X	M9X029	41	M9X248	49	M9X740	48
M58226	24	M93000s	see M9X	M9X030	41	M9X381T	43	M9X741	48
M58280	11	M95830	31	M9X031	41	M9X382T	43	M9X742	48
M58281	11	M95890	50	M9X032	41	M9X384T	43	M9X743	48
M58282	11	M96436	50	M9X033	41	M9X386T	43	M9X744	48
M58283	11	M96512	31	M9X034	41	M9X389T	43	M9X745	48
M58285	11	M96551	51	M9X035	41	M9X391T	43	M9X810	44
M58286	11	M96566	51	M9X036	41	M9X393T	43	M9X811	44
M58287	11	M96567	51	M9X037	34	M9X398T	43	M9X812	44
M58288	11	M96568	51	M9X038	34	M9X400T	43	M9X813	44
M58289	11	M96569	51	M9X039	34	M9X500T	42	M9X814	44
M58290	11	M96570	51	M9X040	34	M9X502T	42	M9X815	44
M58291	11	M96571	51	M9X042	34	M9X505T	42	M9X816	44
M58292	11	M96572	51	M9X043	35	M9X507T	42	M9X817	44
M58293	11	M96573	51	M9X044	35	M9X509T	42	M9X890	45
M58294	11	M96574	51	M9X045	35	M9X510T	42	M9X891	45
M58295	11	M96575	51	M9X046	35	M9X511T	42	M9X892	45
M58296	11	M96632	31	M9X048	35	M9X513T	42	M9X893	45
M58297	11	M96633	31	M9X080	50	M9X520T	42	M9X894	45
M58298	11	M96639	51	M9X081	50	M9X601	34	M9X895	45
M58299	11	M98177	50	M9X082	39	M9X602	34	M9X896	45
M58300	11	M9A000's	see M9X	M9X083	38	M9X604	34	M9X897	45
M58349	23	M9B000's	see M9X	M9X100	36	M9X606	34	A0403634	52
M58405	7	M9C000's	see M9X	M9X101	36	M9X609	34	A0408829	52
M58414	9	M9D000's	see M9X	M9X102	36	M9X611	35	A0408835	52
M58452	25	M9E000's	see M9X	M9X103	36	M9X612	35	AX100029	52
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M58454	25	M9X001	50	M9X150	47	M9X616	35	AX101075	52
M58455	25	M9X002	50	M9X151	47	M9X619	34	AX101077	52
M58456	25	M9X003	50	M9X152	47	M9X620	35	AX101100	53
M58457	25	M9X004	50	M9X153	47	M9X621	35	AX101101	53
M58460	25	M9X005	38	M9X154	47	M9X622	34	AX101791	52
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M58462	25	M9X007	38	M9X170	47	M9X630	37	AX101793	52
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M58521	22	M9X011	38	M9X174	47	M9X634	37	AX101983	52
M58522	22	M9X012	38	M9X175	47	M9X640	37	AX101984	52
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