

GenFree® Uniblend® High Speed

EPR/Copper Tape Shield/LSZH, Medium-Voltage Power, Shielded
5 kV and 8 kV, UL Type MV-105/ST1, 133%/100% Ins. Levels, 115 Mils



Product Construction:

Conductor:

- 6 AWG thru 1000 kcmil annealed bare copper compact Class B strand

Extruded Strand Shield (ESS):

- Extruded thermoset semi-conducting stress-control layer over conductor

Insulation:

- Lead-free Ethylene Propylene Rubber (EPR) insulation, contrasting in color to the black semi-conducting shield layers

Extruded Insulation Shield (EIS):

- Thermoset semi-conducting polymeric layer free stripping from insulation

Metallic Shield:

- 5 mil annealed copper tape with an overlap of 25%

Overall Jacket:

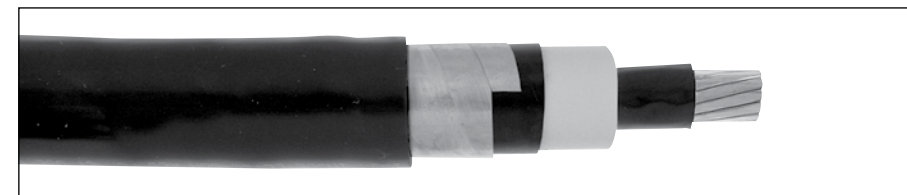
- Lead-free, moisture- and sunlight-resistant Low-Smoke, Zero-Halogen Polyolefin (LSZH)

Options:

- STRANDFILL® – blocked conductor. Tested in accordance with ICEA T-31-610

Applications:

- Superior performance in petrochemical plants, pulp and paper mills, sewage and water treatment plants, environmental protection systems, railroads, mines, utility power generating stations, steel mills, textile plants and other industrial three-phase applications



Applications (cont'd.):

- For use in wet or dry locations when installed in accordance with NEC
- For use in aerial, conduit, open tray and underground duct installations
- For use in direct burial if installed in a system with a ground conductor that is in close proximity, and conforms with NEC 250.4(A)(5)

Features:

- Rated at 105°C
- Excellent heat, moisture and sunlight resistance
- Excellent flame resistance
- Outstanding corona resistance
- High Speed low friction technology for easy cable pulling
- Flexibility for easy handling
- High dielectric strength
- Low moisture absorption
- Electrical stability under stress
- Low dielectric loss
- Chemical-resistant
- Meets cold bend test at -35°C
- 105°C rating for continuous operation
- 140°C rating for emergency overload conditions
- 250°C rating for short circuit conditions

Compliances:

- National Electrical Code (NEC)
- UL 1072
- ICEA S-93-639/NEMA WC74
- ICEA S-97-682
- ICEA T-33-655
- AEC CS8
- UL listed as Type MV-105 for use in accordance with NEC, UL File # E90501
- UL 1685 (Sizes 1/0 AWG and larger) UL Flame Exposure Test
- UL 1685 Vertical Flame and ST1 Smoke Release Test
- Sizes 1/0 AWG and larger are listed and marked "Sunlight-Resistant FOR CT USE" in accordance with NEC
- IEEE 1202 (70,000 BTU/hr)/CSA FT4
- EPA 40 CFR, Part 261 for leachable lead content per TCLP method
- OSHA Acceptable
- RoHS Compliant

Packaging:

- Material cut to length and shipped on non-returnable wood reels. Lengths in excess of 10,000 lbs. are provided on returnable steel reels that require a deposit
- Extra charges apply for cuts less than 1000 ft., lagging, pulling eyes, paralleling and triplexing

* CATALOG NUMBER	COND. SIZE (AWG/ kcmil)	NOMINAL CONDUCTOR DIAMETER	INSULATION DIAMETER INCHES		NOMINAL JACKET THICKNESS		NOMINAL CABLE				COPPER WEIGHT		AMPACITY								CONDUIT SIZING (4) (INCHES)
							DIAMETER		WEIGHT				CONDUIT IN AIR (1)		UNDERGROUND DUCT (2)		TRAY (3)				
		INCHES	mm	INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km	90°C	105°C	90°C	105°C	90°C	105°C						
5 kV AND 8 kV, UL TYPE MV-105, 133%/100% INS. LEVELS, 115 MILS																					
17201.120605*	6	0.17	0.415	0.490	0.060	1.52	0.65	16.51	295	439	126	188	83	93	90	97	-	-	2		
17201.120405*	4	0.22	0.455	0.535	0.060	1.52	0.70	17.15	365	543	178	265	110	120	115	125	-	-	2.5		
17201.120205*	2	0.27	0.510	0.590	0.060	1.52	0.76	19.05	471	701	259	385	150	165	155	165	-	-	2.5		
17201.120105*	1	0.31	0.545	0.620	0.060	1.52	0.79	20.07	539	802	315	468	170	190	175	185	-	-	2.5		
17201.125105*	1/0	0.34	0.580	0.655	0.060	1.52	0.82	21.08	623	927	386	575	195	215	200	215	195	220	3		
17201.125205*	2/0	0.38	0.620	0.695	0.060	1.52	0.86	22.10	728	1083	474	706	225	255	230	245	225	250	3		
17201.125305*	3/0	0.43	0.665	0.745	0.080	2.03	0.94	24.38	886	1318	585	871	260	290	260	275	260	290	3		
17201.135405*	4/0	0.48	0.720	0.795	0.080	2.03	1.00	25.65	1053	1567	725	1080	295	330	295	315	300	335	3		
17201.136005*	250	0.53	0.770	0.850	0.080	2.03	1.05	27.18	1199	1784	849	1263	330	365	325	345	335	370	3.5		
17201.136205*	350	0.62	0.870	0.945	0.080	2.03	1.14	29.72	1559	2320	1165	1735	395	440	390	415	415	460	3.5		
17201.136505*	500	0.74	0.990	1.065	0.080	2.03	1.27	33.53	2088	3107	1639	2439	480	535	465	500	515	575	4		
17201.137005*	750	0.91	1.170	1.250	0.080	2.03	1.45	38.35	2962	4407	2427	3611	585	655	565	610	665	745	5		
17201.637505*	1000	1.06	1.320	1.400	0.080	2.03	1.60	42.42	3815	5677	3210	4777	675	755	640	690	795	890	5		

Dimensions and weights are nominal. Subject to industry tolerances.

* Non-stock item; minimum runs apply. Please consult Customer Service for price and delivery.

(1) Ampacities are in accordance with Table 310.60(C)(73) of the NEC for triplexed or three single conductor copper cables in isolated conduit in air based on a conductor temperature of 90°C (194°F) or 105°C (221°F), temperature denoted in column header, and an ambient air temperature of 40°C (104°F).

(2) Ampacities are in accordance with Table 310.60(C)(77) of the NEC for triplexed or three single conductor copper cables in underground ducts (three conductors per duct), based on a conductor temperature of 90°C (194°F) or 105°C (221°F), temperature denoted in column header, and an ambient earth temperature of 20°C (68°F), electrical duct arrangement per Figure 310.60 Detail 1, 100% load factor, and earth thermal resistance (rho) of 90.

(3) Ampacities are based on single conductor Type MV-105 sizes #1/0 AWG and larger in an uncovered tray in accordance with Section 392.80(B)(2) of the NEC at an ambient air temperature of 40°C (104°F) the ampacities are based on 75% of the values per Table 310.60(C)(69), operating temperature denoted in column header. For cable trays with unventilated covers for more than 6 feet, the ampacities shall not exceed 70% of the values per Table 310.60(C)(69).

(4) Based on nominal cable diameters, three single cables in the duct (PVC Schedule 40) with no ground wire and a maximum of 40% fill. Jam ratio has been considered but should be checked for individual installations.

Note: a) Sizes smaller than 1/0 AWG do not include "FOR CT USE".

b) The NESC Lightning bolt symbol is on all Uniblend® constructions.



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Uniblend® PVC High Speed EPR/Copper Tape Shield with Overall PVC Jacket, Medium-Voltage Power, Shielded, 5 kV and 8 kV UL Type MV-105, 133%/100% Ins. Levels, 115 Mils, Three Conductor



Features (cont'd.):

- High dielectric strength
- Low moisture absorption
- Electrical stability under stress
- Low dielectric loss
- Chemical-resistant
- Meets cold bend test at -35°C
- 105°C rating for continuous operation
- 140°C rating for emergency overload conditions
- 250°C rating for short circuit conditions

Product Construction:

Conductor:

- 6 AWG thru 1000 kcmil annealed bare copper compact Class B strand

Extruded Strand Shield (ESS):

- Extruded thermoset semi-conducting stress-control layer over conductor

Insulation:

- Lead-free Ethylene Propylene Rubber (EPR) insulation, contrasting in color to the black semi-conducting shield layers

Extruded Insulation Shield (EIS):

- Thermoset semi-conducting polymeric layer free stripping from insulation

Metallic Shield:

- 5 mil annealed copper tape with an overlap of 25%

Grounding Conductor:

- 1 bare grounding conductor may be in contact with metallic shielding tape

Overall Jacket:

- Low-friction, lead-free, flame-retardant, moisture- and sunlight-resistant Polyvinyl Chloride (PVC)

Options:

- STRANFILL® – blocked conductor. Tested in accordance with ICEA T-31-610
- 3 bare copper ground wires
- Covered ground wires

Applications:

- Suited for use in a broad range of commercial, industrial and utility applications, where reliability is the major concern, space is limited and ease of installation is critical
- In wet or dry locations when installed in accordance with NEC
- In aerial, direct burial, conduit, open tray and underground duct installations

Features:

- Rated at 105°C
- High Speed low friction technology for easy cable pulling
- Excellent heat, moisture and sunlight resistance
- Outstanding corona resistance
- Flexibility for easy handling

Compliances:

- National Electrical Code (NEC)
- UL 1072
- ICEA S-93-639/NEMA WC74
- ICEA S-97-682
- AEC CS8
- UL listed as Type MV-105 for use in accordance with NEC, UL File # E90501
- UL 1685 (70,000 BTU/hr)
- EPA 40 CFR, Part 261 for leachable lead content per TCLP method
- OSHA Acceptable
- RoHS Compliant

Optional Flame Tests:

- IEEE 1202 (70,000 BTU/hr)/CSA FT4

Packaging:

- Material cut to length and shipped on non-returnable wood reels. Lengths in excess of 10,000 lbs. are provided on returnable steel reels that require a deposit
- Extra charges apply for cuts less than 1000 ft., lagging, pulling eyes, paralleling and plexing

CATALOG NUMBER	COND. SIZE (AWG/ kcmil)	NOMINAL CONDUCTOR DIAMETER	INSULATION DIAMETER INCHES		GROUND WIRE (AWG)	NOMINAL JACKET THICKNESS		NOMINAL CABLE				COPPER WEIGHT		AMPACITY					
								DIAMETER		WEIGHT				CONDUIT IN AIR (1)		UNDERGROUND DUCT (2)		TRAY (3)	
		INCHES	MIN.	MAX.		INCHES	mm	INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km						
5 kV AND 8 kV, UL TYPE MV-105, 133%/100% INS. LEVELS, 115 MILS																			
15493.400605	6	0.17	0.415	0.490	6	0.080	2.03	1.29	32.77	939	1397	460	685	83	92	88	95	93	105
15493.400405	4	0.22	0.455	0.535	6	0.080	2.03	1.39	35.31	1158	1723	616	917	105	120	115	125	120	135
15493.400205	2	0.27	0.510	0.590	6	0.080	2.03	1.51	38.35	1511	2249	860	1279	145	165	150	160	165	185
15493.405105	1/0	0.34	0.580	0.655	4	0.080	2.03	1.67	42.42	2030	3021	1290	1919	195	215	195	210	215	240
15493.405205	2/0	0.38	0.620	0.695	4	0.080	2.03	1.82	46.23	2449	3645	1556	2315	220	245	220	235	245	275
15493.405405	4/0	0.48	0.720	0.795	3	0.110	2.79	2.07	52.58	3438	5116	2344	3488	290	320	285	305	325	360
15493.406005*	250	0.53	0.770	0.850	2	0.110	2.79	2.15	54.61	3968	5904	2759	4105	315	350	310	335	360	400
15493.406205	350	0.62	0.870	0.945	2	0.110	2.79	2.36	59.94	5009	7454	3713	5525	385	430	375	400	435	490
15493.406505	500	0.74	0.990	1.065	1	0.110	2.79	2.64	67.06	6793	10065	5191	7724	470	525	450	485	535	600
15493.407005*	750	0.91	1.170	1.250	1/0	0.140	3.56	3.14	79.76	9833	14633	7629	11352	570	635	545	585	670	745
15493.407505*	1000	1.06	1.320	1.400	2/0	0.140	3.56	3.48	88.39	12601	18753	10070	14985	650	725	615	660	770	860

Dimensions and weights are nominal. Subject to industry tolerances.

* Non-stock item; minimum runs apply. Please consult Customer Service for price and delivery.

(1) Ampacities are in accordance with Table 310.60(C)(75) of the NEC for three conductor copper cable in isolated conduit in air based on a conductor temperature of 90°C (194°F) or 105°C (221°F), temperature denoted in column header, and an ambient air temperature of 40°C (104°F).

(2) Ampacities are in accordance with Table 310.60(C)(79) of the NEC for three conductor copper cable in underground ducts (three conductors per duct), based on a conductor temperature of 90°C (194°F) or 105°C (221°F), temperature denoted in column header, and an ambient earth temperature of 20°C (68°F), electrical duct arrangement per Figure 310.60 Detail 1, 100% load factor, and earth thermal resistance (rho) of 90.

(3) Ampacities are based on three conductor Type MV-105 cables in single layer in an uncovered tray with maintained spacing of not less than one cable diameter between cables, in accordance with Section 392.80(B)(1) of the NEC at an ambient air temperature of 40°C (104°F); the ampacities are per Table 310.60(C)(71), operating temperature denoted in column header. For cable trays with unventilated covers for more than 6 feet, the ampacities shall not exceed 95% of the values in NEC Table 310.60(C)(75).

Note: a) All sizes are "FOR CT USE".

b) The NESC Lightning bolt symbol is on all Uniblend® constructions.

