

# GenFree® Uniblend®

EPR/Copper Tape Shield with Overall LSZH Jacket,  
Medium-Voltage Power, Shielded 5 kV and 8 kV

UL Type MV-105, 133%/100% Ins. Levels, 115 Mils, Three Conductor



## 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:

- Annealed copper tape with an overlap of 25%

### Grounding Conductor:

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

### 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:

- 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
- Excellent heat, moisture and sunlight resistance
- Outstanding corona resistance
- Flexibility for easy handling
- Easy Glider® low friction technology for easy cable pulling
- 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
- AEIC CS8 -13 (AEIC CS8-20, Optional)
- UL listed as Type MV-105 for use in accordance with NEC, UL File # E518856
- UL 1685 (70,000 BTU/hr)
- 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<br>NUMBER  | COND.<br>SIZE<br>(AWG/<br>kcmil) | NOMINAL<br>CONDUCTOR<br>DIAMETER |       | INSULATION<br>DIAMETER<br>INCHES |        | GROUND<br>WIRE<br>(AWG) | NOMINAL<br>JACKET<br>THICKNESS |        | NOMINAL CABLE |                 |           |                 | COPPER<br>WEIGHT |      | AMPACITY              |      |                         |      |          |  |
|--|----------------------------------|----------------------------------|-------|----------------------------------|--------|-------------------------|--------------------------------|--------|---------------|-----------------|-----------|-----------------|------------------|------|-----------------------|------|-------------------------|------|----------|--|
|  |                                  |                                  |       |                                  |        |                         |                                |        | DIAMETER      |                 | WEIGHT    |                 |                  |      | CONDUIT<br>IN AIR (1) |      | UNDERGROUND<br>DUCT (2) |      | TRAY (3) |  |
|  |                                  | INCHES                           | MIN.  | MAX.                             | INCHES |                         | mm                             | INCHES | mm            | LBS/<br>1000 FT | kg/<br>km | LBS/<br>1000 FT | kg/<br>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 |                                  |                                  |       |                                  |        |                         |                                |        |               |                 |           |                 |                  |      |                       |      |                         |      |          |  |
| 15693.400605   | 6                                | 0.17                             | 0.415 | 0.490                            | 6      | 0.080                   | 2.03                           | 1.32   | 33.53         | 939             | 1397      | 454             | 676              | 83   | 92                    | 88   | 95                      | 93   | 105      |  |
| 15693.400405   | 4                                | 0.21                             | 0.455 | 0.535                            | 6      | 0.080                   | 2.03                           | 1.41   | 35.81         | 1158            | 1723      | 611             | 909              | 105  | 120                   | 115  | 125                     | 120  | 135      |  |
| 15693.400205   | 2                                | 0.27                             | 0.510 | 0.590                            | 6      | 0.080                   | 2.03                           | 1.53   | 38.86         | 1511            | 2249      | 853             | 1270             | 145  | 165                   | 150  | 160                     | 165  | 185      |  |
| 15693.405105   | 1/0                              | 0.34                             | 0.580 | 0.655                            | 4      | 0.080                   | 2.03                           | 1.67   | 42.42         | 2108            | 3137      | 1283            | 1909             | 195  | 215                   | 195  | 210                     | 215  | 240      |  |
| 15693.405205   | 2/0                              | 0.38                             | 0.620 | 0.695                            | 4      | 0.080                   | 2.03                           | 1.76   | 44.70         | 2449            | 3645      | 1549            | 2305             | 220  | 245                   | 220  | 235                     | 245  | 275      |  |
| 15693.405405   | 4/0                              | 0.48                             | 0.720 | 0.795                            | 3      | 0.110                   | 2.79                           | 2.06   | 52.32         | 3438            | 5116      | 2338            | 3479             | 290  | 320                   | 285  | 305                     | 325  | 360      |  |
| 15693.406005   | 250                              | 0.52                             | 0.770 | 0.850                            | 2      | 0.110                   | 2.79                           | 2.18   | 55.37         | 3968            | 5905      | 2751            | 4094             | 315  | 350                   | 310  | 335                     | 360  | 400      |  |
| 15693.406205   | 350                              | 0.62                             | 0.870 | 0.945                            | 2      | 0.110                   | 2.79                           | 2.38   | 60.45         | 5009            | 7454      | 3706            | 5515             | 385  | 430                   | 375  | 400                     | 435  | 490      |  |
| 15693.406505   | 500                              | 0.74                             | 0.990 | 1.065                            | 1      | 0.110                   | 2.79                           | 2.63   | 66.80         | 6719            | 9999      | 5178            | 7705             | 470  | 525                   | 450  | 485                     | 535  | 600      |  |
| 15693.407005   | 750                              | 0.91                             | 1.170 | 1.250                            | 1/0    | 0.140                   | 3.56                           | 3.05   | 77.47         | 9833            | 14633     | 7621            | 11341            | 570  | 635                   | 545  | 585                     | 670  | 745      |  |
| 15693.407505   | 1000                             | 1.06                             | 1.320 | 1.400                            | 2/0    | 0.140                   | 3.56                           | 3.48   | 88.39         | 12601           | 18752     | 10070           | 14986            | 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.