# EmPowr® Fill Shielded Power Cable 15-35 kV

## Al Conductor EPR Insulation Longitudinally Applied Corrugated Tape LLDPE Jacket

### Product Construction:

### Complete Cable:

Cross-linked semi-conducting conductor shield, insulation and semi-conducting insulation shield are extruded over a solid or stranded aluminum conductor and cured in a single operation. Corrugated copper tape and an extruded black jacket are applied over the cable core. These products meet the latest requirements of ANSI/ICEA S-97-682 and AEIC CS8 as applicable for Ethylene Propylene Rubber (EPR) insulated shielded power cable.

**Conductor:**
Solid or Class B compressed concentric lay stranded 1350 aluminum.

**Conductor Shield:**
Extruded semi-conducting thermosetting polymeric stress control layer.

**Insulation:**
Extruded Ethylene Propylene Rubber (EPR) Class II and III.

**Insulation Shield:**
Extruded semi-conducting thermosetting layer, clean and free stripping from insulation.

**Longitudinally Applied Corrugated Tape:**
Copper, 8 or 10 mil thick Longitudinally Applied Corrugated Tape (LACT) with a minimum 375 mil overlap.

**Jacket:**
Black, non-conducting, sunlight-resistant, Linear Low-Density Polyethylene (LLDPE).

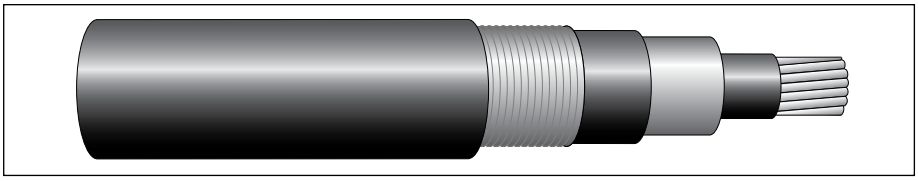
### Features and Benefits:

- Even distribution of fault current and better heat dissipation
- Allows expansion/contraction of cable core
- Improved bending characteristics versus helical copper tape shield
- Triple-extruded for clean interfaces
- Class 10,000 environment utilized for cable core material handling
- Flexibility for easy handling
- Excellent moisture resistance
- Deformation-resistant
- High dielectric strength
- Low dielectric loss
- Excellent resistance to water treeing
- Clean-stripping insulation shield without the use of a release agent
- Sunlight-resistant

### Temperature Rating:

- Normal .....105°C
- Emergency*.....140°C
- Short Circuit.....250°C

** Operation at the emergency overload temperature shall not exceed 1500 hours cumulative during the lifetime of the cable.*



**LONGITUDINALLY APPLIED CORRUGATED TAPE SHIELDED POWER CABLE**

| COMPRESSED CONDUCTOR | | DIAMETER (1) INCHES | | | | | NOMINAL JACKET THKN. INCHES (1) | APPROX. WEIGHT (1) LB/1000 FT | | | AMPACITY (2) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AL AWG OR kcmil | NO. OF WIRES | INSULATION | | LACT SHIELD | | LLDPE JACKET | | AL COND. | CU SHIELD | TOTAL | DIRECT BURIED | IN DUCT |
| | | MIN. | MAX. | THKN. | O.D. | | | | | | | |
| **175 mils NOMINAL EPR INSULATION – 15 kV 100% INSULATION LEVEL** | | | | | | | | | | | | |
| 1/0 | 19 | 0.715 | 0.800 | 0.008 | 0.912 | 1.072 | 0.080 | 99 | 116 | 583 | 235 | 170 |
| 1/0 | 19 | 0.715 | 0.800 | 0.010 | 0.918 | 1.078 | 0.080 | 99 | 145 | 616 | 235 | 170 |
| 2/0 | 19 | 0.760 | 0.845 | 0.008 | 0.956 | 1.116 | 0.080 | 125 | 120 | 638 | 270 | 200 |
| 2/0 | 19 | 0.760 | 0.845 | 0.010 | 0.962 | 1.122 | 0.080 | 125 | 150 | 672 | 270 | 200 |
| 3/0 | 19 | 0.810 | 0.895 | 0.008 | 1.006 | 1.166 | 0.080 | 158 | 125 | 703 | 305 | 225 |
| 3/0 | 19 | 0.810 | 0.895 | 0.010 | 1.012 | 1.172 | 0.080 | 158 | 156 | 738 | 305 | 225 |
| 4/0 | 19 | 0.865 | 0.950 | 0.008 | 1.062 | 1.222 | 0.080 | 199 | 134 | 784 | 350 | 260 |
| 4/0 | 19 | 0.865 | 0.950 | 0.010 | 1.068 | 1.228 | 0.080 | 199 | 168 | 822 | 350 | 260 |
| 250 | 37 | 0.920 | 1.005 | 0.008 | 1.104 | 1.264 | 0.080 | 234 | 131 | 860 | 370 | 285 |
| 250 | 37 | 0.920 | 1.005 | 0.010 | 1.110 | 1.270 | 0.080 | 234 | 164 | 895 | 370 | 285 |
| 350 | 37 | 1.015 | 1.100 | 0.008 | 1.207 | 1.367 | 0.080 | 329 | 157 | 1037 | 445 | 345 |
| 350 | 37 | 1.015 | 1.100 | 0.010 | 1.213 | 1.373 | 0.080 | 329 | 191 | 1073 | 445 | 345 |
| 500 | 37 | 1.150 | 1.235 | 0.008 | 1.335 | 1.495 | 0.080 | 468 | 157 | 1250 | 545 | 425 |
| 500 | 37 | 1.150 | 1.235 | 0.010 | 1.355 | 1.515 | 0.080 | 468 | 220 | 1323 | 545 | 425 |
| 750 | 61 | 1.340 | 1.425 | 0.008 | 1.536 | 1.696 | 0.080 | 703 | 199 | 1645 | 665 | 530 |
| 750 | 61 | 1.340 | 1.425 | 0.010 | 1.542 | 1.702 | 0.080 | 703 | 243 | 1691 | 665 | 530 |
| 1000 | 61 | 1.485 | 1.575 | 0.008 | 1.685 | 1.905 | 0.110 | 937 | 208 | 2077 | 780 | 630 |
| 1000 | 61 | 1.485 | 1.575 | 0.010 | 1.691 | 1.911 | 0.110 | 937 | 260 | 2130 | 780 | 630 |
| **220 mils NOMINAL EPR INSULATION – 15 kV 133% INSULATION LEVEL** | | | | | | | | | | | | |
| 1/0 | 19 | 0.805 | 0.895 | 0.008 | 1.002 | 1.162 | 0.080 | 99 | 125 | 669 | 235 | 170 |
| 1/0 | 19 | 0.805 | 0.895 | 0.010 | 1.008 | 1.168 | 0.080 | 99 | 156 | 704 | 235 | 170 |
| 2/0 | 19 | 0.850 | 0.935 | 0.008 | 1.046 | 1.206 | 0.080 | 125 | 129 | 726 | 270 | 200 |
| 2/0 | 19 | 0.850 | 0.935 | 0.010 | 1.052 | 1.212 | 0.080 | 125 | 162 | 763 | 270 | 200 |
| 3/0 | 19 | 0.900 | 0.985 | 0.008 | 1.096 | 1.256 | 0.080 | 158 | 139 | 799 | 305 | 225 |
| 3/0 | 19 | 0.900 | 0.985 | 0.010 | 1.102 | 1.262 | 0.080 | 158 | 173 | 839 | 305 | 225 |
| 4/0 | 19 | 0.955 | 1.045 | 0.008 | 1.152 | 1.312 | 0.080 | 199 | 143 | 880 | 350 | 260 |
| 4/0 | 19 | 0.955 | 1.045 | 0.010 | 1.158 | 1.318 | 0.080 | 199 | 179 | 921 | 350 | 260 |
| 250 | 37 | 1.010 | 1.100 | 0.008 | 1.194 | 1.354 | 0.080 | 234 | 140 | 961 | 370 | 285 |
| 250 | 37 | 1.010 | 1.100 | 0.010 | 1.200 | 1.360 | 0.080 | 234 | 191 | 1012 | 370 | 285 |
| 350 | 37 | 1.105 | 1.190 | 0.008 | 1.297 | 1.457 | 0.080 | 329 | 157 | 1137 | 445 | 345 |
| 350 | 37 | 1.105 | 1.190 | 0.010 | 1.303 | 1.463 | 0.080 | 329 | 191 | 1173 | 445 | 345 |
| 500 | 37 | 1.240 | 1.330 | 0.008 | 1.439 | 1.599 | 0.080 | 468 | 185 | 1396 | 545 | 425 |
| 500 | 37 | 1.240 | 1.330 | 0.010 | 1.445 | 1.605 | 0.080 | 468 | 231 | 1444 | 545 | 425 |
| 750 | 61 | 1.430 | 1.520 | 0.008 | 1.626 | 1.846 | 0.110 | 703 | 203 | 1871 | 665 | 530 |
| 750 | 61 | 1.430 | 1.520 | 0.010 | 1.632 | 1.852 | 0.110 | 703 | 254 | 1923 | 665 | 530 |
| 1000 | 61 | 1.575 | 1.670 | 0.008 | 1.775 | 1.995 | 0.110 | 937 | 222 | 2228 | 780 | 630 |
| 1000 | 61 | 1.575 | 1.670 | 0.010 | 1.781 | 2.001 | 0.110 | 937 | 277 | 2285 | 780 | 630 |

(1) Extruded layer thicknesses and insulation and insulation shield diameters are in accordance with ANSI/ICEA S-97-682 for Utility Shielded Power Cables Rated 5 through 46 kV and also meet the requirements of the latest revisions of AEIC CS8.

(2) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values are based on one three-phase circuit, one conductor per phase, in flat adjacent configuration (direct buried) with metallic shield bonded at each end. For specific ampacities, contact your General Cable sales representative.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

General Cable

# EmPowr® Fill Shielded Power Cable 15-35 kV

## Al Conductor EPR Insulation Longitudinally Applied Corrugated Tape LLDPE Jacket

| LONGITUDINALLY APPLIED CORRUGATED TAPE SHIELDED POWER CABLE | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| COMPRESSED CONDUCTOR | | DIAMETER (1) INCHES | | | | | NOMINAL JACKET THKN. INCHES (1) | APPROX. WEIGHT (1) LB/1000 FT | | | AMPACITY (2) | |
| AL AWG OR kcmil | NO. OF WIRES | INSULATION | | LACT SHIELD | | LLDPE JACKET | | AL COND. | CU SHIELD | TOTAL | DIRECT BURIED | IN DUCT |
| | | MIN. | MAX. | THKN. | O.D. | | | | | | | |
| **260 mils NOMINAL EPR INSULATION – 25 kV 100% INSULATION LEVEL** | | | | | | | | | | | | |
| 1/0 | 19 | 0.875 | 0.965 | 0.008 | 1.082 | 1.242 | 0.080 | 99 | 134 | 751 | 235 | 170 |
| 1/0 | 19 | 0.875 | 0.965 | 0.010 | 1.088 | 1.248 | 0.080 | 99 | 168 | 789 | 235 | 170 |
| 2/0 | 19 | 0.920 | 1.010 | 0.008 | 1.125 | 1.286 | 0.080 | 125 | 139 | 812 | 270 | 200 |
| 2/0 | 19 | 0.920 | 1.010 | 0.010 | 1.132 | 1.292 | 0.080 | 125 | 173 | 851 | 270 | 200 |
| 3/0 | 19 | 0.970 | 1.060 | 0.008 | 1.176 | 1.336 | 0.080 | 158 | 143 | 883 | 305 | 225 |
| 3/0 | 19 | 0.970 | 1.060 | 0.010 | 1.182 | 1.342 | 0.080 | 158 | 179 | 924 | 305 | 225 |
| 4/0 | 19 | 1.025 | 1.115 | 0.008 | 1.232 | 1.392 | 0.080 | 199 | 153 | 972 | 350 | 260 |
| 4/0 | 19 | 1.025 | 1.115 | 0.010 | 1.238 | 1.398 | 0.080 | 199 | 191 | 1015 | 350 | 260 |
| 250 | 37 | 1.080 | 1.175 | 0.008 | 1.274 | 1.434 | 0.080 | 234 | 157 | 1064 | 370 | 285 |
| 250 | 37 | 1.080 | 1.175 | 0.010 | 1.280 | 1.440 | 0.080 | 234 | 191 | 1100 | 370 | 285 |
| 350 | 37 | 1.175 | 1.265 | 0.008 | 1.377 | 1.537 | 0.080 | 329 | 161 | 1235 | 445 | 345 |
| 350 | 37 | 1.175 | 1.265 | 0.010 | 1.397 | 1.557 | 0.080 | 329 | 220 | 1305 | 445 | 345 |
| 500 | 37 | 1.310 | 1.405 | 0.008 | 1.519 | 1.679 | 0.080 | 468 | 190 | 1503 | 545 | 425 |
| 500 | 37 | 1.310 | 1.405 | 0.010 | 1.525 | 1.685 | 0.080 | 468 | 237 | 1552 | 545 | 425 |
| 750 | 61 | 1.500 | 1.595 | 0.008 | 1.706 | 1.926 | 0.110 | 703 | 213 | 1998 | 665 | 530 |
| 750 | 61 | 1.500 | 1.595 | 0.010 | 1.712 | 1.932 | 0.110 | 703 | 266 | 2054 | 665 | 530 |
| 1000 | 61 | 1.645 | 1.740 | 0.008 | 1.855 | 2.075 | 0.110 | 937 | 227 | 2361 | 780 | 630 |
| 1000 | 61 | 1.645 | 1.740 | 0.010 | 1.861 | 2.081 | 0.110 | 937 | 289 | 2425 | 780 | 630 |
| **345 mils NOMINAL EPR INSULATION – 35 kV 100% INSULATION LEVEL** | | | | | | | | | | | | |
| 1/0 | 19 | 1.045 | 1.145 | 0.008 | 1.252 | 1.412 | 0.080 | 99 | 157 | 947 | 230 | 180 |
| 1/0 | 19 | 1.045 | 1.145 | 0.010 | 1.258 | 1.418 | 0.080 | 99 | 197 | 991 | 230 | 180 |
| 2/0 | 19 | 1.090 | 1.190 | 0.008 | 1.296 | 1.456 | 0.080 | 125 | 162 | 1013 | 260 | 205 |
| 2/0 | 19 | 1.090 | 1.190 | 0.010 | 1.302 | 1.462 | 0.080 | 125 | 202 | 1059 | 260 | 205 |
| 3/0 | 19 | 1.140 | 1.240 | 0.008 | 1.346 | 1.506 | 0.080 | 158 | 166 | 1092 | 295 | 235 |
| 3/0 | 19 | 1.140 | 1.240 | 0.010 | 1.352 | 1.512 | 0.080 | 158 | 208 | 1139 | 295 | 235 |
| 4/0 | 19 | 1.195 | 1.295 | 0.008 | 1.402 | 1.562 | 0.080 | 199 | 171 | 1183 | 340 | 265 |
| 4/0 | 19 | 1.195 | 1.295 | 0.010 | 1.408 | 1.568 | 0.080 | 199 | 214 | 1232 | 340 | 265 |
| 250 | 37 | 1.250 | 1.350 | 0.008 | 1.458 | 1.618 | 0.080 | 234 | 185 | 1305 | 360 | 295 |
| 250 | 37 | 1.250 | 1.350 | 0.010 | 1.464 | 1.624 | 0.080 | 234 | 231 | 1352 | 360 | 295 |
| 350 | 37 | 1.355 | 1.455 | 0.008 | 1.561 | 1.781 | 0.110 | 329 | 199 | 1594 | 430 | 355 |
| 350 | 37 | 1.355 | 1.455 | 0.010 | 1.567 | 1.787 | 0.110 | 329 | 243 | 1640 | 430 | 355 |
| 500 | 37 | 1.480 | 1.580 | 0.008 | 1.689 | 1.909 | 0.110 | 468 | 208 | 1858 | 530 | 430 |
| 500 | 37 | 1.480 | 1.580 | 0.010 | 1.695 | 1.915 | 0.110 | 468 | 260 | 1911 | 530 | 430 |
| 750 | 61 | 1.670 | 1.770 | 0.008 | 1.876 | 2.096 | 0.110 | 703 | 240 | 2294 | 650 | 550 |
| 750 | 61 | 1.670 | 1.770 | 0.010 | 1.882 | 2.102 | 0.110 | 703 | 289 | 2346 | 650 | 550 |
| 1000 | 61 | 1.815 | 1.920 | 0.008 | 2.025 | 2.245 | 0.110 | 937 | 245 | 2668 | 765 | 625 |
| 1000 | 61 | 1.815 | 1.920 | 0.010 | 2.031 | 2.251 | 0.110 | 937 | 306 | 2732 | 765 | 625 |

(1) Extruded layer thicknesses and insulation and insulation shield diameters are in accordance with ANSI/ICEA S-97-682 for Utility Shielded Power Cables Rated 5 through 46 kV and also meet the requirements of the latest revisions of AEIC CS8.

(2) Ampacity based on earth thermal resistivity of 90˚C-cm/watt, 90˚C conductor temp., 20˚C earth ambient temperature, 75% load factor and 36" depth of burial. Values are based on one three-phase circuit, one conductor per phase, in flat adjacent configuration (direct buried) with metallic shield bonded at each end. For specific ampacities, contact your General Cable sales representative.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

### Applications:

EmPowr® Fill cables are intended for use in dry or wet locations for distribution of three-phase medium-voltage power. These cables may be installed in ducts or direct buried.

### Options:

- Compact conductors
- Copper conductors
- EmPowr® Fill LF Lead-Free EAM
- STRANDFILL® blocked conductor. Tested in accordance with ICEA T-31-610
- BIFILL® tested to ICEA T-34-664
  1. blocked conductor
  2. blocked cable core/LACT
- TRIFILL® tested to ICEA T-34-664
  1. blocked conductor
  2. blocked cable core/LACT
  3. sealed overlap and blocked LACT/jacket
- Sealed LACT overlap
- Dry nitrogen cure
- True Triple Extrusion
- Red stripes on jacket
- Semi-conducting thermoplastic jacket
- CL™ XLPE jacket
- 3 X 1/C triplex or parallel
- Type MV-90 UL 1072
- Type MV-105 UL 1072