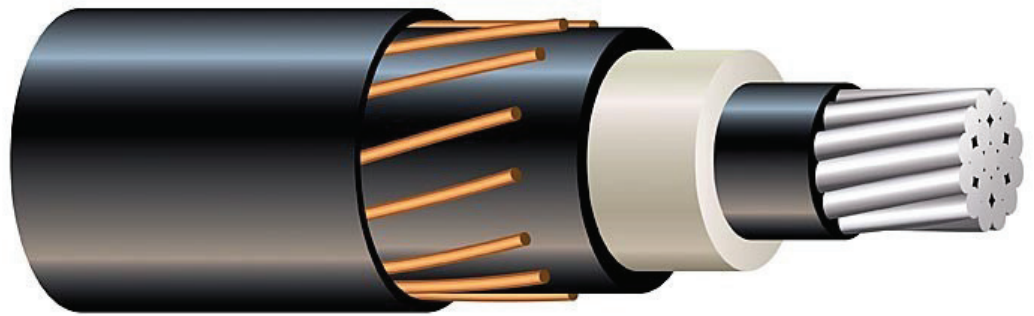


# 15kV Primary UD Cable Jacketed

Aluminum or Copper Conductor. TRXLPE Insulation.  
Bare Copper Concentric Neutrals. Polyethylene Jacket.



## APPLICATIONS

Predominantly used for primary underground distribution; suitable for use in wet or dry locations, direct burial, underground duct, and where exposed to sunlight. To be used at 15,000 volts or less and at conductor temperatures not to exceed 90°C for normal operation.

## SPECIFICATIONS

Southwire 15kV HI-DRI Primary UD Cable meets or exceeds the following ASTM specifications:

- B-3 Soft Annealed Copper Wire.
- B-8 Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard or Soft.
- B-230 Aluminum, 1350-H19 Wire for Electrical Purposes.
- B-231 Aluminum 1350 Conductors, Concentric-Lay-Stranded.
- B-609 Aluminum 1350 Round Wire, Annealed and Intermediate Tempers, for Electrical Purposes.

Southwire 15kV HI-DRI Primary UD Cable is manufactured to the latest edition of the following specifications, and in case of specification conflicts, in the order listed:

- ANSI/ICEA S-94-649
- AEIC CS-8
- RUS U-1

## CONSTRUCTION

The phase conductor is concentrically stranded, compressed soft copper or 1350-H16/26 aluminum alloy. The cable is composed of the conductor with moisture block in the strands, covered by a semi-conducting cross-linked polyethylene strand shield, a tree-retardant cross-linked polyethylene primary insulation, and a semi-conducting cross-linked polyethylene insulation shield. Conductors are available with either 100% or 133% insulation levels. A concentric neutral of bare copper wires and an insulating polyethylene jacket is applied over the insulation shield. The cable is identified by surface print on the jacket and with the lightning bolt symbol for supply cables indented in the jacket. A semi-conducting polyethylene jacket is available upon request.

# 15kV HI-DRI Jacketed

| Phase Conductor                                                                                                                                                                                                                                                                                                                                                                                          |           | Neutral      |            | Thickness Per Cond. (mils) |                          |              | Diameter (mils)  |             |                    |             | Weight 1000 feet (lbs.) | Allowable Ampacities+ |          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------|------------|----------------------------|--------------------------|--------------|------------------|-------------|--------------------|-------------|-------------------------|-----------------------|----------|
| Size (AWG or kcmil)                                                                                                                                                                                                                                                                                                                                                                                      | Stranding | No. of Wires | Size (AWG) | Approx. Insul.             | Insul. Shield Min. Point | Approx. Jkt. | Bare Phase Cond. | Over Insul. | Over Insul. Shield | Comp. Cable | Comp. Cable             | Direct Burial         | In Ducts |
| ALUMINUM CONDUCTOR - 0.175" INSULATION - 100% INSULATION LEVEL                                                                                                                                                                                                                                                                                                                                           |           |              |            |                            |                          |              |                  |             |                    |             |                         |                       |          |
| 2                                                                                                                                                                                                                                                                                                                                                                                                        | 7         | 10           | 14*        | 175                        | 30                       | 50           | 283              | 678         | 758                | 986         | 470                     | 168*                  | 119*     |
| 1/0                                                                                                                                                                                                                                                                                                                                                                                                      | 19        | 16           | 14*        | 175                        | 30                       | 50           | 362              | 758         | 838                | 1066        | 616                     | 218*                  | 155*     |
| 2/0                                                                                                                                                                                                                                                                                                                                                                                                      | 19        | 20           | 14*        | 175                        | 30                       | 50           | 406              | 803         | 883                | 1111        | 711                     | 248*                  | 177*     |
| 3/0                                                                                                                                                                                                                                                                                                                                                                                                      | 19        | 25           | 14*        | 175                        | 30                       | 50           | 456              | 865         | 945                | 1173        | 840                     | 284*                  | 201*     |
| 4/0                                                                                                                                                                                                                                                                                                                                                                                                      | 19        | 20           | 12*        | 175                        | 30                       | 50           | 512              | 908         | 988                | 1249        | 1005                    | 324*                  | 230*     |
| 250                                                                                                                                                                                                                                                                                                                                                                                                      | 37        | 16           | 10*        | 175                        | 30                       | 50           | 558              | 963         | 1043               | 1346        | 1213                    | 360*                  | 257*     |
| 350                                                                                                                                                                                                                                                                                                                                                                                                      | 37        | 18           | 14**       | 175                        | 40                       | 50           | 661              | 1068        | 1168               | 1396        | 1054                    | 389**                 | 319**    |
| 500                                                                                                                                                                                                                                                                                                                                                                                                      | 37        | 25           | 14**       | 175                        | 40                       | 50           | 790              | 1193        | 1293               | 1521        | 1345                    | 468**                 | 384**    |
| 750                                                                                                                                                                                                                                                                                                                                                                                                      | 61        | 24           | 12**       | 175                        | 40                       | 80           | 968              | 1383        | 1483               | 1798        | 1940                    | 569**                 | 468**    |
| 1000                                                                                                                                                                                                                                                                                                                                                                                                     | 61        | 20           | 10**       | 175                        | 40                       | 80           | 1117             | 1530        | 1630               | 1988        | 2463                    | 642**                 | 542**    |
| COPPER CONDUCTOR - 0.175" INSULATION - 100% INSULATION LEVEL                                                                                                                                                                                                                                                                                                                                             |           |              |            |                            |                          |              |                  |             |                    |             |                         |                       |          |
| 2                                                                                                                                                                                                                                                                                                                                                                                                        | 7         | 16           | 14*        | 175                        | 30                       | 50           | 283              | 678         | 758                | 986         | 684                     | 210*                  | 150*     |
| 1                                                                                                                                                                                                                                                                                                                                                                                                        | 19        | 20           | 14*        | 175                        | 30                       | 50           | 322              | 718         | 798                | 1026        | 803                     | 240*                  | 171*     |
| 1/0                                                                                                                                                                                                                                                                                                                                                                                                      | 19        | 25           | 14*        | 175                        | 30                       | 50           | 362              | 758         | 838                | 1066        | 951                     | 273*                  | 194*     |
| 2/0                                                                                                                                                                                                                                                                                                                                                                                                      | 19        | 20           | 12*        | 175                        | 30                       | 50           | 405              | 800         | 880                | 1142        | 1160                    | 313*                  | 224*     |
| 3/0                                                                                                                                                                                                                                                                                                                                                                                                      | 19        | 25           | 12*        | 175                        | 30                       | 50           | 456              | 853         | 933                | 1194        | 1389                    | 358*                  | 255*     |
| 4/0                                                                                                                                                                                                                                                                                                                                                                                                      | 19        | 20           | 10*        | 175                        | 30                       | 50           | 512              | 908         | 988                | 1291        | 1716                    | 410*                  | 293*     |
| 250                                                                                                                                                                                                                                                                                                                                                                                                      | 37        | 24           | 10*        | 175                        | 30                       | 50           | 558              | 963         | 1043               | 1346        | 2052                    | 446*                  | 322*     |
| 350                                                                                                                                                                                                                                                                                                                                                                                                      | 37        | 18           | 12**       | 175                        | 40                       | 50           | 661              | 1068        | 1168               | 1429        | 1963                    | 489**                 | 400**    |
| 500                                                                                                                                                                                                                                                                                                                                                                                                      | 37        | 26           | 12**       | 175                        | 40                       | 50           | 790              | 1193        | 1293               | 1554        | 2648                    | 577**                 | 472**    |
| 750                                                                                                                                                                                                                                                                                                                                                                                                      | 61        | 25           | 10**       | 175                        | 40                       | 80           | 968              | 1383        | 1483               | 1840        | 3900                    | 649**                 | 532**    |
| + Ampacities shown assume use of 100% load factor, 60 Hz current, 36" burial depth, 20°C ambient temperature, 90°C conductor temperature, earth RHO 90, insulation and shield RHO 400.<br>* Full neutral construction (Ampacities assume- single phase circuit, one cable)<br>** 1/3 neutral cable (Ampacities assume - three phase circuit, 3 cables triplexed, multi-point grounding per ICEA methods) |           |              |            |                            |                          |              |                  |             |                    |             |                         |                       |          |

# 15kV HI-DRI Jacketed

| Phase Conductor                                                                                                                                                                                                                                                                                                                                                                                          |           | Neutral      |            | Thickness Per Cond. (mils) |                          |              | Diameter (mils)  |             |                    |             | Weight 1000 feet (lbs.) | Allowable Ampacities+ |          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------|------------|----------------------------|--------------------------|--------------|------------------|-------------|--------------------|-------------|-------------------------|-----------------------|----------|
| Size (AWG or kcmil)                                                                                                                                                                                                                                                                                                                                                                                      | Stranding | No. of Wires | Size (AWG) | Approx. Insul.             | Insul. Shield Min. Point | Approx. Jkt. | Bare Phase Cond. | Over Insul. | Over Insul. Shield | Comp. Cable | Comp. Cable             | Direct Burial         | In Ducts |
| ALUMINUM CONDUCTOR - 0.220" INSULATION - 133% INSULATION LEVEL                                                                                                                                                                                                                                                                                                                                           |           |              |            |                            |                          |              |                  |             |                    |             |                         |                       |          |
| 2                                                                                                                                                                                                                                                                                                                                                                                                        | 7         | 10           | 14*        | 220                        | 30                       | 50           | 283              | 770         | 850                | 1078        | 530                     | 168*                  | 119*     |
| 1/0                                                                                                                                                                                                                                                                                                                                                                                                      | 19        | 16           | 14*        | 220                        | 30                       | 50           | 362              | 850         | 930                | 1158        | 680                     | 218*                  | 155*     |
| 2/0                                                                                                                                                                                                                                                                                                                                                                                                      | 19        | 20           | 14*        | 220                        | 30                       | 50           | 406              | 893         | 973                | 1201        | 777                     | 248*                  | 177*     |
| 3/0                                                                                                                                                                                                                                                                                                                                                                                                      | 19        | 9            | 14         | 220                        | 30                       | 50           | 456              | 943         | 1023               | 1251        | 705                     | 284                   | 201      |
| 4/0                                                                                                                                                                                                                                                                                                                                                                                                      | 19        | 20           | 12*        | 220                        | 30                       | 50           | 512              | 1000        | 1080               | 1342        | 1080                    | 324*                  | 230*     |
| 250                                                                                                                                                                                                                                                                                                                                                                                                      | 37        | 16           | 10*        | 220                        | 40                       | 50           | 558              | 1055        | 1155               | 1459        | 1316                    | 360*                  | 257*     |
| 350                                                                                                                                                                                                                                                                                                                                                                                                      | 37        | 18           | 14**       | 220                        | 40                       | 50           | 661              | 1158        | 1258               | 1486        | 1136                    | 389**                 | 319**    |
| 500                                                                                                                                                                                                                                                                                                                                                                                                      | 37        | 25           | 14**       | 220                        | 40                       | 50           | 790              | 1285        | 1385               | 1613        | 1438                    | 468**                 | 384**    |
| 750                                                                                                                                                                                                                                                                                                                                                                                                      | 61        | 24           | 12**       | 220                        | 40                       | 80           | 968              | 1475        | 1575               | 1891        | 2050                    | 569**                 | 468**    |
| 1000                                                                                                                                                                                                                                                                                                                                                                                                     | 61        | 20           | 10**       | 220                        | 55                       | 80           | 1117             | 1623        | 1753               | 2110        | 2636                    | 642**                 | 542**    |
| COPPER CONDUCTOR - 0.220" INSULATION - 133% INSULATION LEVEL                                                                                                                                                                                                                                                                                                                                             |           |              |            |                            |                          |              |                  |             |                    |             |                         |                       |          |
| 2                                                                                                                                                                                                                                                                                                                                                                                                        | 7         | 16           | 14*        | 220                        | 30                       | 50           | 283              | 770         | 850                | 1078        | 744                     | 210*                  | 150*     |
| + Ampacities shown assume use of 100% load factor, 60 Hz current, 36" burial depth, 20°C ambient temperature, 90°C conductor temperature, earth RHO 90, insulation and shield RHO 400.<br>* Full neutral construction (Ampacities assume- single phase circuit, one cable)<br>** 1/3 neutral cable (Ampacities assume - three phase circuit, 3 cables triplexed, multi-point grounding per ICEA methods) |           |              |            |                            |                          |              |                  |             |                    |             |                         |                       |          |