# DLO TCU 2000V EPDM Insulation Thermoset CPE Jacket. RHH/RHW-2/ RW90 MSHA Approved

UL Listed as 2kV Heavy Duty Flexible Power Cable (HDFPC) DLO, Rated 90°C Dry or Wet. 2kV Type RHH/RHW-2 Flexible Power Cable Rated for Dry or Wet. CSA Listed as 2kV Type RW90. Composite Thermoset Wall EPDM Insulation Thermoset CPE Jacket. Silicone-Free. MSHA Approved




Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** Flexible Stranded Rope-Lay Class I Tinned Copper per ASTM B33 and B172 (As Applicable)
2. **Binder Tape:** Mylar Tape
3. **Insulation:** Black Thermoset Ethylene Propylene Diene Monomer (EPDM)
4. **Jacket:** Thermoset Chlorinated Polyethylene (CPE). Other colors available (see table below)

## APPLICATIONS AND FEATURES:

HDFPC-DLO is a 2kV flexible power cable with a variety of possible applications such as but not limited to: Drilling rigs, railroad and transit car wiring, mining and other industrial equipment, and as flexible motor leads and wind turbine applications. The cable is suited for use in wet and dry areas, conduits, ducts, troughs, trays, and where superior electrical properties are desired. HDFPC-DLO is oil, heat, flame, abrasion, and sunlight resistant. Approved for use per the NEC® as Type RHH/RHW-2 and per the CE Code as 2kV Type RW90. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, and 250°C for short circuit conditions. Sizes 1/0 and Larger Rated For CT Use.

## SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- ASTM B172 Standard Specification for Rope-Lay-Stranded Copper Conductors Having Bunch-Stranded Copper Conductors (As Applicable)
- UL 44 Thermoset-Insulated Wires and Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test (1/0 and Larger)
- UL 2806 Heavy Duty Flexible Power Cable (HDFPC-DLO)
- CSA C22.2 No. 38 Thermoset-insulated wires and cables
- CSA C22.2 No.230 Tray Cables - Rated TC-ER (1/0 AWG and Larger)
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- MSHA Approved



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- Made in America: Compliant with both Buy American and Buy America Act (BAA) requirements per 49 U.S.C. § 5323(j) and the Federal Transit Administration Buy America requirements per 49 C.F.R. part 661

## SAMPLE PRINT LEGEND:

Sizes 12 AWG and 10 AWG
{SQFTG} SOUTHWIRE® ROYAL® XX AWG (XXmm2) E30117 (UL) TYPE RHH/RHW-2 90°C DRY 90°C WET 2KV (-40°C) PRI PRII SR --- EPR/CPE DLO --- P-07-KA100013-MSHA---RoHS

Sizes 8 AWG to 1 AWG
SOUTHWIRE® ROYAL® XX AWG (XX{mm2}) E30117 {UL} TYPE HDFPC EPR/CPE 2KV DLO 90°C DRY 90°C WET OR TYPE RHH/RHW-2 90°C DRY 90°C WET 2KV -40°C PRI PRII SR VW-1 -- {CSA} 156205 RW90 90°C DRY 90°C WET 2KV -40°C PRI PRII FT1 SR {SEQUENTIAL FOOTAGE MARKS} SEQ FEET

Sizes 1/0 AWG and larger
{SQFTG} SOUTHWIRE® ROYAL® XX AWG XX STRAND CLASS XX (XX{mm2}) E30117 {UL} TYPE HDFPC EPR/CPE 2KV DLO 90°C DRY 90°C WET OR TYPE RHH/RHW-2 90°C DRY 90°C WET 2KV -40°C PRI PRII SR FOR CT USE FT4 -- {CSA} 156205 RW90 90°C DRY 90°C WET TC-ER 2KV -40C° PRI PRII FT1 FT4 SR

### Table 1 – Weights and Measurements

| Stock Number | Cond. Size | Cond. Strands | Diameter Over Conductor | Insul. Thickness | Jacket Thickness | Approx. OD | Approx. Weight |
|---|---|---|---|---|---|---|---|
| | AWG/Kcmil | No. | inch | mil | mil | inch | lb/1000ft |
| 571253 | 12 | 19 | 0.091 | 45 | 15 | 0.210 | 36 |
| 560057 | 10 | 19 | 0.125 | 55 | 25 | 0.265 | 58 |
| TBA | 8 | 37 | 0.145 | 55 | 30 | 0.330 | 92 |
| 167015 | 6 | 65 | 0.186 | 50 | 30 | 0.370 | 127 |
| 167017 | 4 | 105 | 0.235 | 60 | 35 | 0.440 | 196 |
| 167019 | 2 | 161 | 0.290 | 60 | 35 | 0.500 | 282 |
| 167020 | 1 | 210 | 0.330 | 85 | 60 | 0.635 | 400 |
| 167021 | 1/0 | 266 | 0.379 | 75 | 55 | 0.645 | 450 |
| 167022 | 2/0 | 342 | 0.400 | 80 | 50 | 0.690 | 566 |
| 167023 | 3/0 | 418 | 0.480 | 80 | 55 | 0.760 | 676 |
| 167024 | 4/0 | 532 | 0.530 | 80 | 60 | 0.815 | 815 |
| 167026 | 262.2 | 646 | 0.565 | 80 | 60 | 0.845 | 974 |
| 167027 | 313.3 | 779 | 0.650 | 90 | 70 | 0.980 | 1139 |
| 167029 | 373.7 | 931 | 0.701 | 95 | 70 | 1.040 | 1343 |
| 167030 | 444.4 | 1121 | 0.782 | 90 | 65 | 1.105 | 1654 |
| 167031 | 535.3 | 1330 | 0.843 | 105 | 75 | 1.212 | 1889 |
| 167032 | 646.4 | 1628 | 0.890 | 115 | 80 | 1.290 | 2292 |
| 167033 | 777.7 | 1924 | 0.966 | 120 | 90 | 1.405 | 2727 |
| 167035 | 1111 | 2745 | 1.168 | 115 | 95 | 1.640 | 4161 |

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item


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## Table 2 – Electrical and Engineering Data

| Cond. Size | DC Resistance @ 25°C | AC Resistance @ 90°C | Inductive Reactance | Max Pull Tension | Max Pull Tension | Min Bending Radius | Allowable Ampacity In Air 75°C | Allowable Ampacity In Air 90°C | Allowable Ampacity At 75°C | Allowable Ampacity At 90°C |
|---|---|---|---|---|---|---|---|---|---|---|
| AWG/ Kcmil | Ω/1000ft | Ω/1000ft | Ω/1000ft | lb | lb | inch | Amp | Amp | Amp | Amp |
| 12 | 1.774 | 2.301 | 0.054 | 52 | 52 | 0.8 | 35 | 40 | 25 | 30 |
| 10 | 1.081 | 1.302 | 0.050 | 83 | 83 | 1.1 | 50 | 55 | 35 | 40 |
| 8 | 0.679 | 0.818 | 0.052 | 132 | 132 | 1.3 | 70 | 80 | 50 | 55 |
| 6 | 0.435 | 0.524 | 0.051 | 209 | 209 | 1.5 | 95 | 105 | 65 | 75 |
| 4 | 0.274 | 0.330 | 0.048 | 333 | 333 | 1.8 | 125 | 140 | 85 | 95 |
| 2 | 0.172 | 0.207 | 0.045 | 530 | 530 | 2.0 | 170 | 190 | 115 | 130 |
| 1 | 0.143 | 0.186 | 0.046 | 670 | 670 | 2.5 | 195 | 220 | 130 | 145 |
| 1/0 | 0.109 | 0.131 | 0.044 | 844 | 844 | 2.6 | 230 | 260 | 150 | 170 |
| 2/0 | 0.087 | 0.104 | 0.043 | 1064 | 1064 | 2.8 | 265 | 300 | 175 | 195 |
| 3/0 | 0.069 | 0.083 | 0.042 | 1342 | 1342 | 3.0 | 310 | 350 | 200 | 225 |
| 4/0 | 0.055 | 0.067 | 0.041 | 1692 | 1692 | 3.3 | 360 | 405 | 230 | 260 |
| 262.2 | 0.026 | 0.033 | 0.031 | 3555 | 3555 | 3.4 | 415 | 466 | 264 | 301 |
| 313.3 | 0.039 | 0.048 | 0.031 | 2506 | 2506 | 3.9 | 460 | 518 | 298 | 332 |
| 373.7 | 0.033 | 0.042 | 0.031 | 2989 | 2989 | 5.2 | 524 | 592 | 323 | 365 |
| 444.4 | 0.026 | 0.040 | 0.029 | 3555 | 3555 | 5.5 | 578 | 652 | 358 | 405 |
| 535.3 | 0.021 | 0.028 | 0.030 | 4282 | 4282 | 6.1 | 644 | 730 | 394 | 446 |
| 646.4 | 0.018 | 0.025 | 0.030 | 5171 | 5171 | 6.5 | 720 | 812 | 439 | 496 |
| 777.7 | 0.016 | 0.024 | 0.030 | 6221 | 6221 | 7.0 | 801 | 905 | 483 | 543 |
| 1111 | 0.011 | 0.016 | 0.029 | 8888 | 8888 | 8.2 | 993 | 1119 | 570 | 648 |

* Ampacities in raceway are based upon 2023 NEC Table 310.16 and do not take into account the overcurrent protection limitations in NEC 240.4(D) 20 Amps for 12 AWG CU, and 30 Amps for 10 AWG CU (independent of the conductor temperature rating and stranding). Also, see NEC sections 310.15 and 110.14(C) for additional requirements. Ampacities for non-standard sizes were extrapolated
* Ampacities in air are based upon 2023 NEC Table 310.17. Ampacities for non-standard sizes were extrapolated
* Inductive Reactance is based on non-ferrous conduit with one diameter spacing.
* #12 and #10 AWG are not approved for CSA RW90


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## Other Insulation Colors

| Cond. Size | Black | Red | Brown | Orange | Yellow | Green | Gray |
|---|---|---|---|---|---|---|---|
| AWG/kcmil | | | | | | | |
| 12 | 571253 | 665446 | 665465 | 665466 | 665467 | 665468 | |
| 10 | 560057 | 665469 | 665470 | 665471 | 665472 | 665473 | |
| 8 | TBA | 167014 | 665474 | 665475 | 665476 | 665477 | |
| 6 | 167015 | 665478 | 665479 | 665480 | 665481 | 665482 | |
| 4 | 167017 | 167017 | 665483 | 665484 | 665485 | 653627 | |
| 2 | 167019 | 167019 | 138238 | 138239 | 138240 | 138241 | |
| 1 | 167020 | 138282 | 138283 | 138287 | 138288 | 138289 | |
| 1/0 | 167021 | 138242 | 138243 | 138244 | 138245 | 138246 | |
| 2/0 | 167022 | 167022 | 138247 | 138248 | 138249 | 138251 | |
| 3/0 | 167023 | 138252 | 138253 | 138254 | 138255 | 138256 | |
| 4/0 | 167024 | 167024 | 138257 | 138258 | 138259 | 138260 | |
| 262.6 | 167026 | 641176 | 665452 | 665453 | 665454 | 665455 | |
| 313.3 | 167027 | 665456 | 665457 | 665458 | 665459 | 665460 | |
| 373.7 | 167029 | 655203 | 678900 | 576729 | 678901 | 678902 | |
| 444.4 | 167030 | 678975 | 665461 | 665462 | 665463 | 665464 | |
| 535.3 | 167031 | 167031 | 138211 | 138212 | 138213 | 677552 | |
| 646.4 | 167032 | 138229 | 138215 | 138216 | 138217 | 138218 | |
| 777.7 | 167033 | 167033 | 640980 | 640981 | 640982 | 138219 | 640983 |
| 1111 | 167035 | 138220 | 138221 | 138222 | 138223 | 138224 | |