



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
- 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 -40°C PRI PRII FT1 FT4 SR





Table 1 – Weights and Measurements

Stock Number	Cond. Size	Strand Count	Diameter Over Conductor	Min. Avg. Insul. Thickness	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/Kcmil	No. of Strands	inch	mil	mil	inch	lb/1000ft	lb/1000ft
665446	12	19	0.091	45	15	0.210	20	36
665465	12	19	0.091	45	15	0.210	20	36
665466	12	19	0.091	45	15	0.210	20	36
665467	12	19	0.091	45	15	0.210	20	36
571253	12	19	0.091	45	15	0.210	20	36
665468	12	19	0.091	45	15	0.210	20	36
665469	10	19	0.125	55	25	0.265	32	58
665470	10	19	0.125	55	25	0.265	32	58
665471	10	19	0.125	55	25	0.265	32	58
665472	10	19	0.125	55	25	0.265	32	58
560057	10	19	0.125	55	25	0.265	32	58
665473	10	19	0.125	55	25	0.265	32	58
167014	8	41	0.145	55	30	0.330	52	92
665474	8	41	0.145	55	30	0.330	52	92
665475	8	41	0.145	55	30	0.330	52	92
665476	8	41	0.145	55	30	0.330	52	92
665477	8	41	0.145	55	30	0.330	52	92
TBA	8	41	0.145	55	30	0.330	52	92
665478	6	65	0.186	50	30	0.370	81	127
665479	6	65	0.186	50	30	0.370	81	127
665480	6	65	0.186	50	30	0.370	81	127
665481	6	65	0.186	50	30	0.370	81	127
167015	6	65	0.186	50	30	0.370	81	127
665482	6	65	0.186	50	30	0.370	81	127
665483	4	105	0.235	60	35	0.440	133	196
665484	4	105	0.235	60	35	0.440	133	196
665485	4	105	0.235	60	35	0.440	133	196
167017	4	105	0.235	60	35	0.440	133	196
653627	4	105	0.235	60	35	0.440	133	196
138238	2	161	0.290	60	35	0.500	210	282
138239	2	161	0.290	60	35	0.500	210	282
138240	2	161	0.290	60	35	0.500	210	282
167019	2	161	0.290	60	35	0.500	210	282
138241	2	161	0.290	60	35	0.500	210	282
167020	1	210	0.330	85	60	0.635	267	400
138282	1	210	0.330	85	60	0.635	267	400
138283	1	210	0.330	85	60	0.635	267	400
138287	1	210	0.330	85	60	0.635	267	400
138288	1	210	0.330	85	60	0.635	267	400
138289	1	210	0.330	85	60	0.635	267	400





Stock Number	Cond. Size	Strand Count	Diameter Over Conductor	Min. Avg. Insul. Thickness	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/ Kcmil	No. of Strands	inch	mil	mil	inch	lb/1000ft	lb/1000ft
138242	1/0	266	0.379	75	55	0.645	327	450
138243	1/0	266	0.379	75	55	0.645	327	450
138244	1/0	266	0.379	75	55	0.645	327	450
138245	1/0	266	0.379	75	55	0.645	327	450
167021	1/0	266	0.379	75	55	0.645	327	450
138246	1/0	266	0.379	75	55	0.645	327	450
138247	2/0	342	0.400	80	50	0.690	423	566
138248	2/0	342	0.400	80	50	0.690	423	566
138249	2/0	342	0.400	80	50	0.690	423	566
167022	2/0	342	0.400	80	50	0.690	423	566
138251	2/0	342	0.400	80	50	0.690	423	566
562064	3/0	418	0.480	80	55	0.760	518	676
138252	3/0	418	0.480	80	55	0.760	518	676
138253	3/0	418	0.480	80	55	0.760	518	676
138254	3/0	418	0.480	80	55	0.760	518	676
138255	3/0	418	0.480	80	55	0.760	518	676
167023	3/0	418	0.480	80	55	0.760	518	676
138256	3/0	418	0.480	80	55	0.760	518	676
138257	4/0	532	0.530	80	60	0.815	638	815
138258	4/0	532	0.530	80	60	0.815	638	815
138259	4/0	532	0.530	80	60	0.815	638	815
167024	4/0	532	0.530	80	60	0.815	638	815
138260	4/0	532	0.530	80	60	0.815	638	815
641176	262.2	646	0.565	80	60	0.845	740	974
665452	262.2	646	0.565	80	60	0.845	740	974
665453	262.2	646	0.565	80	60	0.845	740	974
665454	262.2	646	0.565	80	60	0.845	740	974
167026	262.2	646	0.565	80	60	0.845	740	974
665455	262.2	646	0.565	80	60	0.845	740	974
665456	313.3	779	0.650	90	70	0.980	896	1139
665457	313.3	779	0.650	90	70	0.980	896	1139
665458	313.3	779	0.650	90	70	0.980	896	1139
665459	313.3	779	0.650	90	70	0.980	896	1139
167027	313.3	779	0.650	90	70	0.980	896	1139
665460	313.3	779	0.650	90	70	0.980	896	1139
655203	373.7	931	0.701	95	70	1.040	1076	1343
678900	373.7	931	0.701	95	70	1.040	1076	1343
576729	373.7	931	0.701	95	70	1.040	1076	1343
678901	373.7	931	0.701	95	70	1.040	1076	1343
167029	373.7	931	0.701	95	70	1.040	1076	1343
678902	373.7	931	0.701	95	70	1.040	1076	1343
167030	444.4	1121	0.782	90	65	1.105	1378	1654





Stock Number	Cond. Size	Strand Count	Diameter Over Conductor	Min. Avg. Insul. Thickness	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/ Kcmil	No. of Strands	inch	mil	mil	inch	lb/1000ft	lb/1000ft
678975	444.4	1121	0.782	90	65	1.105	1378	1654
665461	444.4	1121	0.782	90	65	1.105	1378	1654
665462	444.4	1121	0.782	90	65	1.105	1378	1654
665463	444.4	1121	0.782	90	65	1.105	1378	1654
665464	444.4	1121	0.782	90	65	1.105	1378	1654
138211	535.3	1330	0.843	105	75	1.212	1549	1889
138212	535.3	1330	0.843	105	75	1.212	1549	1889
138213	535.3	1330	0.843	105	75	1.212	1549	1889
167031	535.3	1330	0.843	105	75	1.212	1549	1889
677552	535.3	1330	0.843	105	75	1.212	1549	1889
138229	646.4	1628	0.890	115	80	1.290	1898	2292
138215	646.4	1628	0.890	115	80	1.290	1898	2292
138216	646.4	1628	0.890	115	80	1.290	1898	2292
138217	646.4	1628	0.890	115	80	1.290	1898	2292
167032	646.4	1628	0.890	115	80	1.290	1898	2292
138218	646.4	1628	0.890	115	80	1.290	1898	2292
640980	777.7	1924	0.966	120	90	1.405	2246	2727
640981	777.7	1924	0.966	120	90	1.405	2246	2727
640982	777.7	1924	0.966	120	90	1.405	2246	2727
167033	777.7	1924	0.966	120	90	1.405	2246	2727
138219	777.7	1924	0.966	120	90	1.405	2246	2727
640983	777.7	1924	0.966	120	90	1.405	2246	2727
664206	929.9	2300	1.113	90	65	1.470	2745	3171
138220	1111	2745	1.168	115	95	1.640	3560	4161
138221	1111	2745	1.168	115	95	1.640	3560	4161
138222	1111	2745	1.168	115	95	1.640	3560	4161
138223	1111	2745	1.168	115	95	1.640	3560	4161
167035	1111	2745	1.168	115	95	1.640	3560	4161
138224	1111	2745	1.168	115	95	1.640	3560	4161

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item





Table 2 – Electrical and Engineering Data

Stock Number	Cond. Size	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 75°C	Inductive Reactance @ 60Hz	Allowable Ampacity At 75°C	Allowable Ampacity At 90°C
	AWG/Kcmil	inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
665446	12	0.8	52	1.774	2.301	0.054	25	30
665465	12	0.8	52	1.774	2.301	0.054	25	30
665466	12	0.8	52	1.774	2.301	0.054	25	30
665467	12	0.8	52	1.774	2.301	0.054	25	30
571253	12	0.8	52	1.774	2.301	0.054	25	30
665468	12	0.8	52	1.774	2.301	0.054	25	30
665469	10	1.1	83	1.081	1.302	0.050	35	40
665470	10	1.1	83	1.081	1.302	0.050	35	40
665471	10	1.1	83	1.081	1.302	0.050	35	40
665472	10	1.1	83	1.081	1.302	0.050	35	40
560057	10	1.1	83	1.081	1.302	0.050	35	40
665473	10	1.1	83	1.081	1.302	0.050	35	40
167014	8	1.3	132	0.679	0.818	0.052	50	55
665474	8	1.3	132	0.679	0.818	0.052	50	55
665475	8	1.3	132	0.679	0.818	0.052	50	55
665476	8	1.3	132	0.679	0.818	0.052	50	55
665477	8	1.3	132	0.679	0.818	0.052	50	55
TBA	8	1.3	132	0.679	0.818	0.052	50	55
665478	6	1.5	209	0.435	0.524	0.051	65	75
665479	6	1.5	209	0.435	0.524	0.051	65	75
665480	6	1.5	209	0.435	0.524	0.051	65	75
665481	6	1.5	209	0.435	0.524	0.051	65	75
167015	6	1.5	209	0.435	0.524	0.051	65	75
665482	6	1.5	209	0.435	0.524	0.051	65	75
665483	4	1.8	333	0.274	0.330	0.048	85	95
665484	4	1.8	333	0.274	0.330	0.048	85	95
665485	4	1.8	333	0.274	0.330	0.048	85	95
167017	4	1.8	333	0.274	0.330	0.048	85	95
653627	4	1.8	333	0.274	0.330	0.048	85	95
138238	2	2.0	530	0.172	0.207	0.045	115	130
138239	2	2.0	530	0.172	0.207	0.045	115	130
138240	2	2.0	530	0.172	0.207	0.045	115	130
167019	2	2.0	530	0.172	0.207	0.045	115	130
138241	2	2.0	530	0.172	0.207	0.045	115	130
167020	1	2.5	670	0.143	0.186	0.046	130	145
138282	1	2.5	670	0.143	0.186	0.046	130	145
138283	1	2.5	670	0.143	0.186	0.046	130	145
138287	1	2.5	670	0.143	0.186	0.046	130	145
138288	1	2.5	670	0.143	0.186	0.046	130	145
138289	1	2.5	670	0.143	0.186	0.046	130	145





Stock Number	Cond. Size	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 75°C	Inductive Reactance @ 60Hz	Allowable Ampacity At 75°C	Allowable Ampacity At 90°C
	AWG/Kcmil	inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
138242	1/0	2.6	844	0.109	0.131	0.044	150	170
138243	1/0	2.6	844	0.109	0.131	0.044	150	170
138244	1/0	2.6	844	0.109	0.131	0.044	150	170
138245	1/0	2.6	844	0.109	0.131	0.044	150	170
167021	1/0	2.6	844	0.109	0.131	0.044	150	170
138246	1/0	2.6	844	0.109	0.131	0.044	150	170
138247	2/0	2.8	1064	0.087	0.104	0.043	175	195
138248	2/0	2.8	1064	0.087	0.104	0.043	175	195
138249	2/0	2.8	1064	0.087	0.104	0.043	175	195
167022	2/0	2.8	1064	0.087	0.104	0.043	175	195
138251	2/0	2.8	1064	0.087	0.104	0.043	175	195
562064	3/0	3.0	1342	0.069	0.083	0.042	200	225
138252	3/0	3.0	1342	0.069	0.083	0.042	200	225
138253	3/0	3.0	1342	0.069	0.083	0.042	200	225
138254	3/0	3.0	1342	0.069	0.083	0.042	200	225
138255	3/0	3.0	1342	0.069	0.083	0.042	200	225
167023	3/0	3.0	1342	0.069	0.083	0.042	200	225
138256	3/0	3.0	1342	0.069	0.083	0.042	200	225
138257	4/0	3.3	1692	0.055	0.067	0.041	230	260
138258	4/0	3.3	1692	0.055	0.067	0.041	230	260
138259	4/0	3.3	1692	0.055	0.067	0.041	230	260
167024	4/0	3.3	1692	0.055	0.067	0.041	230	260
138260	4/0	3.3	1692	0.055	0.067	0.041	230	260
641176	262.2	3.4	2097	0.026	0.033	0.031	264	301
665452	262.2	3.4	2097	0.026	0.033	0.031	264	301
665453	262.2	3.4	2097	0.026	0.033	0.031	264	301
665454	262.2	3.4	2097	0.026	0.033	0.031	264	301
167026	262.2	3.4	2097	0.026	0.033	0.031	264	301
665455	262.2	3.4	2097	0.026	0.033	0.031	264	301
665456	313.3	3.9	2506	0.039	0.048	0.031	298	332
665457	313.3	3.9	2506	0.039	0.048	0.031	298	332
665458	313.3	3.9	2506	0.039	0.048	0.031	298	332
665459	313.3	3.9	2506	0.039	0.048	0.031	298	332
167027	313.3	3.9	2506	0.039	0.048	0.031	298	332
665460	313.3	3.9	2506	0.039	0.048	0.031	298	332
655203	373.7	5.2	2989	0.033	0.042	0.031	323	365
678900	373.7	5.2	2989	0.033	0.042	0.031	323	365
576729	373.7	5.2	2989	0.033	0.042	0.031	323	365
678901	373.7	5.2	2989	0.033	0.042	0.031	323	365
167029	373.7	5.2	2989	0.033	0.042	0.031	323	365
678902	373.7	5.2	2989	0.033	0.042	0.031	323	365
167030	444.4	5.5	3555	0.026	0.040	0.029	358	405





Stock Number	Cond. Size	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 75°C	Inductive Reactance @ 60Hz	Allowable Ampacity At 75°C	Allowable Ampacity At 90°C
	AWG/Kcmil	inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
678975	444.4	5.5	3555	0.026	0.040	0.029	358	405
665461	444.4	5.5	3555	0.026	0.040	0.029	358	405
665462	444.4	5.5	3555	0.026	0.040	0.029	358	405
665463	444.4	5.5	3555	0.026	0.040	0.029	358	405
665464	444.4	5.5	3555	0.026	0.040	0.029	358	405
138211	535.3	6.1	4282	0.021	0.028	0.030	394	446
138212	535.3	6.1	4282	0.021	0.028	0.030	394	446
138213	535.3	6.1	4282	0.021	0.028	0.030	394	446
167031	535.3	6.1	4282	0.021	0.028	0.030	394	446
677552	535.3	6.1	4282	0.021	0.028	0.030	394	446
138229	646.4	6.5	5171	0.018	0.025	0.030	439	496
138215	646.4	6.5	5171	0.018	0.025	0.030	439	496
138216	646.4	6.5	5171	0.018	0.025	0.030	439	496
138217	646.4	6.5	5171	0.018	0.025	0.030	439	496
167032	646.4	6.5	5171	0.018	0.025	0.030	439	496
138218	646.4	6.5	5171	0.018	0.025	0.030	439	496
640980	777.7	7.0	6221	0.016	0.024	0.030	483	543
640981	777.7	7.0	6221	0.016	0.024	0.030	483	543
640982	777.7	7.0	6221	0.016	0.024	0.030	483	543
167033	777.7	7.0	6221	0.016	0.024	0.030	483	543
138219	777.7	7.0	6221	0.016	0.024	0.030	483	543
640983	777.7	7.0	6221	0.016	0.024	0.030	483	543
664206	929.9	7.4	7433	0.012	0.019	0.028	527	593
138220	1111	8.2	8888	0.011	0.016	0.029	570	648
138221	1111	8.2	8888	0.011	0.016	0.029	570	648
138222	1111	8.2	8888	0.011	0.016	0.029	570	648
138223	1111	8.2	8888	0.011	0.016	0.029	570	648
167035	1111	8.2	8888	0.011	0.016	0.029	570	648
138224	1111	8.2	8888	0.011	0.016	0.029	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 center-to-center.

* #12 and #10 AWG are not approved for CSA RW90





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	

