



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 AWG/Kcmil	Cond. Strands No.	Diameter Over Conductor inch	Insul. Thickness mil	Jacket Thickness mil	Approx. OD inch	Approx. Weight lb/1000ft	Jacket Color
665446	12	19	0.091	45	15	0.210	36	RD
665465	12	19	0.091	45	15	0.210	36	BN
665466	12	19	0.091	45	15	0.210	36	OE
665467	12	19	0.091	45	15	0.210	36	YW
571253	12	19	0.091	45	15	0.210	36	BK
665468	12	19	0.091	45	15	0.210	36	GN
665469	10	19	0.125	55	25	0.265	58	RD
665470	10	19	0.125	55	25	0.265	58	BN
665471	10	19	0.125	55	25	0.265	58	OE
665472	10	19	0.125	55	25	0.265	58	YW
560057	10	19	0.125	55	25	0.265	58	BK
665473	10	19	0.125	55	25	0.265	58	GN
167014	8	37	0.145	55	30	0.330	92	RD
665474	8	37	0.145	55	30	0.330	92	BN
665475	8	37	0.145	55	30	0.330	92	OE
665476	8	37	0.145	55	30	0.330	92	YW
665477	8	37	0.145	55	30	0.330	92	GN
665478	6	65	0.186	50	30	0.370	127	RD
665479	6	65	0.186	50	30	0.370	127	BN
665480	6	65	0.186	50	30	0.370	127	OE
665481	6	65	0.186	50	30	0.370	127	YW
167015	6	65	0.186	50	30	0.370	127	BK
665482	6	65	0.186	50	30	0.370	127	GN
665483	4	105	0.235	60	35	0.440	196	BN
665484	4	105	0.235	60	35	0.440	196	OE
665485	4	105	0.235	60	35	0.440	196	YW
167017	4	105	0.235	60	35	0.440	196	BK
653627	4	105	0.235	60	35	0.440	196	GN
138238	2	161	0.290	60	35	0.500	282	BN
138239	2	161	0.290	60	35	0.500	282	OE
138240	2	161	0.290	60	35	0.500	282	YW
167019	2	161	0.290	60	35	0.500	282	BK
138241	2	161	0.290	60	35	0.500	282	GN
167020	1	210	0.330	85	60	0.635	400	BK
138282	1	210	0.330	85	60	0.635	400	RD
138283	1	210	0.330	85	60	0.635	400	BN
138287	1	210	0.330	85	60	0.635	400	OE
138288	1	210	0.330	85	60	0.635	400	YW
138289	1	210	0.330	85	60	0.635	400	GN
138242	1/0	266	0.379	75	55	0.645	450	RD
138243	1/0	266	0.379	75	55	0.645	450	BN





Stock Number	Cond. Size	Cond. Strands	Diameter Over Conductor	Insul. Thickness	Jacket Thickness	Approx. OD	Approx. Weight	Jacket Color
	AWG/Kcmil	No.	inch	mil	mil	inch	lb/1000ft	
138244	1/0	266	0.379	75	55	0.645	450	OE
138245	1/0	266	0.379	75	55	0.645	450	YW
167021	1/0	266	0.379	75	55	0.645	450	BK
138246	1/0	266	0.379	75	55	0.645	450	GN
138247	2/0	342	0.400	80	50	0.690	566	BN
138248	2/0	342	0.400	80	50	0.690	566	OE
138249	2/0	342	0.400	80	50	0.690	566	YW
167022	2/0	342	0.400	80	50	0.690	566	BK
138251	2/0	342	0.400	80	50	0.690	566	GN
138252	3/0	418	0.480	80	55	0.760	676	RD
138253	3/0	418	0.480	80	55	0.760	676	BN
138254	3/0	418	0.480	80	55	0.760	676	OE
138255	3/0	418	0.480	80	55	0.760	676	YW
167023	3/0	418	0.480	80	55	0.760	676	BK
138256	3/0	418	0.480	80	55	0.760	676	GN
138257	4/0	532	0.530	80	60	0.815	815	BN
138258	4/0	532	0.530	80	60	0.815	815	OE
138259	4/0	532	0.530	80	60	0.815	815	YW
167024	4/0	532	0.530	80	60	0.815	815	BK
138260	4/0	532	0.530	80	60	0.815	815	GN
641176	262.2	646	0.565	80	60	0.845	974	RD
665452	262.2	646	0.565	80	60	0.845	974	BN
665453	262.2	646	0.565	80	60	0.845	974	OE
665454	262.2	646	0.565	80	60	0.845	974	YW
167026	262.2	646	0.565	80	60	0.845	974	BK
665455	262.2	646	0.565	80	60	0.845	974	GN
665456	313.3	779	0.650	90	70	0.980	1139	RD
665457	313.3	779	0.650	90	70	0.980	1139	BN
665458	313.3	779	0.650	90	70	0.980	1139	OE
665459	313.3	779	0.650	90	70	0.980	1139	YW
167027	313.3	779	0.650	90	70	0.980	1139	BK
665460	313.3	779	0.650	90	70	0.980	1139	GN
655203	373.7	931	0.701	95	70	1.040	1343	RD
678900	373.7	931	0.701	95	70	1.040	1343	BN
576729	373.7	931	0.701	95	70	1.040	1343	OE
678901	373.7	931	0.701	95	70	1.040	1343	YW
167029	373.7	931	0.701	95	70	1.040	1343	BK
678902	373.7	931	0.701	95	70	1.040	1343	GN
167030	444.4	1121	0.782	90	65	1.105	1654	BK
678975	444.4	1121	0.782	90	65	1.105	1654	RD
665461	444.4	1121	0.782	90	65	1.105	1654	BN
665462	444.4	1121	0.782	90	65	1.105	1654	OE
665463	444.4	1121	0.782	90	65	1.105	1654	YW





Stock Number	Cond. Size AWG/Kcmil	Cond. Strands No.	Diameter Over Conductor inch	Insul. Thickness mil	Jacket Thickness mil	Approx. OD inch	Approx. Weight lb/1000ft	Jacket Color
665464	444.4	1121	0.782	90	65	1.105	1654	GN
138211	535.3	1330	0.843	105	75	1.212	1889	BN
138212	535.3	1330	0.843	105	75	1.212	1889	OE
138213	535.3	1330	0.843	105	75	1.212	1889	YW
167031	535.3	1330	0.843	105	75	1.212	1889	BK
677552	535.3	1330	0.843	105	75	1.212	1889	GN
138229	646.4	1628	0.890	115	80	1.290	2292	RD
138215	646.4	1628	0.890	115	80	1.290	2292	BN
138216	646.4	1628	0.890	115	80	1.290	2292	OE
138217	646.4	1628	0.890	115	80	1.290	2292	YW
167032	646.4	1628	0.890	115	80	1.290	2292	BK
138218	646.4	1628	0.890	115	80	1.290	2292	GN
640980	777.7	1924	0.966	120	90	1.405	2727	BN
640981	777.7	1924	0.966	120	90	1.405	2727	OE
640982	777.7	1924	0.966	120	90	1.405	2727	YW
167033	777.7	1924	0.966	120	90	1.405	2727	BK
138219	777.7	1924	0.966	120	90	1.405	2727	GN
640983	777.7	1924	0.966	120	90	1.405	2727	GY
138220	1111	2745	1.168	115	95	1.640	4161	RD
138221	1111	2745	1.168	115	95	1.640	4161	BN
138222	1111	2745	1.168	115	95	1.640	4161	OE
138223	1111	2745	1.168	115	95	1.640	4161	YW
167035	1111	2745	1.168	115	95	1.640	4161	BK
138224	1111	2745	1.168	115	95	1.640	4161	GN

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

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
12	1.774	2.301	0.054	52	52	0.8	35	40	25	30
12	1.774	2.301	0.054	52	52	0.8	35	40	25	30
12	1.774	2.301	0.054	52	52	0.8	35	40	25	30
12	1.774	2.301	0.054	52	52	0.8	35	40	25	30
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
10	1.081	1.302	0.050	83	83	1.1	50	55	35	40
10	1.081	1.302	0.050	83	83	1.1	50	55	35	40
10	1.081	1.302	0.050	83	83	1.1	50	55	35	40
10	1.081	1.302	0.050	83	83	1.1	50	55	35	40
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
8	0.679	0.818	0.052	132	132	1.3	70	80	50	55
8	0.679	0.818	0.052	132	132	1.3	70	80	50	55
8	0.679	0.818	0.052	132	132	1.3	70	80	50	55
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
6	0.435	0.524	0.051	209	209	1.5	95	105	65	75
6	0.435	0.524	0.051	209	209	1.5	95	105	65	75
6	0.435	0.524	0.051	209	209	1.5	95	105	65	75
6	0.435	0.524	0.051	209	209	1.5	95	105	65	75
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
4	0.274	0.330	0.048	333	333	1.8	125	140	85	95
4	0.274	0.330	0.048	333	333	1.8	125	140	85	95
4	0.274	0.330	0.048	333	333	1.8	125	140	85	95
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
2	0.172	0.207	0.045	530	530	2.0	170	190	115	130
2	0.172	0.207	0.045	530	530	2.0	170	190	115	130
2	0.172	0.207	0.045	530	530	2.0	170	190	115	130
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	0.143	0.186	0.046	670	670	2.5	195	220	130	145
1	0.143	0.186	0.046	670	670	2.5	195	220	130	145
1	0.143	0.186	0.046	670	670	2.5	195	220	130	145
1	0.143	0.186	0.046	670	670	2.5	195	220	130	145





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
1/0	0.109	0.131	0.044	844	844	2.6	230	260	150	170
1/0	0.109	0.131	0.044	844	844	2.6	230	260	150	170
1/0	0.109	0.131	0.044	844	844	2.6	230	260	150	170
1/0	0.109	0.131	0.044	844	844	2.6	230	260	150	170
1/0	0.109	0.131	0.044	844	844	2.6	230	260	150	170
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
2/0	0.087	0.104	0.043	1064	1064	2.8	265	300	175	195
2/0	0.087	0.104	0.043	1064	1064	2.8	265	300	175	195
2/0	0.087	0.104	0.043	1064	1064	2.8	265	300	175	195
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
3/0	0.069	0.083	0.042	1342	1342	3.0	310	350	200	225
3/0	0.069	0.083	0.042	1342	1342	3.0	310	350	200	225
3/0	0.069	0.083	0.042	1342	1342	3.0	310	350	200	225
3/0	0.069	0.083	0.042	1342	1342	3.0	310	350	200	225
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
4/0	0.055	0.067	0.041	1692	1692	3.3	360	405	230	260
4/0	0.055	0.067	0.041	1692	1692	3.3	360	405	230	260
4/0	0.055	0.067	0.041	1692	1692	3.3	360	405	230	260
4/0	0.055	0.067	0.041	1692	1692	3.3	360	405	230	260
262.2	0.026	0.033	0.031	2097	2097	3.4	415	466	264	301
262.2	0.026	0.033	0.031	2097	2097	3.4	415	466	264	301
262.2	0.026	0.033	0.031	2097	2097	3.4	415	466	264	301
262.2	0.026	0.033	0.031	2097	2097	3.4	415	466	264	301
262.2	0.026	0.033	0.031	2097	2097	3.4	415	466	264	301
313.3	0.039	0.048	0.031	2506	2506	3.9	460	518	298	332
313.3	0.039	0.048	0.031	2506	2506	3.9	460	518	298	332
313.3	0.039	0.048	0.031	2506	2506	3.9	460	518	298	332
313.3	0.039	0.048	0.031	2506	2506	3.9	460	518	298	332
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
373.7	0.033	0.042	0.031	2989	2989	5.2	524	592	323	365
373.7	0.033	0.042	0.031	2989	2989	5.2	524	592	323	365
373.7	0.033	0.042	0.031	2989	2989	5.2	524	592	323	365
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





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
444.4	0.026	0.040	0.029	3555	3555	5.5	578	652	358	405
444.4	0.026	0.040	0.029	3555	3555	5.5	578	652	358	405
444.4	0.026	0.040	0.029	3555	3555	5.5	578	652	358	405
444.4	0.026	0.040	0.029	3555	3555	5.5	578	652	358	405
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
535.3	0.021	0.028	0.030	4282	4282	6.1	644	730	394	446
535.3	0.021	0.028	0.030	4282	4282	6.1	644	730	394	446
535.3	0.021	0.028	0.030	4282	4282	6.1	644	730	394	446
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
646.4	0.018	0.025	0.030	5171	5171	6.5	720	812	439	496
646.4	0.018	0.025	0.030	5171	5171	6.5	720	812	439	496
646.4	0.018	0.025	0.030	5171	5171	6.5	720	812	439	496
646.4	0.018	0.025	0.030	5171	5171	6.5	720	812	439	496
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
777.7	0.016	0.024	0.030	6221	6221	7.0	801	905	483	543
777.7	0.016	0.024	0.030	6221	6221	7.0	801	905	483	543
777.7	0.016	0.024	0.030	6221	6221	7.0	801	905	483	543
777.7	0.016	0.024	0.030	6221	6221	7.0	801	905	483	543
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
1111	0.011	0.016	0.029	8888	8888	8.2	993	1119	570	648
1111	0.011	0.016	0.029	8888	8888	8.2	993	1119	570	648
1111	0.011	0.016	0.029	8888	8888	8.2	993	1119	570	648
1111	0.011	0.016	0.029	8888	8888	8.2	993	1119	570	648
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 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	

