

# Diesel Locomotive Cable 2000 Volts (EPR/XL-CPE)

**SPEC 5310**  
November, 2011

UL RHH/RHW-2, 2000 V and C(UL) RW90, 1000 V

Flexible, Oil-, Sunlight- and Ozone-Resistant, Flame-Retardant, -40°C to 90°C



**Product Construction:**

**Conductor:**

- 14 AWG (2.08 mm) thru 1111.1 kcmil (562 mm) Class 1 fully annealed flexible stranded tin coated copper per AAR 589

**Insulation:**

- Flame-retardant, lead-free cross-linked Ethylene Propylene (EP) with separator tape over the conductor to facilitate stripping

**Jacket:**

- Black, flame-retardant, sunlight-, ozone-, and oil-resistant, lead-free Cross-Linked Chlorinated Polyethylene (XL-CPE)

**Print:**

- GENERAL CABLE® (MFG LOCATION) DIESEL LOCOMOTIVE 2000V C(UL)US TYPE RHH OR RHW-2 VW-1 (SIZE) AWG/kcmil (MM<sup>2</sup>) EP FOR CT USE\* SR -40°C FT4 OR RW90 EP 1000V ROHS MONTH/YEAR OF MFG SEQUENTIAL FOOTAGE MARK

\*Applicable for sizes 1/0 AWG and larger only

**Options:**

- Fully annealed, flexible bare copper stranding per AAR 589
- Other jacket colors available upon request

**Applications:**

- For use up to 2000 V as power cables in wind turbine generator applications per UL Subject 6140
- Diesel electric locomotives
- Mining and earth-moving equipment
- General purpose use as flexible power leads
- Flexible power leads in cable trays in sizes 1/0 AWG and larger

**Features:**

- Rated 90°C wet or dry per UL 44/CSA C.22.2 No. 38
- Flexible tinned copper stranding
- Excellent resistance to oils, gear lubricants, ozone, sunlight, heat and flame
- Designed to withstand continuous flexing

**Minimum Bend Radius:**

- 8X O.D. for fixed installations or mobile applications

**Torsion Requirements:**

- +/-180° twists per meter for 5,000 cycles at -40°C with cable weight compensated to 18 meters

**Compliances:**

**Industry Compliances:**

- Type RHH/RHW-2 per UL 44, UL File # E90494
- c(UL)US Type RW90 per CSA C.22.2 No. 38, UL File # E90494
- National Electrical Code (NEC)
- ICEA S-95-658/NEMA WC70
- "For CT Use" on 1/0 AWG and larger in accordance with NEC®
- RoHS Compliant

**Flame Tests:**

- UL 2556 VW-1
- IEEE 1202/CSA FT4 for sizes 1/0 AWG and larger

**AC Withstand Voltage Testing requirements per UL 44:**

14 - 10 AWG	6000 V
8 - 2 AWG	7500 V
1 - 4/0 AWG	9000 V
262.6 kcmil - 444 kcmil	10,000 V
535.3 kcmil - 929.9 kcmil	11,000 V
1111.1 kcmil	13,500 V

CATALOG NUMBER	COND. SIZE		COND. STRAND	NOMINAL COND. O.D.		NOM. INS. THICKNESS		JACKET THICKNESS		NOMINAL O.D.		APPROX. NET WEIGHT	
	AWG/kcmil	mm <sup>2</sup>		INCHES	mm	INCHES	mm	INCHES	mm	INCHES	mm	LBS/1000 FT	kg/km
5310.01014	14	2.08	19/.0147	0.070	1.8	0.045	1.1	0.015	0.4	0.20	5.1	30	45
5310.01012	12	3.31	19/.0185	0.088	2.2	0.045	1.1	0.015	0.4	0.22	5.6	39	58
5310.01010	10	5.26	27/24	0.117	3.0	0.045	1.1	0.015	0.4	0.25	6.4	56	83
5310.01008	8	8.36	37/24	0.144	3.7	0.055	1.4	0.030	0.8	0.33	8.3	87	129
5310.01006	6	13.3	61/24	0.190	4.8	0.060	1.5	0.030	0.8	0.38	9.7	131	195
5310.01004	4	21.1	105/24	0.262	6.7	0.060	1.5	0.030	0.8	0.46	11.7	202	301
5310.01002	2	33.6	158/24	0.315	8.0	0.060	1.5	0.030	0.8	0.51	13.0	285	424
5310.01001	1	42.4	224/24	0.375	9.5	0.080	2.0	0.045	1.1	0.64	16.3	417	621
5310.01110	1/0	53.5	280/24	0.435	11.0	0.080	2.0	0.045	1.1	0.70	17.8	494	735
5310.01210	2/0	67.4	329/24	0.465	11.8	0.080	2.0	0.045	1.1	0.73	18.5	587	874
5310.01310	3/0	85	456/24	0.535	13.6	0.080	2.0	0.045	1.1	0.80	20.3	718	1,069
5310.01410	4/0	107	551/24	0.581	14.8	0.080	2.0	0.045	1.1	0.84	21.3	845	1,258
5310.01262	262.6	133	650/24	0.617	15.7	0.090	2.3	0.065	1.7	0.94	23.9	1,050	1,563
5310.01313	313.3	158	777/24	0.671	17.0	0.090	2.3	0.065	1.7	1.00	25.3	1,195	1,778
5310.01373	373.7	189	925/24	0.735	18.7	0.090	2.3	0.065	1.7	1.06	26.9	1,384	2,060
5310.01444	444.4	225	1110/24	0.786	20.0	0.090	2.3	0.065	1.7	1.11	28.2	1,634	2,432
5310.01535	535.3	271	1332/24	0.877	22.3	0.090	2.3	0.065	1.7	1.20	30.5	1,925	2,865
5310.01646	646.4	327	1609/24	0.960	24.4	0.090	2.3	0.065	1.7	1.29	32.8	2,307	3,433
5310.01777	777.7	394	1924/24	1.054	26.8	0.090	2.3	0.065	1.7	1.38	35.1	2,728	4,060
5310.01929*	929.9	475	2318/24	1.230	31.2	0.090	2.3	0.065	1.7	1.56	39.6	3,570	5,313
5310.01111*	1111.1	562	2745/24	1.328	33.7	0.115	2.9	0.095	2.4	1.77	44.9	4,232	6,298

\* Non-stock item; minimum runs apply. Please consult Customer Service for price and delivery.

