



# PRODUCT DATA SHEET

## DLO CABLES 2KV

One Bridge Plaza North Suite 260 | Fort Lee, NJ 07024 | Tel 201 242 9906 | Fax 201 242 9926

**SCOPE:** This specification covers the requirements for single conductor rubber insulated cables. They are constructed with stranded, bare, soft or annealed copper wire; insulated with ethylene propylene rubber (EPR) and jacketed overall with chlorinated polyethylene (CPE).

The cables are UL listed for RHH, RHW-2, 2000 volts. The cables are CSA listed for RW90, 1000 volts. The cables are rated for 90°C dry/wet applications, they pass -40°C cold bend and cold impact tests and are sunlight resistant. The cables are highly flame retardant and pass UL 1685 cable tray test as well as IEEE1202, CSA FT4 flame test. These cables are suitable for use in cable trays by UL and CSA; however, they are not Type TC cables per UL/NEC.

The cables are used in wind towers for conveying power at below 1 KV. The cables can also be used for motor lead wires, railcar and transit car wiring, drilling rigs, on earth moving equipment, shipyards, welding equipment, etc.

**INDUSTRY SPECIFICATIONS:**

- UL 44, Rubber Insulated Cables.
- CSA C22.2 No. 96-09, Portable Power Cables.
- NEC Article 310, Conductors for General Wiring.

**1. Conductor:**

- 1.1 Size: See table below.
- 1.2 Stranding: See table below.
- 1.3 Material: Stranded, bare, soft or annealed copper wire as per ASTM B3-01.

**2. Insulation:**

- 2.1 Material: EPR (Ethylene Propylene Rubber).
- 2.2 Wall thickness: see table below. The minimum average thickness shall not be less than 90% of the specified thickness.
- 2.3 Insulated Conductor O.D.: See table below

**3. Color Code**

- 3.1 Insulation: Outer surface of insulation must be black.

**4. Assembly**

- 4.1 Separator: electrically non conductive per UL 44 (clear Mylar).
- 4.2 Splices: Neither the cable nor the stranded conductor as a whole shall be spliced.

**5. Jacket**

- 5.1 Material: CPE (Chlorinated Polyethylene).
- 5.2 Wall Thickness: See table below
- 5.3 Cable O.D.: See table below

**6. Surface Markings**

- 6.1 Type: Cables shall be identified by means of surface ink jet.
- 6.2 Legend (White Surface Ink Print):  
 WTEC - SIZE AWG (OR KCMIL) TYPE RHH OR RHW-2 2 KV (-40°C) PR II VW1 SUN RES FOR CT USE OR FT4 (UL) E\_\_\_\_ ---(CSA Logo) LL\_\_\_\_RW90EP SIZE AWG (OR KCMIL) (SIZE mm<sup>2</sup>) CU 1KV (-40°C) EP/CPE TC FT1 FT4---EPR/CPE 2KV DIESEL LOCOMOTIVE CABLE RoHS.

Revision	Description	Date	Submitted By
K	Added 8 awg and 6 awg	03/25/11	SS
L	Removed printing of GE P/N	09/24/11	SS



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- 6.3 Sequential Footage Markers: Yes
- 6.4 Date Code: Yes.
- 6.5 GE P/N: No

**7. Qualification Tests:**

- 7.1 Cold Impact test- Per UL44.
- 7.2 Vertical Flame test - Per UL 44
- 7.3 Moisture absorption test - installation should not absorb more than 5 mg/in<sup>2</sup> of water for 7 days @ 70°C.
- 7.4 Cold Bend- Per UL 44
- 7.5 Torsion Test - tested for 10000 cycles.

**8. Miscellaneous:**

8.1 Insulation material properties:

- i) Before aging:
  - a. Specific Gravity 0.90-1.29
  - b. Tensile strength, psi, min 1250-2200
  - c. Elongation, %, min 490-730
  - d. Volume resistivity Ohm-cm  $2 \times 10^{16}$
  - e. Dielectric strength Volts/mil  $\geq 700$
  - f. Dielectric constant @ 1KHz 2.8 to 3.2
  - g. Power factor (dissipation) @ 1KHz 0.0018
  - h. Abrasion resistance, heat resistance and weather ability GOOD
  - i. Flame retardancy and water resistance GOOD
- ii) After 7 days in circulating air oven @ 121± 1°C
  - a. Tensile strength, % of unaged 75
  - b. Elongation, % of unaged, min 75

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**Table**

WTEC PART NUMBER	SIZE	STRANDING	CONDUCTOR O.D. (INCHES)	INSULATION MIN. AVG. WALL (MILS)	OUTER INSULATION/JACKET		MIN. BENDING RADIUS (INCHES)
					MIN. AVG. WALL (MILS)	APPROX. O.D. (INCHES) +/-5%	
10-01EPRCPE2KV	10 AWG	19/#24	0.114	45	15	0.250	1.000
8-01EPRCPE2KV	8 AWG	41/#24	0.156	55	30	0.335	1.375
6-01EPRCPE2KV	6 AWG	65/#24	0.186	60	30	0.380	1.520
4-01EPRCPE2KV	4 AWG	105/#24	0.235	60	30	0.440	1.760
2-01EPRCPE2KV	2 AWG	168/#24	0.315			0.512	2.000
1-01EPRCPE2KV	1 AWG	224/#24	0.375	80	45	0.645	2.625
1/0-01EPRCPE2KV	1/0 AWG	273/#24	0.420			0.700	2.750
2/0-01EPRCPE2KV	2/10 AWG	324/#24	0.460			0.740	3.000
3/0-01EPRCPE2KV	3/0 AWG	448/#24	0.540			0.820	3.250
4/0-01EPRCPE2KV	4/0 AWG	532/#24	0.615	90	65	0.940	3.750
250-01EPRCPE2KV	250 KCMIL	608/#24	0.625			0.975	4.000
262-01EPRCPE2KV	262.6 KCMIL	646/#24	0.630			0.980	4.000
373-01/RHH/RHW/2KV*	373.7 KCMIL	925/#24	0.760			1.095	5.500
444-01EPRCPE2KV	444.4 KCMIL	1110/#24	0.830			1.165	5.875
500-01EPRCPE2KV	500 KCMIL	1221/#24	0.860			1.200	6.000
DLO535BC2KVCPE*	535.3 KCMIL	1332/#24	0.865			1.205	6.000
646-01EPRCPE2KV	646.4 KCMIL	1591/#24	0.955			1.285	6.500
777-01EPRCPE2KV	777.7 KCMIL	1924/#24	1.030	1.365	6.825		
929-01EPRCPE2KV	929.2 KCMIL	2318/#24	1.180	1.520	7.625		

Note: \*Part number corrected

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