



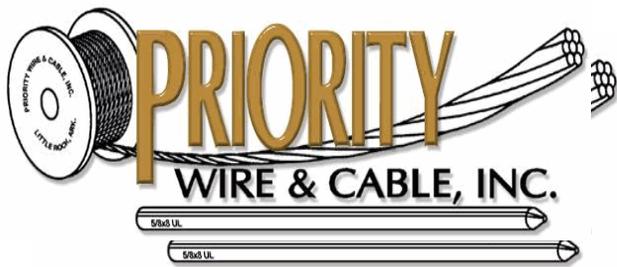
DLO Cable or Diesel Locomotive Cable Overview

Diesel Locomotive Cable which is commonly known as DLO Cable is a flexible (tinned copper Class I, 24 AWG strands) rubber insulated (EPR—Ethylene propylene rubber) and rubber jacketed (CPE-chlorinated polyethylene) 2000 volt UL rated cable originally developed for use in the wiring of Diesel Locomotives. Diesel Locomotives use diesel engines to drive generators to power electric motors that turn the wheels, DLO cable is used to transmit the power from the generator to the electric drive motor. It is available from 14 AWG to 1111 KCMIL. It is also used in many other applications where a flexible, tough cable is needed due to tight bending radiuses. While the NEC should always be consulted for potential uses, at times and due to DLO Cable carrying a UL RHH-RHW-2 or CSA RW90 rating the AHJ (Authority Having Jurisdiction) will allow its use in many other applications. These may include other electrically driven moving equipment, motor or power leads, UPS back-up systems, fuel cell systems, battery banks, and back-up generators. DLO Cable in sizes 1/0 and larger is generally tray cable rated allowing for use in industrial facilities. DLO Cable may be an allowable substitute for welding cable that is often miss-used when a flexible cable is needed (welding cable is generally only allowed on the secondary circuits of an electric welder—ie. welding leads). DLO can be thought of as a very heavy duty welding cable due to the double jacket (or insulation and jacket) construction and will at times be used as welding cable especially for the high amperage systems.

For those that are used to more standard power cables such as THHN or XHHW the user will have to be more careful with the terminations and need to understand that the same lugs used for standard building wire cannot be used on DLO Cable. The major lug manufacturers (for example ILSCO, BURNDY, T&B or Thomas & Betts) offer special lugs for fine stranded cable such as DLO Cable, welding cable, Type W, G & G-GC and SHD-GC cable as well as crimp sets for so consult your favorite lug supplier or electrical distributor for the proper connector. Be careful when stripping the cable in preparation for termination to not allow the finer stranding to become frayed. Most barrel compression lugs sized for DLO Cable have a chamfered barrel to help guide the conductor into the barrel. Be careful to not allow any of the strands to bend back on themselves.

DLO Cable is heavy and expensive compared to other copper power cable such as THHN or XHHW due to the labor that goes into producing the fine stranding and the more expensive insulations. Seek a supplier that can get you the lengths you need but make sure that you do not come up short.

Potential alternates to DLO Cable (consult the NEC or AHJ) are welding cable and single conductor Type W Cable. Welding cable would be a less durable product with less



insulation and Type W would be a potentially more durable alternative as it has double layers of insulation that are thicker than DLO Cable insulation.

Priority Wire & Cable offers DLO Cable carrying the following industry standards:

- UL Listed as RHH-RHW-2
- UL 1658 vertical flame test
- IEEE-1202
- Size 1/0 and larger are rated for tray use
- ARR approved
- MSHA approved
- ICEA S-95-658
- NEMA WC-70
- Sun Res
- CSA Listed RW90, RW90-TC 1KV
- CSA C22.2 No 38
- CSA C22.2 No 230
- FT4 Flame Test

We stock DLO Cable in each of our ten North American warehouses in bulk reels and will cut to length or may have randoms available. We sell exclusively through distribution so contact your favorite local distributor and they can contact us for delivery information. We ship orders the same day we receive them and can deliver to over 85% of the country overnight.

Contact us at www.prioritywire.com or call 1-800-945-5542 in the U.S. or 1-877-611-5122 in Canada

Written by Rob Strahs, Priority Wire & Cable Copyright 2014.