

***EmPowr*<sup>®</sup> *Link CL*<sup>™</sup> / *EmPowr*<sup>®</sup> *Link CL*<sup>™</sup> *Advantage*  
Frequently Asked Questions**

Q: What is *EmPowr*<sup>®</sup>?

A: *EmPowr*<sup>®</sup> is General Cable's trade name for 5kV to 46kV underground medium-voltage shielded power cables for electric utility primary distribution systems.

Q: What is *EmPowr*<sup>®</sup> *Link*?

A: *EmPowr*<sup>®</sup> *Link* is General Cable's Tree-Retardant, Cross-linked Polyethylene (TRXLPE) insulated underground primary distribution cable with concentric neutral wires and a Linear Low Density Polyethylene (LLDPE) jacket that is ideally suited for primary distribution service applications such as underground residential and rural systems because of its excellent dielectric and physical characteristics.

Q: What is *EmPowr*<sup>®</sup> *Link CL*<sup>™</sup>?

A: *CL*<sup>™</sup> is General Cable's trade name for a thermoset Cross-linked Polyethylene (XLPE) jacket available as an alternate to LLDPE jackets for use on *EmPowr*<sup>®</sup> *Link* underground distribution cables.

Q: What benefit does the *CL*<sup>™</sup> jacket have over a LLDPE jacket?

A: In short, the *CL*<sup>™</sup> jacket provides higher temperature resistance allowing for less copper in the concentric neutral without compromising safety, reliability or performance. A standard LLDPE thermoplastic jacket allows for a maximum short circuit transient temperature of 200°C, whereas the *CL*<sup>™</sup> allows for a maximum temperature of 350°C. The higher temperature provides for a higher fault current using a given concentric neutral cross-sectional area, thereby reducing the amount of copper required in the neutrals.

Q: How does the *CL*<sup>™</sup> jacket affect the product's physical properties?

A: The *CL*<sup>™</sup> jacket provides additional protection compared to a LLDPE jacket. Test results show that a *CL*<sup>™</sup> jacket meets or exceeds the physical properties and installation characteristics of a LLDPE jacket: it's easy to remove, is impact-resistant and has a low coefficient of friction. Thermomechanical testing performed on a 3/C *EmPowr*<sup>®</sup> *Link CL*<sup>™</sup> cable in conduit operating at a 140°C conductor temperature passed all requirements without any physical deformation, while a LLDPE jacketed cable installed in the same application melted and fused together, exposing the copper concentric neutral wires.

Q: What is *EmPowr*<sup>®</sup> *Link CL*<sup>™</sup> *Advantage*?

A: *EmPowr*<sup>®</sup> *Link CL*<sup>™</sup> *Advantage* is General Cable's next evolutionary step in medium-voltage technology. It incorporates compact conductor stranding with flat strap copper concentric neutrals and a *CL*<sup>™</sup> jacket. The combination of these features reduces the overall cable diameter and weight while providing best-in-class performance. The flat strap neutrals significantly improves cable durability for ease of installation, and the reduced overall diameter and weight allows for longer standard lengths on the same size shipping reel.

---

The information contained in this document is the exclusive and proprietary intellectual property of General Cable Corporation, and any reproduction or disclosure, in whole or in part, is prohibited without the express written consent of an officer of General Cable Corporation.

- Q: How does the CL™ jacket impact total life cycle costs?
- A: The resistance of the metallic shield in a CL™ jacketed cable will be higher since there is less copper content in the concentric neutral than a comparable LLDPE jacketed cable. The higher resistance of the shield will result in a lower level of circulating current passing through the neutral wires, which in turn reduces the power losses in the cable. The combination of reduced copper content and lower losses allows for a lower total-life-cycle-cost cable.
- Q: Do *EmPowr*® Link CL™ cable designs affect partial discharge field testing?
- A: *EmPowr*® Link CL™ cables compared to an equivalent fault current LLDPE jacketed cable will have less concentric neutral cross-sectional area and less contact coverage over the cable core. Depending on the length of the cable run, conductor size and cross sectional area of the concentric neutral wires, this may result in more signal attenuation along the cable when conducting field partial discharge testing on very long lengths of installed cable.
- Q: How does an *EmPowr*® Link CL™ Advantage cable affect partial discharge field testing?
- A: *EmPowr*® Link CL™ Advantage cables utilizes flat strap concentric neutrals instead of traditional round wire neutrals and provides increased contact coverage over the cable core which results in less signal attenuation that enhances partial discharge field testing.
- Q: Why should I choose the *EmPowr*® Link CL™ Advantage cables?
- A: *EmPowr*® Link CL™ Advantage combines the best design features in a medium voltage underground distribution cable to ensure safety, reliability and long-term operating performance at a competitive price: the smallest overall cable diameter, lowest cable weight, improved protection, longer delivered lengths, enhanced field performance testing and lower total-life-cycle-cost.
- Q: Where have the *EmPowr*® Link CL™ and *EmPowr*® Link CL™ Advantage cables been used?
- A: CL™ jacketed cables have proven performance and are being used extensively in wind farm and solar collection systems with over 70 million feet provided since 2012. Flat strap concentric neutrals and compact stranding are industry wide proven design for well over 40 years. In addition, the CL™ jacketed cable design has been adopted by several utilities as a product improvement and cost savings initiative.
- Q: Do CL™ jacketed cables provide benefit to electric utility distribution systems?
- A: Yes. For electric utility distribution systems, the CL™ jacketed cable design with the reduced neutral is ideally suited for three phase installations providing better performance and enhance reliability and safety over standard LLDPE jacketed cables. The CL™ jacketed cable design has already been adopted by numerous utilities as a product improvement and cost savings initiative.
- Q: Can I request a CL™ XLPE jacketed EPR or EAM insulated underground medium voltage cables?
- A: Yes. CL™ XLPE jacket can be applied to Ethylene Propylene Rubber (EPR) or Ethylene Alkene Copolymer (EAM) insulated cable products.

---

The information contained in this document is the exclusive and proprietary intellectual property of General Cable Corporation, and any reproduction or disclosure, in whole or in part, is prohibited without the express written consent of an officer of General Cable Corporation.