



High and Extra-high Voltage Cable System Solutions for North America

Dow has more than 70 years of experience in the power cable industry. Its global team of specialists provide support to cable makers and utilities through both technical expertise and a world-class portfolio of insulation, jacketing and semiconductive materials for low, medium, high and extra-high voltage power cables. Sophisticated R&D, manufacturing, engineering and in-house testing/validation round out Dow's overall offering and capabilities for the industry.

Investing now and for the future

When it comes to high-voltage (HV) and extra-high voltage (EHV) solutions for North America, Dow has nearly two decades of experience and is the only global producer of world-class HV compounds that can be sourced locally in North America. Understanding that utilities continue to invest in new and rehabilitated infrastructure, Dow continuously advances its facility in Seadrift, Texas, to ensure consistent supply of quality compounds made with modern equipment, process control systems and packaging, as well as logistics practices designed to meet or exceed industry standards for product cleanliness and performance.



Enhancements include:

- World-class product transfer systems
- Additional tape inspection to improve continuous product quality assessment
- Advanced contamination inspection and detection systems for product quality assessments
- Advanced digital control system



Quality materials matter

Cleanliness is extremely important in the production of highly reliable HV and EHV cables. Dow strongly contends that quality materials matter in the construction of quality cables.

ENDURANCE™ compounds help ensure the kind of quality that cable manufacturers and utilities can count on for years of durable and reliable underground (UG) cable function without the fear of contaminants that can lead to premature cable failure.

The case for underground

Renewable generation sources, shifts in generation fuel sources from coal to gas and aging infrastructure all influence transmission development that requires HV/EHV cable. Although overhead lines (OHL) will be used for many projects, the need for HV UG cable will continue to grow. The siting of OHL is challenging in certain regions due to rights of way, topographic obstacles, extreme climate/weather conditions, or desired community aesthetics. Alternatively, UG cable installation results in:

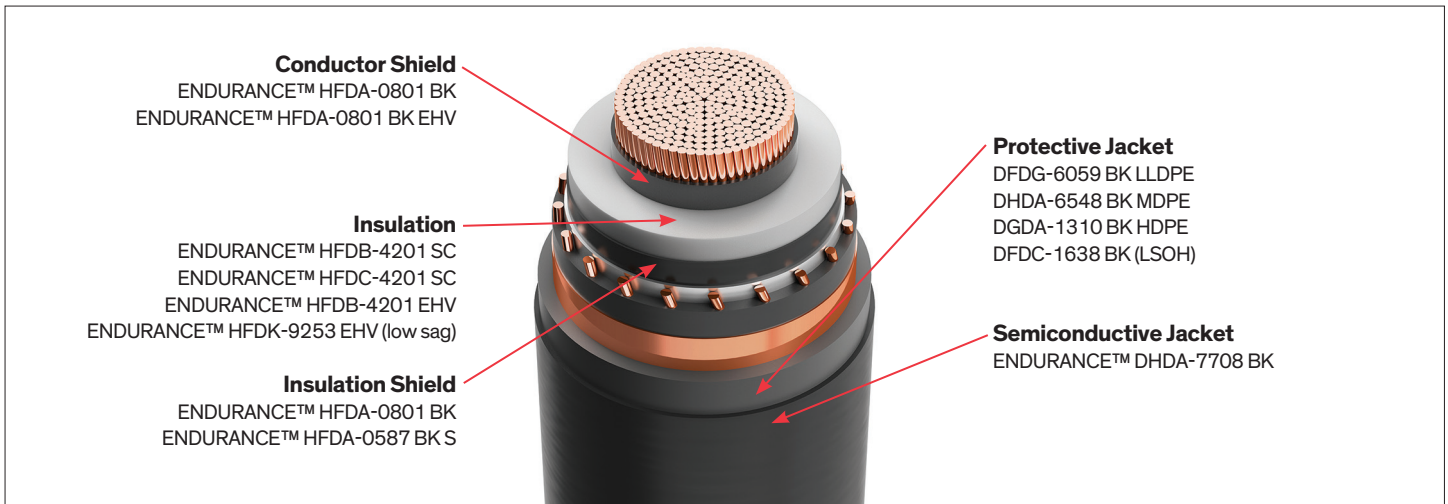
- Increased protection against external factors such as weather, vandalism, etc., resulting in greater reliability
- Lower visual impact (better aesthetics) that increases value of surrounding area versus overhead lines
- Smaller right of way and faster approval of applications for installation
- Lower emission of electromagnetic noise
- Lower short- and long-term maintenance costs than overhead lines
- Lower power loss

Ultimately, underground transmission helps faster deployment of more power and results in happier customers.

For more information about Dow HV and EHV solutions for North America, call your Dow representative or visit www.dow.com/transmission.



Photo courtesy of Southwire



| Material | Voltage Class | Applications |
|------------------------------------|----------------------|---|
| ENDURANCE™ HFDA-0587 BK S | 69-230 kV | Conventional insulation shield based on furnace carbon black |
| ENDURANCE™ HFDA-0801 BK | 69-230 kV 230+ kV | Super-smooth conductor shield based on acetylene carbon black Super-smooth insulation shield based on acetylene carbon black |
| ENDURANCE™ HFDA-0801 BK EHV | 230+ kV | Super-smooth conductor shield based on acetylene carbon black with highest degree of smoothness |
| ENDURANCE™ HFDB-4201 SC | 69-230 kV | Super-clean XLPE insulation |
| ENDURANCE™ HFDB-4201 EHV | 230+ kV | XLPE insulation meeting even higher cleanliness specifications than SC grade |
| ENDURANCE™ HFDC-4201 SC | 69-230 kV | Super-clean XLPE insulation that requires significantly less degassing time |
| DFDG-6059 BK | 69-230+ kV | LLDPE jacketing material having the best combination of jacketing features |
| DHDA-6548 BK | 69-230+ kV | MDPE jacketing material |
| DGDA-1310 BK | 69-230+ kV | HDPE jacketing material used for greater abrasion resistance |
| DFDC-1638 BK | 69-230+ kV | Low-smoke, zero-halogen (LSOH) jacketing material |
| ENDURANCE™ DHDA-7708 BK | 69-230+ kV | Semiconducting jacketing material typically extruded as a thin outer layer to allow for jacket integrity testing after installation |

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