



## Dow Electrical & Telecommunications

# System Solutions for Underground Distribution Electrical Infrastructure

## Depend on one source for polymeric components

From tried and true cable compounds that have withstood the test of time, to ongoing developmental activity for new cable and accessory applications, Dow Electrical & Telecommunications, a business operating unit of The Dow Chemical Company (“Dow E&T”) is directly involved in nearly all phases of medium-voltage underground systems. Known primarily as the inventor of water-tree-retardant crosslinked polyethylene (TR-XLPE) insulation, introduced to the market in 1983, Dow E&T also provides fully-formulated compounds for semi-conductive shields and jacketing materials. In addition, Dow E&T now provides elastomeric resins for ethylene alkene copolymer (EAM) and ethylene propylene rubber (EPR) cable constructions and accessories including separable connectors, splices and terminations.

### Choices to cover your insulation needs

In addition to world-class shield and jacketing materials, Dow E&T has the industry’s broadest portfolio of insulation materials. This enables us to offer our customers choices to construct or specify cables that best meet the needs of the underground system in which they are operated. The portfolio is comprised of DOW ENDURANCE™ TR-XLPE insulation, ENGAGE™ elastomers for EAM insulation and NORDEL™ EPDM for EPR insulation.



**High performance TR-XLPE insulation**  
Next-generation performance in TR-XLPE insulation is realized through DOW ENDURANCE™ HFDC-4202 EC. This insulation meets or exceeds all global requirements including ICEA, AEIC, CSA, NMX and VDE/CENELEC<sup>1</sup>. The product also was recognized by *R&D Magazine* as a 2015 R&D 100 winner for its patented technology enabling improved performance through extended cable life and enhanced reliability, while reducing total life-cycle cost<sup>2</sup>.

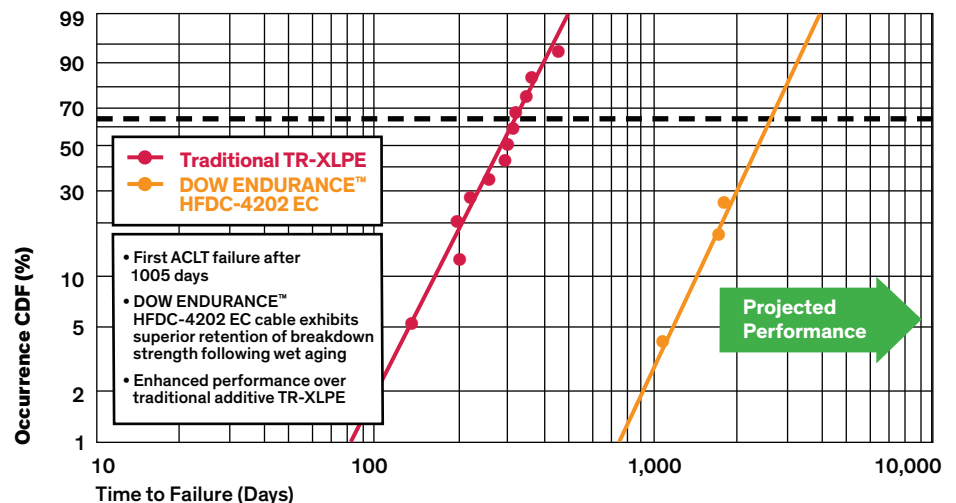


### Global Manufacturing Capability

TEXAS AND GULF COAST, USA  
CENTRAL GERMANY

- Fully-integrated production facilities from ethylene to final product
- Continuous sampling for cleanliness and smoothness targets
- State-of-the-art manufacturing, quality, packaging and logistics practices to ensure delivery of the materials you need, when and where you need them

Enhanced Performance of DOW ENDURANCE™ HFDC-4202 EC TR-XLPE Insulation

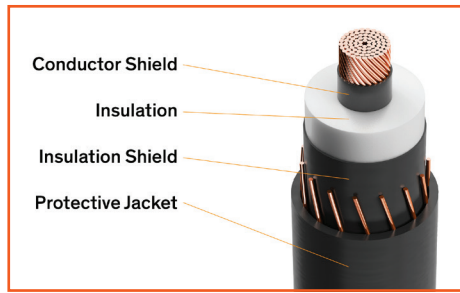


**4,4 ACLT of 15kV MV cable with 4.45 mm insulation**

<sup>1</sup>Regulations may vary by city, state, country, or geographic region. Please contact the Dow Customer Service Group in your region for any additional, relevant regulatory information.

<sup>2</sup>Sutton, S. (2011). A LIFE CYCLE ANALYSIS STUDY OF COMPETING MV CABLE MATERIALS. 21st International Conference on Electricity Distribution (p. 4). Frankfurt: CIRED.

**DOW ENDURANCE™ Solutions  
for Distribution Power Cables**



**Trust an industry leader**

Working together with our customers, Dow E&T has consistently demonstrated that using an engineered system of materials results in superior performance and reliability and can result in a lower total cost over the life of the system. We recommend pairing Dow insulation with Dow semi-conductive shield and jacketing

materials to obtain the optimal result. For materials science-based system solutions for reliable, long-life power cables, trust an industry leader as a consistent and reliable source – trust Dow E&T.

Insulation		Region	Africa, Middle East & India	Asia Pacific	Europe	Latin America	North America
Material	Applications						
<b>DOW ENDURANCE™ HFDC-4202 EC</b>	Enhanced long-life, water-tree-retardant, crosslinkable, polyethylene insulation compound		•	•	•	•	•
<b>DOW™ HFDB-4201 EC</b>	Extra-clean, unfilled, crosslinkable, polyethylene insulation compound		•	•	•	•	•
<b>DOW™ HFDK-4201 NT</b>	Extra-clean, unfilled, crosslinkable, polyethylene insulation compound		•	•	•		
<b>DOW™ HFDB-4202 NT</b>	Water-tree-retardant, crosslinkable, polyethylene insulation compound		•	•		•	
<b>DOW™ HFDK-9253</b>	Low-sag, extra-clean, unfilled, crosslinkable, polyethylene insulation compound		•	•	•	•	•
<b>DOW™ HFDA-9210 BK</b>	Crack-resistant, black crosslinkable polyethylene insulation compound			•			
<b>DOW™ HFDA-9217 BK</b>	Crack-resistant, black crosslinkable polyethylene insulation compound			•		•	
<b>SI-LINK™ DFDA-6451 NT</b>	Crosslinkable polyethylene for moisture-curable power cable insulation			•		•	

Elastomers		Region	Africa, Middle East & India	Asia Pacific	Europe	Latin America	North America
Material	Applications						
<b>ENGAGE™ 7447 EL</b>	Polyolefin elastomer for EAM power insulation and semi-conductive compound		•		•	•	•
<b>ENGAGE™ 8452 EL</b>	Polyolefin elastomer for EAM power insulation and semi-conductive compound			•	•	•	•
<b>NORDEL™ IP 3722P EL</b>	Hydrocarbon rubber for EPR power insulation and semi-conductive compound		•	•	•	•	•

## Semi-conductive Compounds

Material	Applications	Region	Africa, Middle East & India	Asia Pacific	Europe	Latin America	North America
<b>DOW ENDURANCE™ HFDA-0580 BK</b>	Conventional, crosslinkable semi-conductive shielding compound for use on aluminum conductors					•	•
<b>DOW ENDURANCE™ HFDA-0581 BK</b>	Conventional, crosslinkable semi-conductive shielding compound compatible with aluminum and copper conductors					•	•
<b>DOW ENDURANCE™ HFDB-0586 BK</b>	Conventional, crosslinkable semi-conductive shielding compound compatible with aluminum and copper conductors			•			
<b>DOW ENDURANCE™ HFDA-0587 BK</b>	Conventional, crosslinkable semi-conductive shielding compound compatible with copper and aluminum conductors		•	•	•	•	•
<b>DOW ENDURANCE™ HFDK-0587 BK</b>	Conventional, crosslinkable semi-conductive shielding compound compatible with copper and aluminum conductors		•	•	•	•	
<b>DOW ENDURANCE™ HFDA-0800 BK EC</b>	Super-smooth, extra-clean, crosslinkable semi-conductive shielding compound compatible with aluminum and copper conductors					•	•
<b>DOW ENDURANCE™ HFDA-0802 BK EC</b>	Super-smooth, extra-clean, crosslinkable semi-conductive shielding compound for use on aluminum conductors					•	•
<b>DOW ENDURANCE™ HFDA-0693 BK</b>	Strippable, crosslinkable semi-conductive insulation shielding compound for use over crosslinked insulation		•	•	•	•	•

## Jackets

Material	Applications	Region	Africa, Middle East & India	Asia Pacific	Europe	Latin America	North America
<b>DOW AXELERON™ GP-6059 BK CPD</b>	Black LLDPE compound for power cable jacketing		•		•	•	•
<b>DOW ENDURANCE™ DFDA-1375 RD</b>	Red LLDPE compound for identification of power cables					•	•
<b>DOW ENDURANCE™ DHDA-7708 BK</b>	Black, semi-conducting LLDPE jacket compound		•	•	•	•	•
<b>DOW™ DFDA-7530 NT</b>	Colorable LLDPE compound for cable jacketing		•	•	•	•	•
<b>DOW™ DFDK-6050 NT</b>	Colorable LLDPE compound for cable jacketing				•		
<b>DOW™ DGDA-1310 BK</b>	Black HDPE compound for power cable jacketing		•	•	•	•	•
<b>DOW™ DGDA-1310 NT</b>	Colorable HDPE compound for power cable jacketing		•		•	•	•
<b>DOW™ DGDK-6862 NT</b>	Colorable HDPE compound for power cable jacketing				•		
<b>DOW™ DGDL-3479 BK</b>	Black HDPE compound for power cable jacketing			•		•	
<b>DOW™ DGDL-3479 NT</b>	Colorable HDPE compound for power cable jacketing			•		•	

## ABOUT DOW ELECTRICAL & TELECOMMUNICATIONS

Dow E&T, a business unit of The Dow Chemical Company ("Dow"), is a leading global provider of products, technology, solutions and knowledge that sets standards for reliability, longevity, efficiency, ease of installation and protection that the power and telecommunications industries can count on in the transmission, distribution and consumption of power, voice and data. Understanding that collaboration is essential to success, Dow E&T works together with cable makers, other industry suppliers, utilities, municipalities, testing institutes and other organizations around the world to help develop solutions and create mutual value that will sustain these industries for years to come. For more information, visit [www.dow.com/electrical](http://www.dow.com/electrical).

---

### **Dow Electrical & Telecommunications**

Houston Dow Center  
1254 Enclave Parkway  
Houston, TX 77077

### **US**

Toll Free                      800 441 4DOW  
   989 832 1542

### **dow.com**

### **International**

Europe / Middle East    + 800 36 94 63 67  
Italy                            + 800 783 825  
Asia / Pacific                + 800 77 76 77 76  
   + 60 37 958 3392  
South Africa                 + 800 99 5078

---

NOTICE: No freedom from infringement of any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, the Customer is responsible for determining whether products and the information in this document are appropriate for the Customer's use and for ensuring that the Customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments. Dow assumes no obligation or liability for the information in this document. No warranties are given; all implied warranties of merchantability or fitness for a particular purpose are expressly excluded. This document is intended for global use.

®™Trademark of The Dow Chemical Company

Form No. 310-21501-117 HMC