

#### **Dow Electrical & Telecommunications**

## Solutions for Underground Transmission Electrical Infrastructure

## Quality materials matter

Power transmission utilities require years of reliable, consistent service for their customers. For both aging and new transmission infrastructure, quality high-voltage and extra-high-voltage cables are paramount to the reliability that utilities and their customers demand. Dow Electrical & Telecommunications, a business operating unit of The Dow Chemical Company ("Dow E&T"), also believes that quality cables can only be derived from quality materials. We manufacture our product family of DOW ENDURANCE™ HV/EHV, semi-conductive and jacketing compounds to the highest global performance standards - under the strictest quality control, handling, packaging and shipping guidelines that ensure the manufacture of quality cables by our customers around the world1.

# State-of-the-art manufacturing and quality control

At Dow E&T, we are acutely aware that our clean production systems are vital to delivering materials that enable the construction of long-life, reliable cables that utilities can count on over the lifetime of the system. Throughout our dedicated manufacturing process, all products are processed in integrated, continuous steps from raw materials to the final compounds. To ensure that all materials meet stringent requirements for cleanliness and quality, continuous product testing is performed throughout the polymer production and compounding processes.



Recent enhancements at Dow E&T's plants in North America and Europe comprise new leading-edge technology and enhanced capabilities to produce DOW ENDURANCE™ insulation, semi-conductive and jacket compounds for transmission class applications. These measures are being undertaken as part of continuous advancement efforts to ensure stringent materials performance that is especially crucial for the compounds expected for transmission cable applications.



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.







#### **Packaging and logistics**

In addition to state-of-the-art compound manufacturing, it is essential to maintain material cleanliness during distribution from the compound production plant to the cable manufacturing plant. Dow E&T's dedicated packaging operations include:

- Filtration systems meeting the highest industry standards
- Customer-specific packaging that is loaded in fully-enclosed, controlled environment cleanrooms
- Robotically sealed containers stored in temperature-controlled warehousing
- Other specialized packaging operations, practices and detailed protocols







#### Trust an industry leader

For over 70 years, Dow E&T has been serving the power industry; it has been over 40 years since the introduction of its first HV/EHV cable compounds. Our most recent innovations include faster degassing, allowing more efficient manufacturing to achieve lower residual gases and a more reliable cable. Other operational efficiencies are realized through longer extrusion runs, creating greater cable lengths with fewer joints required.

As industry investments in new and rehabilitated transmission infrastructure grow globally, Dow E&T continues to invest in its assets to keep pace with demand – now and in the future – and to meet or exceed stringent product performance requirements. For materials science-based system solutions for reliable, long-life HV/ EHV power cables, trust an industry leader as a consistent and reliable source – trust Dow E&T.



# Global Manufacturing Capability

## TEXAS AND GULF COAST, USA

- Fully-integrated enclosed 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

#### **DOW ENDURANCE™ Solutions for Global Transmission Cables**



**DOW ENDURANCE™ HFDK-0587 BK** 

DOW ENDURANCE™ HFDK-0587 BK S

≤69/230kV

≤150/230kV

Insulation		5 5	Africa, Middle East & India	Asia Pacific	ЭС	Latin America	North America
Material	Voltage Class		Africa & Indi	Asia	Europe	Latin	North
DOW ENDURANCE™ HFDB-4201 SC	≤230kV	Super-clean, unfilled, crosslinkable polyethylene insulation compound for high-voltage power cables	•	•	•	•	•
DOW ENDURANCE™ HFDB-4201 EHV	>230kV	Highest level of cleanliness, unfilled, crosslinkable polyethylene insulation compound for extra-high-voltage power cables	•	•	•		•
DOW ENDURANCE™ HFDK-9253 S	≤230kV	Low-sag, super-clean, unfilled, crosslinkable polyethylene insulation compound for high-voltage power cables	•	•	•	•	•
DOW ENDURANCE™ HFDK-9253 EHV	>230kV	Highest level of cleanliness, low-sag, unfilled, crosslinkable polyethylene insulation compound for extra-high-voltage power cables	•	•	•	•	•
Semi-conductive Compounds  Material	Voltage Class	ເວ ເວ Applications	Africa, Middle East & India	Asia Pacific	Europe	Latin America	North America
DOW ENDURANCE™ HFDA-0801 BK	≥230kV	Super-smooth, extra-clean crosslinkable semi-conductive shielding compound compatible with aluminum and copper conductors	•	•	•	•	•
DOW ENDURANCE™ HFDA-0801 BK EHV	≤500kV	Highest degree of smoothness, extra-clean crosslinkable semi-conductive shielding compound	•	•	•	•	•
DOW ENDURANCE™ HFDA-0587 BK	≤69/230kV	Conventional, crosslinkable semi-conductive shielding compound - can be used for conductor shield to 69kV and insulation shield to 230kV	•	•	•	•	•
DOW ENDURANCE™ HFDA-0587 BK S	≤150/230kV	Conventional, crosslinkable semi-conductive shielding compound - can be used for conductor shield to 150kV and insulation shield to 230kV	•	•	•	•	•
DOW ENDURANCE™ HFDB-0586 BK	≤69/230kV	Conventional, crosslinkable semi-conductive shielding compound - can be used for conductor shield to 69kV and insulation shield to 230kV		•		•	
DOW ENDURANCE™ HFDB-0586 BK S	≤150/230kV	Conventional, crosslinkable semi-conductive shielding compound –		•			

 $Conventional, crosslinkable \ semi-conductive \ shielding \ compound-can be used for conductor shield to 69kV \ and insulation \ shield to 230kV$ 

 $Conventional, crosslinkable \ semi-conductive \ shielding \ compound-can be used for conductor \ shield \ to \ 150 kV \ and \ insulation \ shield \ to \ 230 kV$ 

Jackets	5	Africa, Middle East & India	Asia Pacific	Ф	Latin America	North America
Material	. 5 O Applications	Africa & India	Asia F	Europe	Latin.	North
DOW AXELERON™ GP 6059 BK CPD	Black LLDPE compound for telephone and power cable jacketing		•		•	•
DOW ENDURANCE™ DFDA-1375 RD	Red LLDPE compound for identification of power cables				•	•
DOW ENDURANCE™ DHDA-7708 BK	Black, semi-conducting LLDPE compound	•	•	•	•	•
DOW™ DFDA-7530 NT	Colorable LLDPE compound for cable jacketing	•	•		•	•
DOW™ DFDK-6050 NT	Colorable LLDPE compound for cable jacketing			•		
DOW™ DGDA-1310 BK	Black HDPE compound for power cable jacketing	•	•	•	•	•
DOW™ DGDA-1310 NT	Colorable HDPE compound for power cable jacketing				•	•
DOW™ DGDK-6862 NT	Colorable HDPE compound for power cable jacketing			•		
DOW™ DGDL-3479 BK	Black HDPE compound for cable jacketing	•	•	•	•	
DOW™ DGDL-3479 NT	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.

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Form No. 310-21401-117 HMC