# DOW™ Electrical & Telecommunications

# HFDA-5630 BK

Crosslinkable Power Cable Insulation Compound

The Dow Chemical Company

## Message:

Power cable insulation material
HFDA-5630 Black is a curable polyethylene copolymer with a medium addition of carbon black by thermal cracking method, which is used as a wire insulation material. It is recommended to apply to 600volt power cables and control cables.
Specifications
HFDA-5630 Black has been UL certified and can be used in XHHW, XHHW-2, RHH, RHW, RHW-2, SIS,USE and USE-2 applications.
When adopting the correct commercial manufacturing specifications, cables using HFDA-5630 Black should meet the following industry cable specifications:
ICEA: S-66-524; NEMA WC7

| General Information | | | |
|---|---|---|---|
| Filler / Reinforcement | Carbon fiber reinforced material | | |
| Uses | Low voltage insulation<br>Wire and cable applications<br>Industrial cable insulation material | | |
| Forms | Particle | | |
| **Physical** | **Nominal Value** | **Unit** | **Test Method** |
| Specific Gravity | 1.07 | g/cm³ | ASTM D792 |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Durometer Hardness (Shore D) | 48 | | ASTM D2240 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Modulus - Secant | 80.7 | MPa | ASTM D638 |
| **Elastomers** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Strength (Break) | 17.9 | MPa | ASTM D412 |
| Tensile Elongation (Break) | 430 | % | ASTM D412 |
| **Aging** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile strength retention-14 days (150°C) | 100 | % | ASTM D412 |
| Elongation retention-14 days (150°C) | 87 | % | ASTM D412 |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Brittleness Temperature [1] | -80.0 | °C | ASTM D746 |
| **Electrical** | **Nominal Value** | **Unit** | **Test Method** |
| Volume Resistivity (23°C) | 1.0E+14 | ohms·cm | ASTM D257 |
| Dielectric Strength | | | ASTM D149 |
| 3.18 mm [2] | 15 | kV/mm | ASTM D149 |
| 3.18 mm [3] | 14 | kV/mm | ASTM D149 |
| Dielectric Constant (60 Hz) | 5.00 | | ASTM D150 |

| | | |
|---|---|---|
| Dissipation Factor (60 Hz) | 6.0E-3 | ASTM D150 |

| Additional Information |
|---|
| Nominal property values above represent tests on molded stress-relieved slabs. Cure times were 15 minutes at 175°C. |

| Extrusion | Nominal Value | Unit |
|---|---|---|
| Hopper Temperature | 65.6 | °C |
| Melt Temperature | 116 - 135 | °C |

| Extrusion instructions |
|---|
| HFDA-5630 BK provides excellent surface finish and outstanding output rates over a broad range of conditions. For optimum results, use melt extrusion temperatures in the suggested range of 240-275°F (115-135°C). However, specific recommendations for processing conditions can be determined only when the application and type of processing equipment are known. Please contact your local Dow Wire and Cable sales representative for such particulars. Hopper drying at 150°F (65°C) before extrusion is recommended to remove moisture. |

| NOTE | |
|---|---|
| 1. | F20 |
| 2. | Method A (short time) |
| 3. | Method B (step by step) |



## Recommended distributors for this material

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