



DFDG-6059 Black

Linear Low Density Cable Jacketing Compound

DFDG-6059 Black is a prime quality telephone cable black jacketing compound produced from resin made by the UNIPOL™ polyethylene process. It offers improved low temperature and high temperature performance plus excellent environmental stress-cracking resistance, outdoor weatherability, and toughness. DFDG-6059 Black is completely free of die drool, has an enhanced antioxidant system to provide high Oxidative Induction Time (OIT), and contains a low moisture absorption carbon black.

Specifications

DFDG-6059 Black meets the following raw material specifications:

- ASTM D 1248 IC-4, Grades E5, J1, J3
- Federal LP-390C III-L, Grades 2, 3, and 4, Category 4
- REA PE-22, 38, 39, 86, 89, 90 (Raw Material Sections)

Cable jacketed with DFDG-6059 Black, using sound commercial extrusion practices, should meet the following specifications:

- ICEA: S-61-402
- ANSI: C8.35
- ASTM D 2308
- REA PE-22, 38, 39, 86, 89, 90
- Telcordia GR-421-CORE
- ICEA: S-84-608-1988

Properties	Test Methods ⁽¹⁾	Typical Values ⁽²⁾
Physical		
Density, 23°C	ASTM D 1505	0.932 g/cm ³
Melt Index	ASTM D 1238	0.6 g/10 min
Tensile Strength ⁽³⁾	ASTM D 638	2,350 psi (16.2 MPa)
Tensile Elongation ⁽³⁾	ASTM D 638	700%
Brittleness Temperature, F ₅₀ Notched Brittleness Temperature, F ₅₀	Dow	<-100°C <-60°C
Environmental Stress Crack Resistance, F ₀ , 10% Igepal	ASTM D 1693	>500 hours
Carbon Black Content	ASTM D 1603	2.60%
Absorption Coefficient	ASTM D 3349	440 K(AB/M)
Abrasion Resistance	Dow	23 mg/100 cycles
Oxidative Induction Time, 200°C	Dow	120 min
Electrical		
Dielectric Constant, 1 MHz	ASTM D 1531	2.48
Dissipation Factor, 1 MHz	ASTM D 1531	0.0003

(1) Tests are made in accordance with current ASTM or Dow Methods.

(2) Values are typical, and not to be construed as specifications.

(3) Speed C, 50 mm (2 in)/minute. Type IV dogbone specimen.

Processing Techniques

DFDG-6059 Black 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 425 to 475°F (218 to 246°C).

Hopper drying at 150-160°F (67-71°C) is recommended to remove moisture.

Handling Considerations

Material Safety Data Sheets (MSDS) for Wire and Cable Materials are available from The Dow Chemical Company to help customers/users further understand the proper handling of the product.

Before using this product, read and understand the current Dow Material Safety Data Sheet for this product. As various additives and processing aids used in the manufacture of wire and cable have their own safe use profile, their possible influence on handling and disposal must be investigated separately.

Disposal

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all Federal, State/Provincial, and local laws and regulations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

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As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess, or manage chemicals or plastics, and that manage used drums.

Storage and Handling

This product is supplied in pellet form. This product may be readily conveyed and bulk-fed through equipment designed for conventional pelleted polyethylene resin, provided the equipment is designed to prevent accumulation of the fines and dust particles that are contained in all polyethylene resins. These fines and dust particles can, under certain conditions, pose an explosion hazard. We recommend that the conveying system used be: (1) equipped with filters of adequate size, (2) operated and maintained in such a manner to ensure that no leaks develop, and (3) grounded adequately. These fines and dust particles are considered a nuisance dust under OSHA-1910.1000, and personnel exposure must be controlled accordingly. We further recommend good housekeeping be practiced throughout your facility.

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