



# DOW™ Electrical & Telecommunications DGDA-1310 BK Black High Density Polyethylene Compound for Cable Jacketing

## Overview

DGDA-1310 BK is a black HDPE jacket grade for power and telecom cable applications. The material provides excellent mechanical and physical properties and environmental stress crack resistance in combination with good processability.

DGDA-1310 BK can be extruded using conventional cable jacket techniques with melt temperatures typically between 200 and 230 °C.

Specifications.

DGDA-1310 BK meets the following Raw material specifications:

- ASTM D 1248 Type III, Class C, Category 5, Grade J4, E8, E9, W8, W9
- ISO 1872-PE, KHL, 50-D003

Cables jacketed with DGDA-1310 BK, using industry standard commercial extrusion practice, should meet the following cable specifications:

- IEC 60502, ST 7
- IEC 62067, ST 7
- IEC 60840, ST 7
- ICEA S-94 649
- ICEA S-108 720
- ICEA S-97 682
- ICEA-S-87-640
- BS 6234: Type H03C, TS2
- Telcordia GR-70-CORE
- HD 620 S2, Part 1, Table 4B, type DMP2, DMP 9-10, DMP 14-15, DMP 17
- EN 50290-2-24

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.965 g/cm <sup>3</sup>	0.965 g/cm <sup>3</sup>	ASTM D792 ISO 1183
Melt Mass-Flow Rate			ASTM D1238 ISO 1133
190°C/2.16 kg	0.26 g/10 min	0.26 g/10 min	
190°C/21.6 kg	28 g/10 min	28 g/10 min	
Environmental Stress-Cracking Resistance (ESCR)			IEC 60811
122°F (50°C), 10% Igepal, F0	> 1000 hr	> 1000 hr	
Carbon Black Content	2.5 %	2.5 %	ASTM D1603
Absorption Coefficient	445 K(AB/M)	445 K(AB/M)	ASTM D3349
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength	4200 psi	29.0 MPa	IEC 60811
Tensile Elongation (Break)	820 %	820 %	IEC 60811
Flexural Modulus	171000 psi	1180 MPa	ISO 178
Taber Abrasion Resistance (100 Cycles)	21.0 mg	21.0 mg	ASTM D1242
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Shore Hardness			ISO 868
Shore D, 1 sec	66	66	
Shore D, 3 sec	63	63	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Brittleness Temperature <sup>1</sup>	-105 °F	-76.0 °C	ASTM D746
Oxidation Induction Time (392°F (200°C))	170 min	170 min	ASTM D3895



<b>Aging</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>	<b>Test Method</b>
Retention of Tensile Elongation - 14 days 230°F (110°C)	93 %	93 %	IEC 60811
Retention of Tensile Strength - 14 days 230°F (110°C)	93 %	93 %	IEC 60811
<b>Electrical</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>	<b>Test Method</b>
Volume Resistivity (73°F (23°C))	5.6E+16 ohms·cm	5.6E+16 ohms·cm	ASTM D257

### Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

<sup>1</sup> No Failure

