



AXELERON™ GP K-3479 BK CPD

Black High Density Polyethylene Compound for Cable Jacketing

Overview

AXELERON™ GP K-3479 BK CPD is a high-molecular weight, high density polyethylene compound ("CPD") produced from resin made by the UNIPOL™ process. AXELERON™ GP K-3479 BK CPD is a prime quality telephone and power cable black jacketing that provides good toughness, stress-cracking resistance, outdoor weatherability and abrasion resistance.

Specifications

AXELERON™ GP K-3479 BK CPD meets the following raw material specifications:

- ASTM D-1248: Type III, Class C, Category 5, Grades E10 and J4, J5
- Federal LP-390C: Type III, Class H, Grade 1, Category 5
- REA PE 39 and PE 89 (Raw Material Sections)

Cable jacketed with AXELERON™ GP K-3479 BK CPD, using sound commercial extrusion practices, should meet the following specifications:

- ICEA: S-61-402; NEMA WC5
- REA PE 39 and PE 89
- ANSI: C8.35
- IEC 60502

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.952 g/cm ³	0.952 g/cm ³	ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	0.20 g/10 min	0.20 g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR)			ASTM D1693
10% Igepal, F0	> 336 hr	> 336 hr	
Carbon Black Content	2.6 %	2.6 %	ASTM D1603
Absorption Coefficient - (kAB/m)	> 400	> 400	ASTM D3349
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			ASTM D638
Yield	3000 psi	20.7 MPa	
--	4200 psi	29.0 MPa	
Tensile Elongation (Break)	800 %	800 %	ASTM D638
Flexural Modulus	149000 psi	1030 MPa	ASTM D790
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Brittleness Temperature ¹	< -148 °F	< -100 °C	ASTM D746
Aging	Nominal Value (English)	Nominal Value (SI)	Test Method
Retention of Tensile Elongation - 48 hrs			ASTM D638
212°F (100°C)	95 %	95 %	
Retention of Tensile Strength - 48 hrs			ASTM D638
212°F (100°C)	90 %	90 %	
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Dielectric Constant (1 MHz)	2.56	2.56	ASTM D1531
Dissipation Factor (1 MHz)	3.0E-4	3.0E-4	ASTM D1531
Extrusion	Nominal Value (English)	Nominal Value (SI)	
Melt Temperature	450 to 480 °F	232 to 249 °C	

Extrusion Notes

AXELERON™ GP K-3479 BK CPD 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 450-480°F (232-249°C). Hopper drying at 180°F (82°C) to remove moisture is recommended. However, specific recommendations for processing conditions can be determined only when the application and type of processing equipment are known.

Notes

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

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Published: 2005-11-17

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