

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.

