Technical Information

AXELERON™ GP 6059 BK CPD

Black Linear Low Density Polyethylene Compound for Cable Jacketing

Overview

AXELERON™ GP 6059 BK CPD is a prime quality telephone cable black jacketing compound ("CPD"). It offers improved low temperature and high temperature performance plus excellent environmental stress-cracking resistance, outdoor weatherability, and toughness.

Specifications

AXELERON™ GP 6059 BK CPD meets the following raw material specifications:

- ASTM D 1248 IC-4, Grades E5, J1, J3
- Federal LP-390C III-L, Grades 2, 3, 4 and Category 4
- REA PE-22, 38, 39, 86, 89, 90 (Raw Materials Sections)
- ISO 1872-PE, KCH, 18-D006
- GB/T 15065

Cable jacketed with AXELERON™ GP 6059 BK CPD, using sound commercial extrusion practices, should meet the following specifications:

- ICEA: S-83-640
- ASTM D 2308
- Telcordia GR-421-CORE
- EN 50290-2-24
- IEC 60708
- YD/T 901
- IEC 60502 ST3, ST7
- IEC 60840 ST3, ST7
- HD 620 S2, Part 1, Table 4B, DMP 10, DMP 14, DMP 17
- ICEA S-94-649
- ICEA S-97-682
- ICEA S-108-720
- ICEA S-84-608
- YD/T 1092
- IEC 62067, ST3, ST7
- IEC 60794

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	0.932	g/cm³	0.932	g/cm³	ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	0.60	g/10 min	0.60	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance [1]					ASTM D1693
10% Igepal, F0	> 1000	hr	> 1000	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					
-- [2, 3]	2350	psi	16.2	MPa	ASTM D638
--	3050	psi	21.0	MPa	IEC 60811-502
Tensile Elongation					
Break [2, 3]	700	%	700	%	ASTM D638
Break	900	%	900	%	IEC 60811-502
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Brittleness Temperature					ASTM D746
-- [4]	< -148	°F	< -100	°C	
-- [5]	< -105	°F	< -76.0	°C	
Oxidation Induction Time (392°F (200°C))	120	min	120	min	ASTM D3895

Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Dielectric Constant (1 MHz)	2.48	2.48	ASTM D1531
Dissipation Factor (1 MHz)	3.0E-4	3.0E-4	ASTM D1531

Extrusion	Nominal Value (English)	Nominal Value (SI)
Melt Temperature	425 to 475 °F	218 to 246 °C

Extrusion Notes

AXELERON™ GP 6059 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 425 to 475°F (218 to 246°C).

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

Notes

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

[1] Typical value per IEC 60811-406 > 1000 hrs.

[2] Type IV

[3] Speed 20 in/min (500mm/min)

[4] F50

[5] Notched, F50