AXELERON™ CS L-3364 NT CPD

High Density Polyethylene Solid Insulation Compound

The Dow Chemical Company

Message:

AXELERON™ CS L-3364 NT CPD is a high-molecular weight, high-density polyethylene insulation compound ("CPD") specifically formulated to provide excellent oxidative stability, toughness, and abrasion resistance. It provides superior long term aging performance, especially in the more demanding grease-filled cable applications while providing excellent environmental and thermal stress-cracking resistance. In addition, AXELERON™ CS L-3364 NT CPD provides excellent processibility for high-speed wire insulating extrusion processes.
AXELERON™ CS L-3364 NT CPD provides excellent performance across the full range of telephone insulation applications, including aircore and grease-filled cable designs in both buried and aerial environments AXELERON™ CS L-3364 NT CPD is optimized to meet rigorous Telcordia (formerly Bellcore) age testing requirements, as well as all major international age testing standards and specifications for both solid and foam/skin insulation use. There is also considerable AXELERON™ CS L-3364 NT CPD use in a wide variety of other twisted pair, optic, coaxial and power cable designs.
Specifications
AXELERON™ CS L-3364 NT CPD meets the following raw material specifications:
ASTM D 1248 Type III Category A-4, Grade E8 and E9
Federal LP-390 C, II-H, Grades 1 and 2, Category 4
Telephone wire insulated with AXELERON™ CS L-3364 NT CPD, using sound commercial extrusion practices, should meet the following cable specifications:
REA PE 39 "Filled Telephone Cable"
REA PE 89 "Filled Telephone Cable with Expanded Insulation"
Telcordia GR-421-CORE, Issue 1; 3 "Generic Requirements for Metallic Telecommunications Cables"
ICEA S-84-608 "Telecommunications Cable; Filled, Polyolefin Insulated, Copper Conductor - Technical Requirements"

General Information	
Uses	Thin wall insulation
	Telephone insulator
	Wire and cable applications
	Solid insulation
	Communication wire insulation material
Agency Ratings	ASTM D 1248, III, Class A, Cat. 4, Grade E8
	ASTM D 1248, III, Class A, Cat. 4, Grade E9
	FED L-P-390C, Type II, Class H, Category 4, Grade 1
	ICEA S-84-608
	REA PE-39
	REA PE-89
Forms	Particle

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.945	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.80	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (50°C, 100% Igepal, F0)	> 48.0	hr	ASTM D1693
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength	23.4	MPa	ASTM D638

Tensile Elongation (Break)	500	%	ASTM D638
Aging	Nominal Value	Unit	Test Method
Tensile strength retention-48 hrs (100°C)	90	%	ASTM D638
Elongation retention rate-48 hrs (100°C)	90	%	ASTM D638
Heat resistant stress crack-F0	> 96	hr	ASTM D2951
Oxidation Induction Time [1] (200°C)	170	min	ASTM D4565
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature [2]	-76.0	°C	ASTM D746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity (23°C)	> 1.0E+15	ohms·cm	ASTM D257
Dielectric Constant [3] (1 MHz)	2.32		ASTM D1531
Dissipation Factor (1 MHz)	6.0E-5		ASTM D1531
Extrusion	Nominal Value	Unit	
Melt Temperature	218 - 260	°C	

Extrusion instructions

AXELERON™ CS L-3364 NT CPD provides excellent surface finish and good output rates over a broad range of extrusion conditions. AXELERON™ CS L-3364 NT CPD is typically extruded at melt discharge temperatures ranging from 425 to 500°F (220 to 260°C) using conductor preheats ranging from 230 to 290°F (110 to 140°C). Specific extrusion conditions can be recommended only when the application, processing speed and processing equipment details are known.

NOTE

1.	Aluminum pan O/T testing of 0.25 mm film samples 80°C ETPR cable type filler was used.
2.	F0
3.	After 14 days Water Immersion at 23°C (73°F)

Recommended distributors for this material

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