



# AXELERON™ CS K-3364 NT CPD

## High Density Polyethylene Solid Insulation Compound

### Overview

AXELERON™ CS K-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, while providing excellent environmental and thermal stress-cracking resistance. In addition, AXELERON™ CS K-3364 NT CPD provides excellent processability for high-speed wire insulating extrusion processes.

AXELERON™ CS K-3364 NT CPD provides good performance for telephone insulation applications, primarily cable designs for aerial environments. AXELERON™ CS K-3364 NT CPD is optimized to meet major international age testing standards and specifications for both solid and foam/skin insulation use.

### Specifications

AXELERON™ CS K-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
- ISO 1872-PE, KHKN,45-D006

Telephone wire insulated with AXELERON™ CS K-3364 NT CPD, using sound commercial extrusion practices, should meet the following cable specifications:

- ICEA S-84-608
- EN-50290-2-23
- IEC 60708
- DIN VDE 0819-103
- BS 6234 type H03
- NF C 32-060

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.947 g/cm <sup>3</sup>	0.947 g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	0.75 g/10 min	0.75 g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR)			ASTM D1693
212°F (100°C), 100% Igepal, F0	> 48.0 hr	> 48.0 hr	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength	3400 psi	23.4 MPa	ASTM D638
Tensile Elongation (Break)	500 %	500 %	ASTM D638
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Brittleness Temperature <sup>1</sup>	-105 °F	-76.0 °C	ASTM D746
Thermal Stress Crack Resistance - F0	> 96 hr	> 96 hr	ASTM D2951
Aging	Nominal Value (English)	Nominal Value (SI)	Test Method
Retention of Tensile Elongation - 48 hrs			ASTM D638
212°F (100°C)	90 %	90 %	
Retention of Tensile Strength - 48 hrs			ASTM D638
212°F (100°C)	90 %	90 %	
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Volume Resistivity (73°F (23°C))	> 1.0E+15 ohms·cm	> 1.0E+15 ohms·cm	ASTM D257
Dielectric Constant (1 MHz)	2.32	2.32	ASTM D1531
Dissipation Factor <sup>2</sup> (1 MHz)	6.0E-5	6.0E-5	ASTM D1531
Extrusion	Nominal Value (English)	Nominal Value (SI)	
Melt Temperature	425 to 500 °F	218 to 260 °C	

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**Extrusion Notes**

AXELERON™ CS K-3364 NT CPD provides excellent surface finish and good output rates over a broad range of extrusion conditions. AXELERON™ CS K-3364 NT CPD is typically extruded at melt discharge temperatures ranging from 218-260°C (425-500°F) using conductor preheats ranging from 110-140°C (230-290°F). Specific extrusion conditions can be recommended only when the application, processing speed and processing equipment details 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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<sup>1</sup> F0

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<sup>2</sup> After 14 days Water Immersion at 23°C (73°F)

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