

AXELERON™ CS K-3364 NT CPD

High Density Polyethylene Solid Insulation Compound

The Dow Chemical Company

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Technical Data

Product Description

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

General

| | |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Material Status | • Commercial: Active |
| Literature ¹ | • Technical Datasheet |
| Search for UL Yellow Card | • The Dow Chemical Company |
| Availability | • Africa & Middle East • Asia Pacific • Europe • Latin America • North America |
| Uses | • Communication Wire Insulation • Solid Insulation • Telephone Insulation • Thin-walled Insulation • Wire & Cable Applications |
| Agency Ratings | • ASTM D1248, III, Class A, Cat. 4, Grade E8 • ASTM D1248, III, Class A, Cat. 4, Grade E9 • BS 6234 Type H03 • EN 50290-2-23 • FED L-P-390C, Type II, Class H, Category 4, Grade 1 • ICEA S-84-608 • IEC 60708 • NF C 32-060 |
| Forms | • Pellets |

| Physical | Nominal Value Unit | Test Method |
|---------------------------------------------------------------------------|-------------------------|-------------|
| Density | 0.947 g/cm ³ | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 0.75 g/10 min | ASTM D1238 |
| Environmental Stress-Cracking Resistance (ESCR) 100°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 |
| Thermal | Nominal Value Unit | Test Method |
| Brittleness Temperature ³ | -76.0 °C | ASTM D746 |
| Thermal Stress Crack Resistance - F0 | > 96 hr | ASTM D2951 |



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| Aging | Nominal Value Unit | Test Method |
|--------------------------------------------------|--------------------|-------------|
| Retention of Tensile Elongation - 48 hrs (100°C) | 90 % | ASTM D638 |
| Retention of Tensile Strength - 48 hrs (100°C) | 90 % | ASTM D638 |
| Electrical | Nominal Value Unit | Test Method |
| Volume Resistivity (23°C) | > 1.0E+15 ohms·cm | ASTM D257 |
| Dielectric Constant (1 MHz) | 2.32 | ASTM D1531 |
| Dissipation Factor ⁴ (1 MHz) | 6.0E-5 | ASTM D1531 |
| Extrusion | Nominal Value Unit | |
| Melt Temperature | 218 to 260 °C | |

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

¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

² Typical properties: these are not to be construed as specifications.

³ F0

⁴ After 14 days Water Immersion at 23°C (73°F)



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Where to Buy

Supplier

The Dow Chemical Company

Telephone: +1-800-258-2436 (Americas); 00800-3-694-6367 (Europe, Middle East, Africa, and India); +800-7776-7776 (Asia Pacific)

Web: <http://www.dow.com>

Distributor

RESINEX Group

RESINEX is a Pan European distribution company. Contact RESINEX for availability of individual products by country.

Telephone: +32-14-672511

Web: <http://www.resinex.com/>

Availability: Europe

