

ALCUDIA® LDPE CP-104

Low Density Polyethylene

REPSOL

Message:

ALCUDIA® CP-104 is a natural and cross-linkable compound based on low density polyethylene, specifically designed to be cross-linked by organic peroxide. It contains a special antioxidant to guarantee thermal stability and causes minimum interference with the cross-linking process. The outstanding features of this grade are cleanliness, excellent thermal stability, good processing behaviour, excellent cross-linking efficiency at high speed and smooth surface finish.

ALCUDIA® CP-104 is normally supplied in octabins, tankers and van-boxes.

TYPICAL APPLICATIONS

Medium voltage power cable insulation.

Processing conditions of ALCUDIA® CP-104 are dependent on formulation and technique employed but it is noteworthy that this grade is suitable to use in a temperature range of 120°C - 130°C.

ALCUDIA® CP-104 meets the following standards: ISO 1872 PE KHN 18D022; ASTM D 1248 I,A3 Grade E5.

| General Information | | | |
|---|---|-------------------|---------------|
| Additive | Antioxidation | | |
| Features | High molecular weight | | |
| | Antioxidation | | |
| | Workability, good | | |
| | Crosslinkable | | |
| | Thermal stability, good | | |
| | Excellent appearance | | |
| Uses | Wire and cable applications | | |
| | Insulating material | | |
| Agency Ratings | ASTM D 1248, I, Class A, Cat. 3, Grade E5 | | |
| | ISO 1872 PE KHN 18D022 | | |
| Appearance | Natural color | | |
| Forms | Particle | | |
| Processing Method | Extrusion | | |
| Physical | Nominal Value | Unit | Test Method |
| Density (23°C) | 0.920 | g/cm ³ | ISO 1183 |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 2.4 | g/10 min | ISO 1133 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Stress (Break) | 14.0 | MPa | ISO 527-2 |
| Tensile Strain (Break) | 600 | % | ISO 527-2 |
| Aging | Nominal Value | Unit | Test Method |
| Retention of Mechanical Properties ¹ (100°C) | > 75 | % | ISO 527-2 |
| Thermoset ² (200°C) | | % | IEC 60811-2-1 |

| Thermal | Nominal Value | Unit | Test Method |
|----------------------------------|---------------|---------|-------------|
| Vicat Softening Temperature | 91.0 | °C | ISO 306/A |
| Electrical | Nominal Value | Unit | Test Method |
| Volume Resistivity | > 1.0E+16 | ohms·cm | ASTM D257 |
| Dielectric Strength ³ | > 22 | kV/mm | IEC 60243-1 |
| Dielectric Constant (1 MHz) | 2.30 | | ASTM D150 |
| Dissipation Factor (1 MHz) | 5.0E-3 | | ASTM D150 |

NOTE

1. 10 days, 1.9% Peroxide
2. 20 N/cm², 1.9% Peroxide
3. 50 Hz

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