Polylink Power Cable PP 408/401

Crosslinked Polyethylene

Polylink Polymers (India) Ltd.

Message:

A silane grafted crosslinkable polyethylene compound, curable by exposure to moisture, for insulation of power cables and possessing excellent extrudability at high out put rate.

PP 408 is based on a high molecular weight polymer and has melt index in the range of 0.5 to 0.8. It has especially developed for low voltage cable insulation and for sheathing purpose.

DESCRIPTION :

This compound utilizes the system for cross - linking of polyethylene developed by DOW Corning and known as Sioplas. It is a two component system comprising a silylated ethylene polymer known as the graft copolymer PP 408, and a master batch PP 401 containing a cross - linking catalyst. The two materials normally used in the ratio of 95 parts graft to 5 parts catalyst master batch.

| General Information | | | | |
|---|------------------------|----------|-------------|--|
| Features | High molecular weight | | | |
| | Crosslinkable | | | |
| Uses | Low voltage insulation | | | |
| | Cable sheath | | | |
| Forms | Particle | | | |
| Processing Method | Extrusion | | | |
| Physical | Nominal Value | Unit | Test Method | |
| Density | 0.925 | g/cm³ | ASTM D1505 | |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 0.50 | g/10 min | ASTM D1238 | |
| Mechanical | Nominal Value | Unit | Test Method | |
| Tensile Stress (Break) | 18.0 | MPa | IEC 60811 | |
| Tensile Strain (Break) | 550 | % | IEC 60811 | |
| Aging | Nominal Value | Unit | Test Method | |
| Change in Tensile Strength in Air (135°C, 168 hr) | 10 | % | IEC 60811 | |
| Change in Tensile Strain at Break in Air (135°C, 168 hr) | 15 | % | IEC 60811 | |
| Thermal | Nominal Value | Unit | Test Method | |
| Thermoset ¹ | | | IEC 60811 | |
| Elongation Under Load : 200°C | 100 | % | IEC 60811 | |
| Permanent Elongation after Cooling : 200°C | 5.0 | % | IEC 60811 | |
| Power factor (23°C) ² | 4.00E-4 | | IEC 250 | |
| Electrical | Nominal Value | Unit | Test Method | |
| Volume Resistivity (20°C) | 2.4E+16 | ohms•cm | IEC 60502 | |
| Dielectric Strength | 25 | kV/mm | IEC 60243-1 | |
| Dielectric Constant | 2.30 | | IEC 60250 | |

| Extrusion | Nominal Value | Unit | | |
|---|-------------------------------|------|--|--|
| Cylinder Zone 1 Temp. | 160 | °C | | |
| Cylinder Zone 2 Temp. | 170 | °C | | |
| Cylinder Zone 3 Temp. | 180 | °C | | |
| Cylinder Zone 4 Temp. | 190 | °C | | |
| Cylinder Zone 5 Temp. | 200 | °C | | |
| Die Temperature | 210 | °C | | |
| Extrusion instructions | | | | |
| Screw water temperature : 60 to70°CScreens : 30,100,30(mesh apertures per linear inch)L/D Ratio: 20Compression: 3:0:1 | | | | |
| NOTE | | | | |
| 1. | 15 min, 0.2 N/mm ² | | | |
| 2. | 50 Hz | | | |

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