

PLEXLINK™ 235

Processibility of Compounds

Extruder

Recommended using a standard PE extruder with a cooling screw

Screw diameter : 120-150mm

Length of screw : 20-25 D

Screw design : Troester or equivalent having the last 2 D as a Maddox mixing zone or with Shear –mix elements to achieve very good thermal mixing and homogenization of the melt. This is important to prevent overheating of the melt.

Screen packs : with 4-5 screens (1/0.5/0.3/(0.2))/0.5*

- ** Optional*

Extruder Temperature/Melt Pressure Profile

| <i>Barrel</i> | <i>Z 1</i> | <i>Z 2</i> | <i>Z 3</i> | <i>Z 4</i> |
|-----------------------|------------|------------|------------|----------------------|
| <i>Temperature °C</i> | <i>125</i> | <i>125</i> | <i>125</i> | <i>125(+/- 4° C)</i> |

Screw Temperature 100 (+/- 10° C)

Hopper Temperature 50 (+/- 5° C)

NOTE: It is important to keep the melt temperature under 135° C to avoid “scorching”

Depending on the cable type, line speeds, and outputs different melt pressures can be realized. Usual values for the melt pressure are

180 Bar (11 KV, 12 m/min.)

260 Bar (25KV, 10 m/min.)

CV Tube Temperature/Pressure Profile (dry curing)

For 10-20 KV cables the following profiles are recommended

Line speed 10-15 m/min.

| <i>Tube</i> | <i>Z 1</i> | <i>Z 2</i> | <i>Z 3</i> | <i>Z 4</i> | <i>Z 5</i> | <i>Z 6</i> |
|-----------------------|------------|------------|------------|------------|------------|----------------------|
| <i>Temperature °C</i> | <i>420</i> | <i>410</i> | <i>400</i> | <i>390</i> | <i>380</i> | <i>370(+/-30° C)</i> |

Nitrogen Pressure 9-10 bars

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PLEXLINK™ 235 CROSSLINK PEROXIDE COMPOUNDS

Description

PLEXLINK™ 235 is a crosslinkable low density polyethylene compound for the insulation of medium to high (33kv) voltage cables. The product contains a balance of an excellent non staining antioxidant with a thermally stable, yet easy processing peroxide.

Properties

Based on the conditions listed in section (iv) the following results were obtained

Material Characterization

a)Cable

| PARAMETER | TEST METHODS | DIMENSION | TYPICAL VALUES |
|--|--------------|-----------|----------------|
| Hot set test (200° C, 20 N/cm ²) | IEC 811 | | |
| Elongation under load | | % | 50-60 |
| After discharge | | % | 0 |
| Gottfert Elastograph (max. torque) | ISO 6502 | | 0.6-0.8 |
| Gel content | ASTM D 2765A | % | 78-83 |

b)Tape

| | | | |
|----------------------------------|--------------|---|-------|
| Smooth surface with no scorching | | | |
| Gel content | ASTM D 2765A | % | 75-82 |

Mechanical Properties

| PARAMETER | TEST METHODS | DIMENSION | TYPICAL VALUES |
|------------------------------------|--------------|-------------------|----------------|
| Tensile strength | ASTM D 638 | n/mm ² | 16-19 |
| Elongation at break | ASTM D 638 | % | 450-550 |
| Change after aging (7 days, 135°C) | ASTM D 638 | | |
| Tensile strength | | % | 8-12 |
| Elongation at break | | % | 5-9 |

Electrical Properties

| PARAMETER | TEST METHODS | DIMENSION | TYPICAL VALUES |
|------------------------------|--------------|-----------|--------------------|
| Dielectric constant (1 M Hz) | ASTM D 1531 | | 2.3 |
| Dissipation Factor (50 Hz) | ASTM D 1531 | | 0.0005 |
| DC Resistivity (23°C) | ASTM 257 | Ω | 5X10 ¹⁶ |
| Dielectric Strength | ASTM 149 | KV/mm | 35 |

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Do you have the safety data sheet for this product ? Please contact you service representative for one or E-mail us at : plexchem@plexchem.com.sg

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