

Crosslinkable Semiconductive Compound

#### Description

**Borlink LE0511** is a crosslinkable black polyethylene compound, specially designed for semiconductive strippable insulation screen of energy cables.

#### **Applications**

Borlink LE0511 is designed for semiconductive strippable insulation screens in medium voltage cables.

#### **Specifications**

**Borlink LE0511** meets the applicable requirements as below when processed using sound extrusion practices and testing procedures

AEIC CS8	IEC 60502-2
BS 6622	NF C33-223
ANSI/ICEA S-94-649	NF C33-226
ANSI/ICEA S-97-682	UTE C 33-223
ANSI/ICEA S-93-639	

# **Special features**

**Borlink LE0511** is a ready-to-use semiconductive compound. It provides low strip forces over a broad temperature range when used over Borealis crosslinkable polyethylene insulation compounds.

The excellent distribution of carbon black and additives in Borlink LE0511 results in a smooth semiconductive screen.

# **Physical Properties**

Property	Typical Value Data should not be used for specifi	Test Method
Density (23 °C) Tensile Strain at Break (20 In/min) <sup>1</sup> Tensile Strength (20 In/min) <sup>1</sup> Tensile Strength Retention (168 h, 136 °C) Tensile Elongation After Ageing (168 h, 136 °C) Brittleness temperature	1170 kg/m³ 250 % 11 MPa > 75 % > 100 % < -35 °C	ISO 1872-2/ISO 1183 ISO 527 ISO 527 ISO 527 ISO 527 ISO 527 ASTM D 746
<sup>1</sup> Measured on crosslinked specimens		
Electrical Properties		

Property	Typical Value Data should not be used for specifica	Test Method ation work
DC Volume Resistivity (23 °C)	< 50 Ohm.cm	ISO 3915

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DC Volume Resistivity (90 °C)

< 500 Ohm.cm

ISO 3915

# **Other properties**

Property	Typical Value Data should not be used for specifica	Test Method ation work
Cable Strip Force (90° peel)	3 - 6 kN/m	AEIC CS8

# **Processing Techniques**

Borlink LE0511 provides excellent surface finish and outstanding output rates, when processing conditions are optimized for the actual processing equipment and cable dimensions. Optimal conditions may vary according to the equipment used.

The required extrusion melt temperature range is approximately 240 to 260°F (115 to 125°C). Lower melt temperatures may result in a poorly mixed, uneven extrudate and higher melt temperatures may result in extrudate pre-cure or scorch. The feed section of the extruder should be water cooled. The curing configuration should be carefully controlled, and the maximum cable surface temperature in the curing tube should be maintained below 280°C (535 °F).

To produce a good and reliable cable, it is essential to ensure careful and clean handling of semiconductive material. Hence all material handling should preferably be conducted in closed systems. Please contact your Borealis representative for more details.

#### Extrusion

Typical processing temperature ranges for Borlink LE0511 are shown below:

Hopper drying	40 °C	With dehumidified air
Melt temperature	115 - 125 °C	

# Packaging

Package: Smallbins

# Storage

**Borlink LE0511** has a shelf life of 18 months from production date if stored in unopened original packages, under dry and clean conditions at temperatures between 10 - 30 °C (50 - 85 °F). It is suggested that first-in/first-out practices be followed.

More information on storage is found in our "Safety data sheet" / "Product safety information sheet" for this product.

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#### Safety

Please see our "Safety data sheet" / "Product safety information sheet" for details on various aspects of safety of the product. For more information, contact your Borealis representative.

#### Disclaimer

The product(s) mentioned herein are not intended to be used for medical, pharmaceutical or healthcare applications and we do not support their use for such applications.

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication, however we do not assume any liability whatsoever for the accuracy and completeness of such information.

Borealis makes no warranties which extend beyond the description contained herein. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose.

It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products.

No liability can be accepted in respect of the use of any Borealis product in conjunction with any other products and/or materials. The information contained herein relates exclusively to our products when not used in conjunction with any other material unless as specifically provided for in the test methods stated above.

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