



Polyethylene Borlink™ LE0511

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
BS 6622
ANSI/ICEA S-94-649
ANSI/ICEA S-97-682
ANSI/ICEA S-93-639

IEC 60502-2
NF C33-223
NF C33-226
UTE C 33-223

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 specification work	Test Method
Density (23 °C)	1170 kg/m ³	ISO 1872-2/ISO 1183
Tensile Strain at Break (20 In/min) ¹	250 %	ISO 527
Tensile Strength (20 In/min) ¹	11 MPa	ISO 527
Tensile Strength Retention (168 h, 136 °C)	> 75 %	ISO 527
Tensile Elongation After Ageing (168 h, 136 °C)	> 100 %	ISO 527
Brittleness temperature	< -35 °C	ASTM D 746

¹ Measured on crosslinked specimens

Electrical Properties

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

Borlink is a trademark of Borealis group.

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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 specification work	Test Method
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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 Polyethylene
Borlink LE0511**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.

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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.

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