



**Polyethylene**  
**Borlink™ LE0592**  
 Crosslinkable Semiconductive Compound

**Description**

**Borlink LE0592** is a crosslinkable black polyethylene compound, specially designed for semiconductive conductor screen and bonded insulation screen of power cables.

**Applications**

**Borlink LE0592** is intended for semiconductive screen of XLPE medium and high voltage (MV & HV) AC cables with rated voltages up to 161 kV (Um = 170 kV). It can be used as conductor and insulation screen for bonded cable constructions and as conductor screen for strippable cable constructions.

The values are voltages between phases as defined in IEC 60183.

**Specifications**

**Borlink LE0592** is expected to meet the applicable requirements included in the below mentioned standards provided it is processed using sound material handling, extrusion and crosslinking practices as well as appropriate testing procedures. This applies up to the maximum recommended voltage level indicated in "Applications" section above since some standards cover wider voltage ranges.

IEC 60840	ANSI/ICEA S-97-682
IEC 60502-2	DIN VDE 0276-620
AEIC CS9 (below 8 kV/mm)	DIN VDE 0276-632
AEIC CS8	Cenelec HD 620 S2 (Part 1)
ANSI/ICEA S-108-720	Cenelec HD 632 S1
ANSI/ICEA S-93-639	NF C33-226
ANSI/ICEA S-94-649	UL 1072

**Special Features**

**Borlink LE0592** is a ready-to-use semiconductive compound. It offers excellent thermal stability which provides robust cable extrusion and crosslinking at high surface temperature, allowing for high line speed.

The excellent distribution of carbon black and additives in Borlink LE0592 results in a smooth semiconductive screen.

**Physical Properties**

Property	Typical Value	Test Method
<small>Data should not be used for specification work</small>		
Density	1135 kg/m <sup>3</sup>	ISO 1183
Tensile Strain at Break (25 mm/min) <sup>1</sup>	> 150 %	ISO 527
Tensile Strength (25 mm/min) <sup>1</sup>	> 15 MPa	ISO 527
Change of Tensile Properties After Ageing (168 h, 135 °C) <sup>1</sup>	< 25 %	IEC 60811-401
Hot Set Test (200 °C, 0,20 MPa) <sup>1</sup>	Elongation under load < 100 %	IEC 60811-507
	Permanent deformation < 10 %	
MDR, max torque	12 dNm	ISO 6502

Borlink is a trademark of the Borealis group.

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Moisture 200 ppm ISO 15512

<sup>1</sup> Measured on crosslinked specimens

## Electrical Properties

Property	Typical Value	Test Method
	Data should not be used for specification work	
DC Volume Resistivity (23 °C)	< 100 Ωcm	ISO 3915
DC Volume Resistivity (90 °C)	< 1000 Ωcm	ISO 3915

## Processing Techniques

**Borlink LE0592** 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. Hence all material handling should preferably be conducted in closed systems and in clean room conditions. Please contact your Borealis representative for more details.

### Pre-drying

It is recommended that **Borlink LE0592** is dried prior to extrusion. Typical drying conditions are shown below:

Predrying (4 h) 60 °C With dehumidified air

### Extrusion

A screen-pack on the extruder is recommended for improved melt homogenisation. Typical processing temperature ranges for **Borlink LE0592** are shown below:

Melt temperature 120 - 135 °C

## Packaging

Package: Smallbins  
Octabins



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## Storage

**Borlink LE0592** 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).

Material shelf life is affected by the storage conditions and extreme conditions influence the general material quality and performance.

It is also recommended to ensure proper stock rotation by First In – First Out principle.

More information on storage is found in the Safety data sheet (SDS) / Product safety information sheet (PSIS) for this product.

## Safety

Please see the Safety data sheet (SDS) / Product safety information sheet (PSIS) for details on various aspects of safety, recovery and disposal of the products. 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.**

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