



Polyethylene Borlink™ LE0592S

Crosslinkable Semiconductive Compound

Description

Borlink LE0592S is a crosslinkable black polyethylene compound, specially designed for semiconductive conductor screen and bonded insulation screen of power cables.

Applications

Borlink LE0592S is intended for semiconductive screen of XLPE high voltage (HV) AC cables with rated voltages up to 230 kV (U_m = 245 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 LE0592S 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 62067	ANSI/ICEA S-97-682
IEC 60840	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 LE0592S 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 LE0592S would result in a very smooth semiconductive screen.

Physical Properties

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

Borlink is a trademark of the Borealis group.

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MDR, max torque	12 dNm	ISO 6502
Moisture	200 ppm	ISO 15512

¹ Measured on crosslinked specimens

Electrical Properties

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

Processing Techniques

Borlink LE0592S 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 LE0592S** 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 LE0592S** are shown below:

Melt temperature 120 - 135 °C

Packaging

Package: Smallbins



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Storage

Borlink LE0592S 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. The product is not classified as dangerous.

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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