02.04.2015 Ed.1

Polyethylene

Borlink™ LE0500EHV

Crosslinkable Semiconductive Compound

Description

Borlink LE0500EHV is a Supersmooth ready-to-use semiconductive compound, specially designed for semiconductive conductor screen and bonded insulation screen of energy cables.

Applications

Borlink LE0500EHV is intended for semiconductive shielding of XLPE extra high voltage (EHV) cables.

Specifications

Borlink LE0500EHV meets the applicable requirements as below when processed using sound extrusion practice and testing procedure:

AEIC CS9
ANSI/ICEA 108-720

IEC 62067

Special Features

Borlink LE0500EHV is a ready-to-use semiconductive compound. It offers excellent thermal stability which provides robust cable extrusion and crosslinking at high surface temperature. The excellent distribution of carbon black and additives in Borlink LE0500EHV results in superior smoothness of the semiconductive screen. Borlink LE0500EHV is intended as conductive shields in cables rated 400kV and above. The product is manufactured with the most stringent specification on smoothness reflected by a frequency of pips reduced by 50% compared to Borlink LE0500.

Physical Properties

Property		Typical Value Data should not be used for specification work	Test Method
Density		1120 kg/m³	ISO 1183
Tensile Strain at Break (25 mm/min) [1]		180 %	ISO 527
Tensile Strength (25 mm/min) [1]		> 15 MPa	ISO 527
Change of Tensile Properties After Ageing (168 h, 135 °C) [1]		< 20 %	IEC 60811-401
Hot Set Test (200 °C, 0,10 MPa)	Elongation under load	25 %	IEC 60811-507
	Permanent deformation	0 %	
MDR, max torque		14,6 dNm	ISO 6502
Moisture		100 ppm	Karl Fischer-titration

[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)	25 Ωcm	ISO 3915

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DC Volume Resistivity (90 °C)	50 Ωcm	ISO 3915
DC Volume Resistivity (23 °C)	25 Ωcm	ASTM D 991

Processing Techniques

Borlink LE0500EHV 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. To produce a good and reliable cable, it is essential to ensure careful and very clean handling of the semiconductive material. Hence all material handling should preferably be conducted in closed systems and in clean room conditions. Please contact your Borealis representative for more details.

Extrusion

Typical processing temperature ranges for **Borlink LE0500EHV** are shown below:

Hopper drying (4 h)	60 °C	With dehumidified air
Melt temperature	120 - 135 °C	

Packaging

Package:	Smallbins

Storage

Borlink LE0500EHV 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).

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

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.

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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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