14.06.2013 Ed.1

Polyethylene
Borlink™ LE0504

Crosslinkable Semiconductive Compound

Description

Borlink LE0504 is a crosslinkable black polyethylene compound, specially designed for semiconductive conductor shield or bonded insulation shield of energy cables.

Applications

Borlink LE0504 is designed for semiconductive shields TR-XLPE medium voltage cables. It can be used as inner and outer shield for bonded cable constructions and as inner shield for strippable cable constructions.

Specifications

Borlink LE0504 meets the applicable requirements as below when processed using sound extrusion practices and testing procedures

AEIC CS8
ANSI/ICEA S-93-639
ANSI/ICEA S-94-649
ANSI/ICEA S-97-682
IEC 60502-2
IEC 60840

Special features

Borlink LE0504 is a ready-to-use semiconductive compound. provides excellent and consistent adhesion with aluminium conductors to meet stringent shrinkback requirements.

The excellent distribution of carbon black and additives and type of carbon black in Borlink LE504 results in an outstanding smooth semiconductive shield.

Physical Properties

Property	Typical Value Data should not be used for specification work	Test Method
Density (23 °C)	1130 g/cm³	ASTM D 1928C/ D 1505
Tensile Strain at Break (20 In/min) [1]	300 %	ASTM D 638
Tensile Strength (20 In/min) [1]	2.400 psi	ASTM D 638
Retention of Tensile Properties After Ageing (168 h, 150 °C) [1]	> 75 %	ASTM D 638
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)	< 30 Ohm.cm	ASTM D 991
DC Volume Resistivity (90 °C)	< 100 Ohm.cm	ASTM D 991

Borealis Compounds Inc | 176 Thomas Road | Port Murray, NJ 07865 | United States of America
Tel. +1 908 850 6200 | Fax +1 908 850 6268
22-2768116 | Court of New Jersey | Website www.borealisgroup.com

BOREALIS

14.06.2013 Ed.1

Polyethylene
Borlink LE0504

Processing Techniques
Borlink LE0504 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 curing configuration should be carefully controlled.

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 LE0504 are shown below:

Hopper drying (4 h)	60 °C	With dehumidified air
	160 °F	With dehumidified air
Melt temperature	115 - 125 °C	
	240 - 260 °F	

Storage
Borlink LE0504 has a shelf life of 12 months from delivery 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".

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.

Borealis Compounds Inc | 176 Thomas Road | Port Murray, NJ 07865 | United States of America
Tel. +1 908 850 6200 | Fax +1 908 850 6268
22-2768116 | Court of New Jersey | Website www.borealisgroup.com

BOREALIS

14.06.2013 Ed.1

Polyethylene
Borlink LE0504

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.

Borealis Compounds Inc | 176 Thomas Road | Port Murray, NJ 07865 | United States of America
Tel. +1 908 850 6200 | Fax +1 908 850 6268
22-2768116 | Court of New Jersey | Website www.borealisgroup.com

BOREALIS