



Polyethylene
Borlink™ LE4253DC
 Crosslinkable Insulation Compound

Description

Borlink LE4253DC is a crosslinkable natural polyethylene compound based on Supercure technology, specially designed for insulation of high voltage direct current (HVDC) power cables.

Applications

Borlink LE4253DC is intended for insulation of XLPE high voltage (HV) DC cables with rated voltages up to 320 kV.

Specifications

Borlink LE4253DC is expected to meet the applicable requirements provided it is processed using sound material handling, extrusion and crosslinking practices as well as appropriate testing procedures.

Special Features

Borlink LE4253DC is a ready-to-use natural compound. Borlink LE4253DC is developed for easy extrusion and low space charge accumulation when used in combination with Borlink LE0550DC as supersmooth insulation and conductor screen. The cleanliness and product consistency of Borlink LE4253DC results in superclean insulation. Borlink LE4253DC cleanliness level is assured through the Borealis quality management system.

Physical Properties

Property	Typical Value	Test Method
Data should not be used for specification work		
Density (Base Resin)	922 kg/m ³	ISO 1183
Melt Flow Rate (190 °C/2,16 kg) ¹	2 g/10min	ISO 1133
Tensile Strain at Break (250 mm/min) ²	> 450 %	ISO 527
Tensile Strength (250 mm/min) ²	> 17 MPa	ISO 527
Change of Tensile Properties After Ageing (168 h, 135 °C) ²	< 20 %	IEC 60811-401
Hot Set Test (200 °C, 0,20 MPa) ²	Elongation under load < 175 % Permanent deformation < 15 %	IEC 60811-507
MDR, max torque	2,8 - 3,8 dNm	ISO 6502
Methanol Wash ³	< 800 ppm	BTM 00118
Moisture	< 200 ppm	ISO 15512

¹ Base Resin

² Measured on crosslinked specimens

³ BTM = Borealis Test Method

Electrical Properties

Property	Typical Value	Test Method
Data should not be used for specification work		
Dielectric constant (50 Hz)	2,3	IEC 60250
DC Volume Resistivity (23 °C)	> 10 PΩcm	IEC 62631
Dissipation Factor (50 Hz)	< 0,0003	IEC 60250

Borlink is a trademark of the Borealis group.

Borealis AG | Wagramer Strasse 17-19 | 1220 Vienna | Austria
 Telephone +43 1 224 00 0 | Fax +43 1 22 400 333
 FN 269858a | CCC Commercial Court of Vienna | Website www.borealisgroup.com





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Processing Techniques

To produce a good and reliable cable, it is essential to ensure careful and very clean handling of the insulation 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

A screen-pack on the extruder is recommended for improved melt homogenisation.

Melt temperature 125 - 135 °C

Packaging

Package: Octabins

Storage

Borlink LE4253DC has a shelf life of 24 months from production date if stored in unopened original packages, under dry and clean conditions at temperatures between 10 - 35°C (50 - 95°F). The material can be stored at ambient temperature up to 40°C (104°F) for a period up to 6 months provided it is in unopened original packages and under dry and clean conditions. Material shelf life is affected by the storage conditions and extreme conditions influence the general material quality and performance.

Before use, material shall be conditioned indoors (production room) to reach ambient temperature. 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.



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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.

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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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