## Polyethylene

# Borlink™ LE4253DC

Crosslinkable Insulation Compound

## Description

**Borlink LE4253DC** is a crosslinkable natural polyethylene compound based on Supercure technology, specially designed for insulation of energy cables.

## Applications

**Borlink LE4253DC** is intended for insulation of XLPE solid dielectric HVDC cables.

## Special Features

**Borlink LE4253DC** is a ready-to-use natural compound. The cleanliness and product consistency of Borlink LE4253DC results in Superclean insulation. Borlink LE4253DC cleanliness level is assured through the Borealis quality control system.
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.

## Physical Properties

| Property | | Typical Value<br>Data should not be used for specification work | Test Method |
|---|---|---|---|
| Density (Base Resin) | | 922 kg/m³ | ISO 1872-2/ISO 1183 |
| Bulk density | | 500 - 600 kg/m³ | |
| 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) | Elongation under load | < 175 % | IEC 60811-507 |
| | Permanent deformation | < 15 % | |
| MDR, max torque | | 2,8 - 3,8 dNm | ISO 6502 |
| Methanol Wash [3] | | < 800 ppm | BTM 00118 |
| Moisture | | < 200 ppm | Karl Fischer-titration |

[1] Base Resin
[2] Measured on crosslinked specimens
[3] BTM = Borealis Test Method

## Electrical Properties

| Property | Typical Value<br>Data should not be used for specification work | Test Method |
|---|---|---|
| Dielectric constant (50 Hz) | < 2,3 | IEC 60250 |
| DC Volume Resistivity | > 10 PΩcm | IEC 60093 |
| Dielectric Strength (50 Hz) | > 22 kV/mm | IEC 60243 |
| Dissipation Factor (50 Hz) | < 0,0003 | IEC 60250 |

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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**

| | |
|---|---|
| Melt temperature | 125 - 135 °C |

## Packaging

| | |
|---|---|
| Package: | Octabins |

## Storage

**Borlink LE4253DC** has a shelf life of 12 months from production date if stored in unopened original packages, under dry and clean conditions at temperatures between 10 - 30 °C (50 - 85 °F). The material could be stored (originally closed and in dry environment) at an ambient temperature up to 40°C for a certain period of time (6 months) without negative influence on the material quality. Before use, material shall be conditioned indoors (production room) at the ambient temperature.

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.

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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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