



## Polyethylene

# Borlink™ LH4201R

Crosslinkable Insulation Compound

### Description

**Borlink LH4201R** is a crosslinkable natural polyethylene compound, specially designed for insulation of energy cables.

### Applications

**Borlink LH4201R** is intended for insulation of XLPE power cables with rated voltages up to 72 kV. It is designed for cable constructions with bonded insulation shields.

### Specifications

**Borlink LH4201R** meets the applicable requirements as below when processed using sound extrusion practices and testing procedures

Cenelec HD 620 S1, Part 1, table 2A, DIX 3 to 14  
DIN VDE 0276-620  
GOSTR 55025-2012

IEC 60502-2  
IEC 60840

### Special Features

**Borlink LH4201R** is a ready-to-use natural co-polymer compound. It provides superior electrical performance (polymer WTR XLPE) meeting the most stringent wet ageing requirements. It offers excellent scorch resistance and long production runs. Borlink LH4201R cleanliness level is assured through the Borealis quality control system.

### Physical Properties

| Property                                                               | Typical Value                | Test Method            |
|------------------------------------------------------------------------|------------------------------|------------------------|
| Data should not be used for specification work                         |                              |                        |
| Density (Base Resin)                                                   | 924 kg/m <sup>3</sup>        | ISO 1183               |
| Melt Flow Rate (190 °C/2,16 kg) <sup>1</sup>                           | 2,8 g/10min                  | ISO 1133               |
| Tensile Strain at Break (250 mm/min) <sup>2</sup>                      | > 450 %                      | ISO 527                |
| Tensile Strength (250 mm/min) <sup>2</sup>                             | > 17 MPa                     | ISO 527                |
| Change of Tensile Properties After Ageing (168 h, 135 °C) <sup>2</sup> | < 20 %                       | IEC 60811-401          |
| Hot Set Test (200 °C, 0,20 MPa)                                        | Elongation under load<br>5 % | IEC 60811-507          |
| MDR, max torque                                                        | 3,1 - 4,1 dNm                | ISO 6502               |
| Methanol Wash <sup>3</sup>                                             | < 500 ppm                    | BTM 00118              |
| Moisture                                                               | < 200 ppm                    | Karl Fischer-titration |

<sup>1</sup> Base Resin

<sup>2</sup> Measured on crosslinked specimens

<sup>3</sup> BTM = Borealis Test Method

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](http://www.borealisgroup.com)



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### 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                          | > 10 PΩcm     | IEC 60093   |
| Dielectric Strength (50 Hz)                    | > 22 kV/mm    | IEC 60243   |
| Dissipation Factor (50 Hz)                     | 0,0005        | IEC 60250   |

### 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. Practical advice is given in a separate brochure. Please contact your Borealis representative for more details.

### Extrusion

Melt temperature 125 - 135 °C

### Packaging

Package: Octabins  
Cleantainers

### Storage

**Borlink LH4201R** 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). 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.

**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.