Polyethylene

Borlink™ LS4201S

Crosslinkable Insulation Compound

Description

Borlink LS4201S is a crosslinkable natural polyethylene compound based on Supercure technology, specially designed for insulation of energy cables.

Applications

Borlink LS4201S is intended for insulation of XLPE high voltage (HV) cables with rated voltages up to 220 kV.

Specifications

Borlink LS4201S meets the applicable requirements as below when processed using sound extrusion practices and testing procedures

AEIC CS9
HD 632 S1
IEC 60840
IEC 62067
ICEA S-108-720

Special features

Borlink LS4201S is a ready-to-use natural compound. The cleanliness and product consistency of Borlink LS4201S results in Superclean insulation. Borlink LS4201S cleanliness level is assured through the Borealis quality control system.Borlink LS4201S provides very good electrical performance. It also offers excellent scorch resistance resulting in long production runs. In addition, Borlink LS4201S is specially designed for high productivity due to a reduced degassing burden.

Physical Properties

Property		Typical Value Data should not be used for specification work	Test Method
Density (Base Resin)		922 kg/m³	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)	Elongation under load	75 %	IEC 60811-507
	Permanent deformation	5 %	
Göttfert Elastograph		0,56 - 0,67 Nm	ISO 6502
Scorch Time (t10)		> 1,0 min	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

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Electrical Properties

Property	Typical Value Data should not be used for specification work	Test Method
Dielectric constant (50 Hz)	2,3	IEC 60250
DC Volume Resistivity	> 10 POhm.cm	IEC 60093
Dielectric Strength (50 Hz)	> 30 kV/mm	IEC 60243
Dissipation Factor (50 Hz)	0,0003	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. Please contact your Borealis representative for more details.

Extrusion

Melt temperature	125 - 135 °C

Packaging

Package:	Smallbins Octabins

Storage

Borlink LS4201S 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.

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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