Polyethylene

Borlink™ LE4212

Crosslinkable Insulation Compound

Description

Borlink LE4212 is a crosslinkable natural polyethylene compound, specially designed for insulation of energy cables.

Applications

Borlink LE4212 is intended for insulation of XLPE power cables with rated voltages up to 72 kV.

Specifications

Borlink LE4212 meets the applicable requirements as below when processed using sound extrusion practices and testing procedures

AEIC CS8
BS 6622
DIN VDE 0276-620
ANSI/ICEA S-94-649
ANSI/ICEA S-97-682
ANSI/ICEA S-94-639
Cenelec HD 620 S1, Part 1, table 2A, DIX 3-14
IEC 60502-2
IEC 60840
NF C33-223
UL 1072

Special features

Borlink LE4212 is a ready-to-use natural compound. It provides improved electrical performance (additive WTR XLPE) meeting the advancesd wet ageing requirements. It offers easy extrusion performance and very good scorch resistance. Borlink LE4212 cleanliness level is assured through the Borealis quality control system.

Physical Properties

Property		Typical Value Data should not be used for specification work	Test Method
Density (Base Resin)		923 kg/m³	ASTM D 792
Melt Flow Rate (190 °C/2,16 kg) [1]		2,2 g/10min	ASTM D 1238
Tensile Strain at Break (500 mm/min) [2]		400 %	ASTM D 638
Tensile Strength (500 mm/min) [2]		17 MPa	ASTM D 638
Retention of Tensile Properties After Ageing (168 h, 136 °C)		90 %	ASTM D 638
Brittleness temperature		< -76 °C	ASTM D 746
Hot Creep Test (150 °C, 29 psi)	Elongation under load	< 75 %	ICEA T-28-562
	Permanent deformation	< 5 %	
Hot Set Test (200 °C, 0,2 MPa)	Elongation under load	< 75 %	IEC 60811-507
	Permanent deformation	< 5 %	

[1] Base Resin
[2] Measured on crosslinked specimens

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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	ASTM D 150
DC Volume Resistivity	> 10 POhm.cm	ASTM D 257
Dielectric Strength	> 21 kV/mm	ASTM D 149
Dissipation Factor (50 Hz)	0,0005	ASTM D 150

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 257 - 275 °F

Packaging

Package:	Smallbins Bulk

Storage

Borlink LE4212 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).

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.

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