Polyethylene

Visico™LE4421M / Visico™LE4431M

Description

Visico LE4421M / Visico LE4431M is a two-part silane crosslinkable insulation system, specially designed for insulation applications.

Applications

Visico LE4421M / Visico LE4431M is intended for insulation of XLPE medium voltage cables with rated voltages up to 36 kV.

Specifications

Visico LE4421M / Visico LE4431M in combination meets the applicable requirements as below when processed using sound extrusion and testing procedure:

IEC 60502-2

Cenelec HD620 S2

The standards referred to above is a selection and is not complete coverage of all applicable standards. Contact your Borealis representative for additional information.

Special Features

Visico LE4421M / Visico LE4431M is a ready-to-use two part system. It provides the following advantages:

Quick change-over for short length cables
Longer production runs between cleaning stops
Very good surface finish
Long shelf life
Low odour during processing

Physical Properties

Property		Typical Value Data should not be used for specification work	Test Method
Density (mixture 95:5)		923 kg/m³	ISO 1872-2/ISO 1183-2
Melt Flow Rate (190 °C/2,16 kg) [1]		1,0 g/10min	ISO 1133
Tensile Strain at Break (250 mm/min)		> 300 %	ISO 527
Tensile Strength (250 mm/min)		> 15 MPa	ISO 527
Change of Tensile Properties After Ageing (240 h, 135 °C)		<= 25 %	IEC 60811-401
Hot Set Test (200 °C, 0,20 MPa)	Elongation under load	60 %	IEC 60811-507
	Permanent deformation	0 %	

[1] Base Resin

HongRong Engineering Plastics Co.,Ltd.
Head Office Tel. +85-2-6957-5415
Research Center Tel.+188 1699 6168

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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 PΩcm	IEC 60093
Dielectric Strength	> 30 kV/mm	IEC 60243
Dissipation Factor (50 Hz)	< 0,0005	IEC 60250

Processing Techniques

The crosslink system is based on the use of Visico LE4421M (base material) and Visico LE4431M (catalyst masterbatch). When used in combination, Visico LE4431M would accelerate the moisture-induced crosslinking reaction of Visico LE4421M . The system is easy to use: dry blend 5 parts Visico LE4431M to 95 parts Visico LE4421M directly into the extruder hopper. 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.

Crosslinking

Can be crosslinked by immersion in hot water or exposed to low pressure steam at a temperature in typical circumstances of 70 °C. The time period needed and maximum temperature will depend on e.g. the thickness of insulation, type of semiconductive screen and reel size. It is good practice to purge stranded aluminium conductors with air or nitrogen during crosslinking to prevent conductor corrosion.

Packaging

Visico LE4421M - Base material
Package: Octabins
Visico LE4431M - Catalyst master batch
Package: Bags
Smallbins

Storage

Visico LE4421M / Visico LE4431M 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).

More information on storage is found in our "Safety data sheet" / "Product safety information sheet" for this product.

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Safety

The product is not classified as dangerous and is intended for industrial use only. Check and follow local codes and regulations!

Please see our "Safety data sheet" / "Product safety information sheet" for details on various aspects of safety, recovery and disposal of the products. For more information, contact your Borealis representative.

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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