



# Polyethylene Visico™ LE4423/LE4437

Silane Crosslinkable Insulation Compound

## Description

**Visico LE4423/LE4437** is a scorch retardant, moisture-crosslinking polyethylene compound for low voltage insulation

The combination of a VISICO base material, **LE4423**, and a tin catalyst masterbatch, **LE4437**, provides a highly scorch retardant compound with excellent thermal stability. **LE4423/LE4437** contains a patented scorch retardant additive (SRA) that increases the processing window for a moisture crosslinking compound and minimizes the tendency for premature crosslinking in the extruder, head or die.

**LE4437** should be added to **LE4423** directly in the extruder hopper by dry blending a ratio of 5 parts **LE4437** to 95 parts **LE4423**. **LE4437** also provides, in addition to catalyst, a stabilizaton package containing suitable antioxidants, a metal passivator and a metal deactivator. Properly mixed, during the extrusion process, **LE4423/LE4437** exhibits excellent thermal stability to oxidation.

**LE4423/LE4437** is readily pigmented to a variety of colors using standard wire & cable concentrates designed for thermoplastic or crosslinked polyethylene. UV weather resistance is obtained by the addition of a suitable carbon black or UV additive. Using VISICO **LE4432** in place of **LE4437** combines a tin catalyst along with the proper carbon black to provide a black, UV resistant, moisture crosslinking cable insulation.

## Specifications

**Visico LE4423/LE4437** meets the applicable requirements as below when processed using sound extrusion practice and testing procedure:

Underwriters Laboratories Standards 854 for types USE and USE-2	EC 502
Canadian Standards Association C22.2 No. 1790-00-Airport Series Lighting Cables and C22.2 No. 38 Cable Type RW-90 Outdoor	NBN C 33-321
ASTM D 2655	NF C33-210
	HD 603 S1
	NF C32-090

Contact your Borealis representative for additional information.

## Physical Properties

Property	Typical Value	Test Method
	Data should not be used for specification work	
Density (Base Resin)	923 kg/m <sup>3</sup>	ASTM D 792
Density (Masterbatch)	0,941 kg/m <sup>3</sup>	ASTM D 792
Melt Flow Rate (190 °C/2,16 kg) <sup>1</sup>	0,9 g/10min	ASTM D 1238
Tensile Strain at Break	300 %	ASTM D 412
Tensile Strength	2.140 psi	ASTM D 412



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Tensile Strength	15 MPa	
Retention of Tensile Properties After Ageing (168 h, 121 °C)	>= 90 %	
Hot Creep Test (150 °C, 0,20 MPa)	Elongation under load Permanent deformation	<= 50 % <= 5 %

ICEA T-28-562

<sup>1</sup> Base Resin

### Electrical Properties

Property	Typical Value	Test Method
	Data should not be used for specification work	
Dielectric constant (60 Hz)	2,3	ASTM D 150
DC Volume Resistivity	10 POhm.cm	ASTM D 257
Dielectric Strength	> 550 V/mil	ASTM D 149
Dielectric Strength	> 22 kV/mm	
Dissipation Factor (60 Hz)	0,00005	ASTM D 150

### Processing Techniques

Following parameters should be used as guidelines:

Most equipment designed for PVC or PE extrusion is equally suitable for LE4423/LE4437. Typically the following process conditions should be used as a starting point to achieve a stable extrusion process. On-size pressure or low draw down tube-on tooling is recommended for a cable having a smooth glossy appearance. Whichever type of tooling is used, however, the die should hve parallel lands of a length approximately twice that of the final cable diameter.

Typically the following process conditions are used:

Barrel 1	146 °C 295 °F
Barrel 2	155 °C 310 °F
Barrel 3	163 °C 325 °F
Barrel 4	171 °C 340 °F
Die head	177 °C 350 °F



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## Packaging

- Base material

Package: Smallbins

Package: Octabins

- Catalyst master batch

Package: Smallbins

## Storage

**Visico LE4423/LE4437** 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".

## 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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