



PolyethyleneTM

VisicoTM 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 stabilizer 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 ³	ASTM D 792
Density (Masterbatch)	0,941 kg/m ³	ASTM D 792
Melt Flow Rate (190 °C/2,16 kg) ¹	0,9 g/10min	ASTM D 1238
Tensile Strain at Break	300 %	ASTM D 412
Tensile Strength	15 MPa	

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Retention of Tensile Properties After Ageing (168 h, 121 °C)	>= 90 %	
Hot Creep Test (150 °C, 0,20 MPa)	Elongation under load <= 50 %	ICEA T-28-562
	Permanent deformation <= 5 %	

¹ Base Resin

Electrical Properties

Property	Typical Value Data should not be used for specification work	Test Method
Dielectric constant (60 Hz)	2,3	ASTM D 150
DC Volume Resistivity	10 POhm.cm	ASTM D 257
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
Barrel 2	155 °C
Barrel 3	163 °C
Barrel 4	171 °C
Die head	177 °C

Packaging

- Base material
Package: Smallbins

Package: Octabins
- Catalyst master batch
Package: Smallbins

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Visico LE4423/LE4437**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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