Visico™ LE4421/LE4460/ LE4437

Polyethylene

Borealis AG

Message:

Visico LE4421/LE4460/LE4437 is a scorch retardant, moisture-crosslinking polyethylene compound for low voltage insulation
LE4421/LE4460/LE4437 is a natural, moisture-induced crosslinking polyethylene compound that is designed for use as low voltage wire insulation and jacketing. The combination of a VISICO LE4421 base resin, along with the LE4460 brominated flame retardant masterbatch and the LE4437 catalyst, provides a highly scorch retardant compound with excellent thermal stability and good retardant flame properties. LE4421/LE4460/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.
A finished compound that is composed of 75 parts of LE4421 mixed with 20 parts of LE4460 and 5 parts of LE4437 is recognized by Underwriters Laboratories as VISICO HORIZONTAL. VISICO HORIZONTAL is designed to reduce normal PE flame spread characteristics and achieve an HB-1 flame rating on 14 AWG wires and larger. LE4437 also provides, in addition to catalyst, a stabilization package containing suitable antioxidants, a metal passivator and a metal deactivator. Properly mixed, during the extrusion process, LE4421/LE4460/LE4437 exhibits excellent thermal stability to oxidation.
LE4421/LE4460/LE4437 is readily pigmented to a variety of colors using standard wire & cable color 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.

General Information	
Features	Flame Retardant Good Thermal Stability Good UV Resistance
Uses	Cable Jacketing Wire & Cable Applications Wire Jacketing
Agency Ratings	ASTM D 2655 EC 502 HD 603 S1 NBN C 33-321 NF C 33-210 UL 44 UL 854

Physical	Nominal Value	Unit	Test Method
Specific Gravity			ASTM D792
Base Resin	0.923	g/cm³	
Yellow	0.941	g/cm³	
-- [1]	2.00	g/cm³	
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.90	g/10 min	ASTM D1238
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (Yield)	16.5	MPa	ASTM D412

Tensile Elongation (Break)	300	%	ASTM D412
Aging	**Nominal Value**	**Unit**	**Test Method**
Mechanical Properties After Aging in Air Oven, 121°C, 168 hr (Change in Tensile Strength)	< -10	%	IEC 60811
Thermal	**Nominal Value**	**Unit**	**Test Method**
Hot Set [2]			ICEA T-28-562
Elongation under load : 150°C	< 50	%	
Permanent deformation : 150°C	< 5.0	%	
Horizontal Flame Test [3]	PASS		
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	1.0E+16	ohms·cm	ASTM D257
Dielectric Strength	> 22	kV/mm	ASTM D149
Dielectric Constant (60 Hz)	2.50		ASTM D150
Dissipation Factor (60 Hz)	5.0E-4		ASTM D150
Extrusion	**Nominal Value**	**Unit**	
Cylinder Zone 1 Temp.	146	°C	
Cylinder Zone 2 Temp.	163	°C	
Cylinder Zone 3 Temp.	171	°C	
Cylinder Zone 4 Temp.	171	°C	
Die Temperature	177	°C	
NOTE			
1.	Masterbatch		
2.	0.20 MPa		
3.	14 AWG-30 mil		

Recommended distributors for this material

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