

Visico™ ME4425/Ambicat™ LE4472

Crosslinked Polyethylene

Borealis AG

Message:

Visico ME4425 / Ambicat LE4472 is a silane crosslinkable black compound designed for covering/insulation of overhead cables. The base material Visico ME4425 in combination with the catalyst masterbatch Ambicat LE4472 will accelerate the moisture-induced crosslinking reaction. The system is highly active and crosslinks quickly at ambient conditions, in sauna or in hot water. When properly mixed, addition of 7 parts of Ambicat LE4472 to 93 parts of Visico ME4425 , insulation with excellent thermo-oxidative stability, also in contact with copper as well as aluminium, is achieved. The final product will contain nominal 2,5% of fine size carbon black ensuring excellent weatherability. Visico ME4425 / Ambicat LE4472 contains antioxidant, metal deactivator and a drying agent. Visico ME4425 contains a permanent scorch retardant additive, ensuring safe processing and enabling the use of highly active crosslinking catalyst. Visico ME4425 / Ambicat LE4472 in combination meets the applicable requirements as below when processed using sound extrusion and testing procedure:

ANSI/ICEA S-70-547
ASTM D 1248 Type II, Class C, Category 4
HD 626 S1 (TIX-2, TIX-4, TIX-6, TIX-9)
HD 603 S1
NEMA WC 70
NEMA WC 71
IEC 60502-1

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

General Information	
Additive	Antioxidant
	Carbon Black (3%)
	Metal Deactivator
	Scorch Resistant
Features	Antioxidant
	Crosslinkable
	Fast Cure
	Good Processability
	Good Stability
	Good Surface Finish
	Good Thermal Stability
	Good Weather Resistance
	Low Die Swell
Uses	Oxidation Resistant
	Cable Jacketing
Agency Ratings	Insulation
	ANSI/ICEA S-70-547
	ASTM D 1248, I, Class A, Cat. 4

HD 603 S1
IEC 60502-1
NEMA WC-70 , WC-71

Appearance	Black		
Forms	Pellets		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Density ¹	0.940	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.0	g/10 min	ISO 1133
Environmental Stress-Cracking Resistance (50°C, 10% Igepal, F20)	> 96.0	hr	IEC 60811-4-1/B
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D, 1 sec)	55		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Yield)	> 20.0	MPa	ISO 527-2/250
Tensile Strain (Break)	> 300	%	ISO 527-2/250
Aging	Nominal Value	Unit	Test Method
Change in Tensile Stress (135°C, 240 hr)	< 25	%	IEC 60811-1-2
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -76.0	°C	ASTM D746
Hot Set			IEC 60811-2-1
200°C ²	60	%	
200°C ³	0.0	%	
Crosslinking			
23°C, 700.0 µm ⁴	1.5	day	
23°C, 1.80 mm ⁵	7.0	day	
90°C, 700.0 µm ⁶	< 15.0	min	
90°C, 1.80 mm ⁷	1.00	hr	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 1.0E+16	ohms·cm	IEC 60093
Electric Strength	> 20	kV/mm	IEC 60243-1
Dielectric Constant (50 Hz)	< 2.50		IEC 60250
Dissipation Factor (50 Hz)	< 6.0E-4		IEC 60250
Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	150	°C	
Cylinder Zone 2 Temp.	185	°C	
Cylinder Zone 3 Temp.	185	°C	
Cylinder Zone 4 Temp.	185	°C	
Melt Temperature	190 to 195	°C	
Die Temperature	185	°C	
NOTE			

1.	Mixture 95:5, ISO 1872-2
2.	Elongation under load, 0.20 MPa
3.	Permanent deformation, 0.20 MPa
4.	In air, 50 % humidity
5.	In air, 50 % humidity
6.	Sauna or water bath
7.	Sauna or water bath

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