# Borealis PE LE0563

### Polyethylene

**Borealis AG** 

#### Message:

LE0563 is a thermoplastic semiconductive compound specifically designed for medium- high and extra-high voltage cable systems requiring improved grounding. It may be used either as a complete jacket or as a thin layer extruded on top of the regular jacket. This compounds permits easy diagnostic testing of the cable to ensure jacket conformity, allowing confirmation of fault-free cable before and after installation. It provides excellent mechanical properties, superior environmental stress crack resistance and good electrical conductivity. Due to the semiconductive properties, it will also provide added protection against lightning.

Specifications :

LE0563 meets the applicable requirements as below when processed using sound extrusion practice and testing procedure:

IEC 60502, Type ST7 IEC 60840, Type ST7 IEC 62067, Type ST7 ICEA S-94-649, Type 1 ICEA S-108-720, Type 1 ICEA S-108-720, Type 2 Features: LE0563 provides excellent environmental stress crack resistance and good electrical conductivity.

General Information			
Features	Electrically Conductive		
	High ESCR (Stress Crack Resist.)		
	Semi Conductive		
Uses	Cable Jacketing		
Agency Ratings	ICEA S-108-720 Type 1		
	ICEA S-108-720 Type 2		
	ICEA S-94-649 Type 1		
	IEC 60502 Type ST7		
	IEC 60840 Type ST7		
	IEC 62067 Type ST7		
Appearance	Black		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Density	1.06	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)			ISO 1133
190°C/2.16 kg	0.20	g/10 min	
190°C/21.6 kg	30	g/10 min	
Environmental Stress-Cracking Resistance			
(50°C, 10% Igepal, F0)	> 2000	hr	ASTM D1693
Moisture Content <sup>1</sup>	400	ppm	
Change in Tensile Properties - 240 hr	25	0 <i>/</i>	150 00011 1 2
(100°C)	< 25	%	IEC 60811-1-2

Hardness	Nominal Value	Unit	Test Method
Shore Hardness			ISO 868
Shore D, 1 sec	58		
Shore D, 3 sec	55		
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Yield)	16.0	MPa	ISO 527-2/25
Tensile Strain (Break)	560	%	ISO 527-2/25
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity			ISO 3915
23°C	25	ohms·cm	
90°C	50	ohms·cm	
Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	180	°C	
Cylinder Zone 2 Temp.	190	°C	
Cylinder Zone 3 Temp.	200	°C	
Cylinder Zone 4 Temp.	210	°C	
Melt Temperature	215 to 245	°C	
Die Temperature	210	°C	
NOTE			
1.	Karl Fischer-titration, 1000 ppm		

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