

Thermoplastic Semiconductive Jacketing Compound

Description

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

Special features

LE0563 provides excellent environmental stress crack resistance and good electrical conductivity.

Physical Properties

Property	Typical Value Data should not be used for	Test Method specification work
Density (Compound)	1055 kg/m³	ISO 1183
Melt Flow Rate (190 °C/21,6 kg)	30 g/10min	ISO 1133
Melt Flow Rate (190 °C/2,16 kg)	0,2 g/10min	ISO 1133
Tensile Strain at Break (25 mm/min) 1	560 %	ISO 527
Tensile Strength (25 mm/min) ¹	16 MPa	ISO 527
Change of Tensile Properties After Ageing (240 h, 110 °C)	< 25 %	IEC 60811-401
Environmental Stress Crack Resistance (50 °C) (Igepal 10	> 2.000 h	ASTM D 1693
%), (F0) ¹ Hardness, Shore D (1 s) ¹	58	ISO 868
Hardness, Shore D (3 s) ¹	55	ISO 868
Moisture	400 ppm	Karl Fischer-titration
Pressure Test at High Temperature (110 °C, 6 h) ¹	< 5 %	IEC 60811-508
1 Management and second statements		

¹ Measured on moulded plaques.

Electrical Properties

Property	Typical Value Test Method Data should not be used for specification work	
DC Volume Resistivity (23 °C) ¹	25 Ohm.cm	ASTM D 991
DC Volume Resistivity (90 °C) ¹	50 Ohm.cm	ASTM D 991

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¹ Measured on moulded plaques.

Processing Techniques

To produce a good and reliable cable, it is essential to ensure careful and very clean handling of the jacketing material. Please contact your Borealis representative for more details.

Predrying

It is recommended that LE0563 is dried prior to extrusion. Typical drying conditions are shown below:

Predrying (4 h)

70°C

With dehumidified air

No screw cooling

Optimum DC volume resistivity and mechanical properties could be obtained by maximizing cooling water temperature or distance between cooling water and die head.

Extrusion

Typical processing temperature ranges for LE0563 are shown below:

180 °C
356 °F 190 °C
374 °F
200 °C
392 °F
210 °C
410 °F
210 °C
410 °F
210 °C
410 °F
215 - 245 °C
419 - 473 °F

Packaging

Package: Smallbins

Safety

The product is not classified as dangerous and is intended for industrial use only. Check and follow local codes and regulations!

Please see our "Safety data sheet" / "Product safety information sheet" for details on various aspects of safety of the product. For more information, contact your Borealis representative.

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