

Polyethylene

LE0572

Thermoplastic Semiconductive Compound

Description

LE0572 is a thermoplastic black polyethylene compound, specially designed for semiconductive strippable insulation screen of power cables.

Applications

LE0572 is intended for semiconductive strippable insulation screens for silane crosslinkable medium voltage (MV)AC cables with rated voltages up to 36 kV (Um = 42 kV).

The values are voltages between phases as defined in IEC 60183.

Specifications

LE0572 is expected to meet the applicable requirements included in the below mentioned standards provided it is processed using sound material handling and processing practices as well as appropriate testing procedures.

IEC 60502-2

HD 620 S2 Part 1

This applies up to the maximum recommended voltage level indicated in "Applications" section above since some standards cover wider voltage ranges.

Physical properties

Property	Typical value *	Unit	Test method
Density	1140	kg/m ³	ISO 1183-1
Moisture content	<500	ppm	EN ISO 15512
Tensile strain at break (25 mm/min) ¹	>150	%	ISO 527-2
Tensile stress at break (25 mm/min) ¹	>10	MPa	ISO 527-2

* Data should not be used for specification work

¹ Measured on crosslinked specimens

Electrical properties

Property	Typical value *	Unit	Test method
DC Volume resistivity (23°C) ²	<100	Ωcm	ISO 3915
DC Volume resistivity (90°C)	<2000	Ωcm	ISO 3915

* Data should not be used for specification work

² Borealis Test Method; BTM20864

Processing techniques

LE0572 provides excellent surface finish when processing conditions are optimal. The actual conditions will depend on the type of equipment used. To produce a good and reliable cable, it is essential to ensure careful and very clean handling of the semiconductive material. Hence all material handling should preferably be conducted in closed systems and in clean room conditions. Practical advice is given in a separate brochure. Please contact your Borealis representative for more details.

Extrusion

A screen-pack on the extruder is recommended for improved melt homogenisation.

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Packaging and storage

LE0572 has a shelf life of 18 months from production date if stored in unopened original packages, under dry and clean conditions at temperatures between 10 - 30 °C (50 - 85 °F). Material shelf life is affected by the storage conditions and extreme conditions influence the general material quality and performance.

It is also recommended to ensure proper stock rotation by First In – First Out principle.

More information on storage is found in the Safety data sheet (SDS) / Product safety information sheet (PSIS) for this product.

Product compliance documents

Latest versions of product safety information sheets (PSIS), product safety data sheets (SDS) and other product liability documents are available in our website www.borealisgroup.com.

Sustainability aspects

Borealis is ever mindful of the impact of our products on the planet. We promote Design for Circularity (DfC) and Design for Recycling (DfR) to conserve natural resources and to reduce the environmental impact of products over their entire lifetime (including production, use phase and after phase). DfR helps ensure that material can be effectively recycled while maximizing the material performance efficiency. Further information on sustainability and Design for Recycling (DfR) can be found from our websites www.borealisgroup.com and www.borealiseverminds.com.

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