

Polyethylene

Borlink™ LE7710

Thermoplastic Semiconductive Compound

Description

Borlink LE7710 is a thermoplastic black polyethylene compound, specially designed for semiconductive screen of power cables.

Borlink LE7710 is a ready-to-use black compound. The good distribution of carbon black and additives in Borlink LE7710 provides a chemically clean and smooth semiconductive screen.

Applications

Borlink LE7710 is intended for semiconductive screens in 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

Borlink LE7710 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.

ISO 1872-E/BA KHX Y 23-G200, C40

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	1135	kg/m ³	ISO 1183
Tensile strain at break (25 mm/min)	> 150	%	ISO 527
Tensile strength (25 mm/min)	> 10	MPa	ISO 527
Moisture content ¹	< 300	ppm	ISO 15512

* Data should not be used for specification work

¹ Measured at time of production

Electrical properties

Property	Typical value *	Unit	Test method
DC Volume resistivity (23°C)	< 100	Ωcm	ISO 3915
DC Volume resistivity (90°C)	< 1000	Ωcm	ISO 3915

* Data should not be used for specification work

Processing techniques

Borlink LE7710 provides excellent surface finish and outstanding output rates, when processing conditions are optimized for the actual processing equipment and cable dimensions. Optimal conditions may vary according to the equipment used. A screen-pack on the extruder is recommended for improved melt homogenisation. Typical processing temperature ranges for Borlink LE7710 are shown below:

Processing setting	Typical value/range
Drying temperature ²	60 °C
Melt temperature	120 - 185 °C

² 4 h with dehumidified air

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Packaging and storage

Packaging

Smallbins and Octabins

Storage

Borlink LE7710 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.

Disclaimer

The product(s) mentioned herein are not intended to be used for medical, pharmaceutical or healthcare applications and we do not support their use for such applications.

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