Polyethylene
LE6006

Description
LE6006

It is a low loss LDPE compound for coaxial cables. LE6006 contains a special type of antioxidant, which does not adversely affect the electrical properties.

Applications
LE6006 is intended for:

Bamboo constructed cables
Coaxial cables
Inner skin of radio frequency cables
Telephone wires

Specifications
LE6006 meets the following material classification:

ISO 1872-PE, KGHN, 18-D003
ASTM D 1248 Type I, Class A, Category 5, Grade E4, E5

The following cable material standards are met by LE6006:

EN 50290-2-23 [1]
DIN VDE 0207, 2YI3

[1] Appropriate parts

Cables manufactured with LE6006 using sound extrusion practice normally comply with the following cable product standards:

IEC 61196
EN 50117

Special features
LE6006 consists of specially selected components to offer:

Low dielectrical loss
Smooth surface
Excellent surface finish
High output

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Physical Properties

Property	Typical Value Data should not be used for specification work	Test Method
Density	918 kg/m³	ISO 1183
Melt Flow Rate (190 °C/2,16 kg)	0,3 g/10min	ISO 1133
Tensile Strain at Break (50 mm/min)	600 %	ISO 527
Tensile Strength (50 mm/min)	15 MPa	ISO 527
Brittleness temperature	< -76 °C	ASTM D 746
Environmental Stress Crack Resistance (50 °C) (Igepal 100 %), (F20)	> 96 h	IEC 60811-406
Hardness, Shore D (1 s)	50	ISO 868

Electrical Properties

Property	Typical Value Data should not be used for specification work	Test Method
Dielectric constant (1 MHz)	2,29	IEC 60250
DC Volume Resistivity	10 POhm.cm	IEC 60093
Dielectric Strength	22 kV/mm	IEC 60243
Dissipation Factor (1 MHz)	0,00008	IEC 60250

Processing Techniques

The actual conditions will depend on the type of equipment used.

For extrusion of solid coaxial cables it is recommended to use gradient cooling to minimise the risk of contraction-void formation.

For normal extrusion equipments and applications we suggest a melt temperature and a conductor preheating according to table below.

Tooling

Pressure tooling is invariably required. Typically "on size" die diameters are used.

Extrusion

Barrel	150 - 210 °C
Die head	200 °C
Melt temperature	180 - 220 °C
Conductor preheating temperature	80 - 100 °C

Please contact your local Borealis representative for specific assistance.

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Packaging

Package: Bags
Bulk
Octabins

Safety

Check and follow local codes and regulations!

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

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.

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication; however we do not assume any liability whatsoever for the accuracy and completeness of such information.

Borealis makes no warranties which extend beyond the description contained herein. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose.

It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products.

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