



Polyethylene

ME1244

Compound for Cellular insulation of Communication cables

Description

ME1244

It is a fully formulated compound for chemical foamed telesingles.
ME1244 is a medium-density polyethylene compound containing chemical blowing agent.

Applications

ME1244 is intended for:

Foam or foam-skin insulation for telephone singles with typical expansion of 35-40%.
Dry core and petroleum jelly filled cables

Specifications

ME1244 meets the following material classification:

ISO 1872-PE, KEGHN, 33-D006 ¹
ASTM D 1248 Type II, Class A, Category 4 ¹

¹ Refers to Base Resin

The following cable material standards are met by ME1244:

EN 50290-2-23

Cables manufactured with ME1244 using sound extrusion practice normally comply with the following cable product standards:

IEC 60708

EN 50407

Special Features

ME1244 consists of specially selected components to offer:

Outstanding extrusion stability
Good surface finish
Consistent cell structure



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Physical Properties

Property	Typical Value	Test Method
Data should not be used for specification work		
Density (Base Resin)	934 kg/m ³	ISO 1183-1, Method A
Density (Compound)	937 kg/m ³	ISO 1183-1, Method A
Bulk density	500 - 600 kg/m ³	
Tensile Strain at Break (50 mm/min)	500 %	ISO 527-2
Tensile Strength (50 mm/min)	11 MPa	ISO 527-2
Hardness, Shore D (1 s)	60	ISO 868

For information on the influence of petroleum jelly please refer to the article published on borealisgroup.com : "Impact of Petroleum Jelly on the Ageing of Telephone Wire", by going to the following link
http://www.borealisgroup.com/pdf/literature/borealis/technical-article/1112Impact_of_Petroleum_Jelly_on_the_Ageing_of_Telephone_Wire_Final.pdf

Physical Properties of expanded (35 %) insulation

Property	Typical Value	Test Method
Data should not be used for specification work		
Tensile Strength (50 mm/min),	11 MPa	IEC 60811-501
Tensile Strain (50 mm/min),	500 %	IEC 60811-501
Oxidation Induction Time (200 °C),	50 min	IEC 60811-410
Resistance to Thermal Ageing (105 °C)	1.500 h	IEC 60811-408

Electrical Properties

Property	Typical Value	Test Method
Data should not be used for specification work		
Dielectric constant (1 MHz) ¹	2,31	IEC 60250
Dissipation Factor (1 MHz)	0,0005	IEC 60250

¹ Measured on moulded plaques containing blowing agent but not expanded



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Processing Techniques

ME1244 can be processed over a wide range of conditions.

The adoption of correct processing conditions is important to obtain the optimum physical and electrical properties of the insulated wire. The melt temperature depends on the desired capacitance. The melt temperature should be kept within a close tolerance within +/- 1°C.

Conductor preheating is important for the insulation mechanical properties and to ensure good adhesion to the conductor

Tooling

Pressure tooling is invariably required. The die diameter is a function of the level of expansion with a greater expansion requiring a smaller die. Typically die diameters 5-10% below the nominal insulation outer diameter are used.

Extrusion

Adapter	195 °C
Barrel 1	155 °C
Barrel 2	170 °C
Barrel 3	185 °C
Barrel 4	195 °C
Die	195 °C
Melt temperature	195 - 200 °C
Conductor preheating temperature	100 - 120 °C

Please contact your local Borealis representative for specific assistance.

Packaging

Package:	Bags
	Bulk
	Octabins



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Storage

ME1244 should be stored in dry conditions at temperatures below 50°C and protected from UV-light.

Safety

The product is not classified as dangerous. 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.

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