

PRODUCT DATA SHEET

05.10.2016 Ed.3

 Polyethylene
HE4873**Description**
HE4873

It is a fully formulated compound for physical foamed data cable insulation. HE4873 is a high-density polyethylene compound containing blowing agent for the production of foam or foam-skin insulation.

Applications

HE4873 is designed to use as physically foamed insulation for:

Data cables

Specifications

HE4873 meets the following material classification:

ISO 1872-PE, KEGHN, 45-D045

ASTM D1248 Type III, Class A, Category 3, Grade E1, E3

The following cable material standards are met by HE4873:

EN 50290-2-23 ¹

¹ Appropriate parts

Cables manufactured with HE4873 using sound extrusion practice normally comply with the following cable product standards:

IEC 61156
EN 50288

Special Features

HE4873 consists of specially selected components to offer:

Optimal cell structure
Smooth surface
Low plate out
Easy extrusion
High process control
Improved crushability

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Physical Properties

Property	Typical Value	Test Method
Data should not be used for specification work		
Density	946 kg/m ³	ISO 1183-1, Method A
Bulk density	500 - 600 kg/m ³	
Melt Flow Rate (140 °C/5 kg)	3,8 g/10min	ISO 1133-1, Method A
Tensile Strain at Break	600 %	ISO 527-2
Tensile Strength	23 MPa	ISO 527-2
Brittleness temperature	< -76 °C	ASTM D 746
Hardness, Shore D (1 s)	61	ISO 868

Processing Techniques

HE4873 can be processed over a wide range of conditions. The construction, extruder size and setup of gas injection system all play important roles for selection of proper processing conditions including the extruder temperature profile.

At the gas injection point, a temperature of approximately 185-190°C is recommended for optimal activation of the cell nucleating agent, which is of the exothermic type. Specific recommendations for processing conditions can be determined only when the application and type of equipment are known.

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 20 to 25% below the nominal insulation outer diameter are used.

Typical extrusion temperatures

Screw cooling	120°C
Zone 1	165°C
Zone 2	180°C
Zone 3	185°C
Gas Injection	
Zone 4	175°C
Zone 5	170°C
Flange	190°C
Adapter	200°C
Head	200°C
Die	220°C

Please contact your local Borealis representative for specific assistance.

Borealis AG | Wagramer Strasse 17-19 | 1220 Vienna | Austria
 Telephone +43 1 224 00 0 | Fax +43 1 22 400 333
 FN 269858a | CCC Commercial Court of Vienna | Website www.borealisgroup.com

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Package: Bags
 Bulk
 Octabins

Storage

HE4873 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.

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