

 **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 <sup>1</sup>

<sup>1</sup> 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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**HE4873**

**Physical Properties**

Property	Typical Value	Test Method
	<small>Data should not be used for specification work</small>	
Density	946 kg/m <sup>3</sup>	ISO 1183-1, Method A
Bulk density	500 - 600 kg/m <sup>3</sup>	
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.



# Polyethylene HE4873

## Packaging

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

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