

**Polyolefins****Borcell™ HE1106****High Density Polyethylene Compound for Gas Injection of Cellular Insulation****Description**

HE1106 is a fully formulated high-density polyethylene compound intended for insulation of communication cables using gas injection.

The components in **HE1106** are selected to give the lowest possible dielectric loss by the selection of electrically clean feedstock and strict cleanliness requirements during production and materials handling. A small amount of a special nucleating agent is incorporated in the formulation to give uniform cell structure in the foamed insulation.

Applications

HE1106 is designed for the insulation of coaxial cables using a gas injection foaming process. Using optimised-processing conditions, the product is suitable for expansion up to 80%.

Specifications

HE1106 meets the applicable requirements as below when processed using sound extrusion practice and testing procedure:

- ASTM D 1248 Type III, Category 3
- ISO 1872-PE, KGHN, 50-D090

Physical Properties

		Typical Value*	Unit	Test Method
Density		950	kg/m ³	ISO 1872-2-B/ISO 1183-D
Melt Flow Rate	(140°C, 5 kg)	7.5	g/10 min	ISO 1133
Elongation	(50 mm/min)	300	%	ISO 527
Durometer Hardness	(3 sec)	60	Shore D	ISO 868

Electrical Properties

		Typical Value*	Unit	Test Method
Dielectric Loss:	1 MHz	0.00006	-	IEC 60250
	1.8 GHz	0.00010	-	Internal
Dielectric Constant:	1 MHz	2.34	—	IEC 60250
	1.8 GHz	2.34	—	Internal

* Data should not be used for specification work

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Polyolefins

Borcell™ HE1106

Processing Guidelines

HE1106 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 the proper processing conditions including the extruder temperature profile.

At the gas injection point a temperature of approximately 190°C is recommended for optimal activation of the cell nucleating agent, which is of the blowing agent type.

More specific recommendations for processing conditions can be determined only when the application and type of equipment are known. Please contact your local Borealis representative for such particulars.

Delivery

Form: Granules
Package: 25 kg bags - 1.375 Ton loads
1050 kg Octabins
Bulk

Safety

HE1106 is not classified as a dangerous preparation. Material does not contain any substance classified as hazardous in concentrations, which should be taken into account according to EC directives.

The product is supplied in form of free-flowing granules of approximately 3 - 4 mm sizes and can be readily handled with commercially available equipment. Handling and transport of the product may generate some dust and fines, which constitute a potential hazard for dust explosion. All metal parts in the system should therefore be properly grounded. Properly designed equipment and good housekeeping will reduce the risk. Check and follow local codes and regulations!

Inhalation of any type of dust should be avoided as it may cause irritation of the respiratory system.

The product is intended for industrial use only. A Safety Data Sheet is available on request. Please contact your Borealis representative for more details on various aspects of safety, recovery and disposal of the product.

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