Polyethylene

Borstar® ME3444

Blue Medium Density Polyethylene for Drinking Water Pipes

Description

Borstar ME3444 is a blue, bimodal, medium density polyethylene classified as a MRS 8.0 material (PE80) produced with the advanced Borstar technology. A combination of pigments and stabilisers is included which ensures excellent long-term thermal stability and UV-resistance. It also shows excellent resistance to rapid crack propagation and slow crack growth.

Applications

Borstar ME3444 is recommended for pressure pipe systems in the application fields of drinking water.

Physical Properties

		Typical Value*	Unit	Test Method
Density		943	kg/m^3	ISO 1183
Melt Flow Rate	(190°C/5.0 kg)	0.9	g/10 min	ISO 1133
Tensile Stress at Yield		19	MPa	ISO 527-2
Tensile Modulus		800	MPa	ISO 527-2
Thermal Stability	(210°C)	> 20	min	EN 728
Resistance to Slow Crack Growth	(8 bar, 80°C)	> 2000	h	ISO 13479
Resistance to Rapid Crack Propagation (S4 test, Pc at 0°C, Test pipe 110 mm, SDR 11)		> 6	bar	ISO 13477

* Data should not be used for specification work.

Processing guidelines

The actual extrusion conditions will depend on the type of equipment used and the size and wall thickness of the pipe required. The following conditions may be used as a guideline when starting up the extruder.

Cylinder	180 - 210°C
Head	200 - 210°C
Die	200 - 210°C
Melt Temperature	200 - 220°C

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.

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Storage and handling

ME3444 should be stored in dry conditions at temperatures below 50ºC and protected from UV-light.

Improper storage can initiate degradation, which results in odour generation and colour changes and can have negative effects on the physical properties of the product.

Safety

Borstar ME3444 is not classified as dangerous preparation.

Dust and fines from the product carry a risk of dust explosion. All equipment should be properly earthed.

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

Small amounts of fumes are generated during processing of the product. Proper ventilation is therefore required.

Recycling

For the manufacture of water pipes only clean reprocessable material generated from the manufacturer's own production of pipes may be used if it is derived from the same compound as used for the relevant production and if approved in the relevant standard or specification.
Waste material may be recycled into the manufacture of other products provided that the manufacturer respects the appropriate product specifications and regulations.

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.

Related documents

The following related documents are available on request, and represent various aspects on the usability, safety, recovery and disposal of the product.

Recovery and disposal of Polyolefins
Information on Emissions from Processing and Fires
Safety Data Sheet, SDS
Environmental Fact Sheet

Liability statements on:

- Compliance to Regulations for Drinking Water Pipes

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