



Polyethylene Borstar[®] ME3440

Black Medium Density Polyethylene Compound for Pressure Pipes

Description

Borstar ME3440 is a black, bimodal medium density polyethylene compound classified as a MRS 8.0 material (PE80), with an optimum balance between flexibility and strength, produced with the advanced Borstar technology. Well dispersed carbon black gives outstanding UV resistance. Long-term stability is ensured by an optimised stabilisation system.

Applications

Borstar ME3440 is recommended for pressure pipe systems in the application fields of drinking water, natural gas, pressure sewerage, relining, sea outfall and industrial, particularly where flexibility and coilability is of importance. It also shows excellent resistance to rapid crack propagation and slow crack growth. Thanks to the structure, it gives outstanding extrudability, compared to conventional PE80 products.

Physical Properties

		Typical Value*	Unit	Test Method
Density	(Compound)	951	kg/m ³	ISO 1183
Melt Flow Rate	(190°C/5.0 kg)	0.85	g/10 min	ISO 1133
Tensile Stress at Yield	(50 mm/min)	19	MPa	ISO 527-2
Tensile Modulus	(1 mm/min)	800	MPa	ISO 527-2
Elongation at Break		> 600	%	ISO 527-2
Carbon Black content		≥ 2.0	%	ASTM D 1603
Thermal Stability	(200°C)	> 20	min	EN 728
Resistance to slow crack growth	(8.0 bar, 80°C)	> 5000	h	ISO 13479
Resistance to rapid crack propagation		> 7	Bar	ISO 13477

(Pc at 0°C, S4 test / pipe size 250mm SDR11)

* 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 should be used as a guide when starting up the extruder.

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

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Borealis A/S

Parallevej 16
DK-2800 Kongens Lyngby (Denmark)
Telephone: +45 45 96 60 00
Fax : +45 45 96 61 23
www.borealisgroup.com



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For normal extrusion conditions and applications we advise preheating and drying with a maximum preheating temperature of 90°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.

Storage and handling

Borstar ME3440 should be stored in dry conditions at temperatures below 50°C and protected from UV-light.

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

Safety

Borstar ME3440 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

The product is suitable for recycling using modern methods of shredding and cleaning. In-house production waste should be kept clean to facilitate direct recycling.

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
- Compliance to Food Regulations
- Heavy Metals
- Chemicals and Certain Regulations and Norms



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