Polyethylene

BorSafe™ HE3490-LS-H

Black High Density Polyethylene compound for pressure pipes

Description

BorSafe HE3490-LS-H is a bimodal polyethylene compound produced by the advanced Borstar technology.

The product contains a combination of pigments and stabilizers to ensure excellent long-term stability and UV-resistance.

BorSafe HE3490-LS-H is classified as an MRS 10.0 material (PE100).

Applications

BorSafe HE3490-LS-H is recommended for:

Drinking water
Natural gas
Pressure sewerage
Corrugated pipes
Relining
Sheets and profiles
Industrial
Co-extrusion of layers for pressure pipes
Glass fibre ducts
Cable protection pipes

Specifications

BorSafe HE3490-LS-H is intended to fulfill following International standards, when appropriate industrial manufacturing standard procedures are applied and a continuous quality system is implemented.

EN 12201
ISO 4427
EN ISO 15494
EN 1555
ISO 4437

It is especially designed for the production of larger diameter, thick wall pipe, but can be processed for the whole range of diameters. It shows excellent resistance to rapid crack propagation. The product is a high-density hexene copolymer compound with an outstanding resistance to slow crack growth and used for non-conventional pipe installation technologies, like No Dig. **BorSafe HE3490-LS-H** is tested in accordance with PAS 1075 and classified as PE100-RC material.

Physical Properties

Property	Typical Value Data should not be used for specification work	Test Method
Density (Compound)	960 kg/m³	ISO 1183-1, Method A
Melt Flow Rate (190 °C/5,0 kg)	0,25 g/10min	ISO 1133
Tensile Modulus (1 mm/min)	1.100 MPa	ISO 527-2
Tensile Strain at Break (50 mm/min)	> 600 %	ISO 527-2
Tensile Stress at Yield (50 mm/min)	25 MPa	ISO 527-2
Carbon black content	2 - 2,5 %	ISO 6964
Carbon black dispersion	< 3	ISO 18553

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Oxidation Induction Time (210 °C),	> 20 min	ISO 11357-6
Resistance to rapid crack propagation (S4 test, Pc at 0 °C, Test pipe 250 mm, SDR11)	> 10 bar	ISO 13477
Resistance to slow crack growth / Strain Hardening Modulus	> 65 MPa	ISO 18488

Processing Techniques

The actual conditions will depend on the type of equipment used.

Extrusion

Cylinder	190 - 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. For normal conditions and applications we suggest preheating and drying. Please contact your local Borealis representative for such particulars.

Storage

BorSafe HE3490-LS-H shall be stored indoors below 50°C in unopened original packaging in clean and dry environment. It is recommended to ensure proper stock rotation by using first in – first out principle.
Following afore-mentioned conditions the material can safely be stored for a period of up to 2 years after production. However, caution shall be taken regarding the moisture level. It is recommended to measure the moisture after longer storage periods prior to processing.

Safety

The product is not classified as dangerous.

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.

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.

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Issuer:
Marketing Consumer Products / Norbert Jansen
Product Management / Christian Merz

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.

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication; however we do not assume any liability whatsoever for the accuracy and completeness of such information.

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