Polyethylene
BorSafe™ HE3490-DS-H

Black High Density Polyethylene compound for pressure pipes

Description

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

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

Applications

BorSafe HE3490-DS-H is recommended for pressure pipe systems in the applications field of:

Drinking water
Pressure sewerage
Relining
Sea outfall
Industrial

It is especially designed for the production of larger diameter, thick wall pipe, but can be processed for the whole range of diameters. It also shows excellent resistance to rapid crack propagation and slow crack growth. It also exhibits an improved resistance to chlorinated water disinfectants.

Physical Properties

Property	Typical Value Data should not be used for specification work	Test Method
Density [1]	960 kg/m³	ISO 1183A
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	> 500 %	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
Oxidation Induction Time (210 °C),	> 20 min	ISO 11357-6
Environmental Stress Crack Resistance (80 °C, Arkopal 2 %, 4 MPa)	> 8.760 hrs	ISO 16770
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 (9,2 bar, 80 °C)	> 5.000 hrs	ISO 13479

[1] Compound

Processing Techniques

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

Extrusion

Cylinder	190 - 210 °C
Die	200 - 210 °C
Head	200 - 210 °C
Melt temperature	200 - 220 °C

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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-DS-H should be stored in dry conditions at temperatures below 50°C and protected from UV-light. Improper storage can initiate degradation, and can have negative effects on the physical properties of this product.

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.

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.

Borealis makes no warranties which extend beyond the description contained herein. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose.

It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products.

No liability can be accepted in respect of the use of any Borealis product in conjunction with any other products and/or materials. The information contained herein relates exclusively to our products when not used in conjunction with any other material unless as specifically provided for in the test methods stated above.

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