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PRODUCT DATA SHEET

Polyethylene

BorSafe™ HE3470-LS

Black High Density Polyethylene compound for pressure pipes

Description

BorSafe HE3470-LS is a bimodal polyethylene compound produced by the advanced Borstar technology.

The product is a high-density polyethylene compound in pellet form and contains a combination of stabilizers and carbon black to ensure a reliable long-term stability and UV-resistance.
BorSafe HE3470-LS is classified as a MRS 8.0 material (PE80).

Applications

BorSafe™ HE3470-LS is intended for following applications:

Cable protection pipes
Corrugated pipes
District heating
Drinking water
Industrial applications
Irrigation pipes
Natural gas
Pressure sewerage
Relining
Sea outfall

Specifications

BorSafe™ HE3470-LS is expected to meet the applicable requirements included in the below mentioned standards provided it is processed using sound material handling and processing practices as well as appropriate testing procedures.

EN 12201
EN 1555
EN ISO 15494
ISO 4427
ISO 4437

The product is a high-density butene copolymer compound with an outstanding resistance to slow crack growth. It shows excellent resistance to rapid crack propagation. Thanks to the molecular structure, it offers outstanding extrudability and good melt strength, supporting a problem-free extrusion process to tight tolerances.

Physical properties

Property	Typical value *	Unit	Test method
Density	957	kg/m³	ISO 1183-1/Method A
Melt flow rate (190 °C/5 kg)	0.30	g/10min	ISO 1133-1
Resistance to gas condensate	pass	-	EN1555-1
Resistance to rapid crack propagation (S4 test, Pc at 0°C, Test pipe 250mm, SDR11)	3	bar	ISO 13477
Oxidation induction time (210 °C)	≥20	min	
Carbon black content	2.0 - 2.5	% Weight	ISO 6964
Resistance to slow crack growth (8 bar 80 °C)	>2000	h	ISO 13479
Tensile modulus (1 mm/min)	1000	MPa	ISO 527-2
Tensile strain at break (50 mm/min)	>600	%	ISO 527-2
Tensile stress at yield (50 mm/min)	22	MPa	ISO 527-2

* Data should not be used for specification work

Processing techniques

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

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Processing setting	Typical value/range
Cylinder temperature	190 - 210 °C
Head temperature	200 - 210 °C
Die temperature	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.

Packaging and storage

BorSafe HE3470-LS 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.

Product compliance documents

Latest versions of product safety information sheets (PSIS), product safety data sheets (SDS) and other product liability documents are available in our website www.borealisgroup.com.

Sustainability aspects

Borealis is ever mindful of the impact of our products on the planet. We promote Design for Circularity (DfC) and Design for Recycling (DfR) to conserve natural resources and to reduce the environmental impact of products over their entire lifetime (including production, use phase and after phase). DfR helps ensure that material can be effectively recycled while maximizing the material performance efficiency. Further information on sustainability and Design for Recycling (DfR) can be found from our websites www.borealisgroup.com and www.borealiseverminds.com.

Regional Availability

Europe

South America

North America

For information on regional availability please contact Borealis Sales 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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