



Polyethylene BorSafe™ HE3490-IM-W

Black High Density Polyethylene compound for pressure pipes

Description

BorSafe™ HE3490-IM-W 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-IM-W is classified as an MRS 10.0 material (PE100).

Applications

BorSafe HE3490-IM-W is recommended for pressure pipe systems and especially designed for the injection moulding of fittings in the application field of:

Drinking Water
District Heating
Sheets and profiles

Industrial
Gas
Cable protection pipes

Specifications

BorSafe HE3490-IM-W is intended to fulfil following standards and regulations, in case of appropriate industrial manufacturing standard procedures applied and a continuous quality system is implemented.

EN 12201
EN 1555
EN ISO 15494
ISO 4427

ISO 4437

BorSafe HE3490-IM-W provides an improved performance level in terms of drinking water related requirements such as migration limits. The sensoric properties like taste and odour are regularly monitored for the compound to ensure a high constant level of quality.

BorSafe HE3490-IM-W is a high-density hexene copolymer compound with a high resistance to slow crack growth and with an optimal balance between mouldability and physical strength. Fittings are easily welded to PE80 and PE100 using conventional fusion methods such as butt fusion-welding, electro fusion-welding and socket-welding.

Physical Properties

Property	Typical Value	Test Method
Density (Compound)	959 kg/m ³	ISO 1872-2/ISO 1183
Melt Flow Rate (190 °C/5,0 kg)	0,47 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

BorSafe is a trademark of the Borealis group.

www.borealisgroup.com



Polyethylene

BorSafe HE3490-IM-W

Tensile Stress at Yield (50 mm/min)	24 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
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)	> 500 h	ISO 13479
Resistance to gas condensate	Pass	EN1555-1

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-IM-W 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 aforementioned 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. Please see our "Safety data sheet" / "Product safety information sheet" for details on various aspects of recovery and disposal of the product.



Polyethylene
BorSafe HE3490-IM-W

Issuer:

Marketing Pipe / Norbert Jansen
Product Management / Robert Mwasaru

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.