

Polyethylene

BorSafe™ ME3441**Yellow PE80 Medium Density Polyethylene compound for pressure pipes****Description**

BorSafe ME3441 is a bimodal polyethylene compound produced by the advanced Borstar technology.

It is a readymade compound, including a carefully selected combination of pigments and stabilizers to ensure excellent long-term thermal stability and UV-resistance for limited outdoors storage of the final product.

BorSafe ME3441 is classified as an MRS 8.0 material (PE80).

Applications

BorSafe™ ME3441 is intended for following applications:

Gas distribution

Co-extrusion of layers for pressure pipes

Natural gas

BorSafe ME3441 is recommended for pressure pipe systems in the application fields above.

Specifications

BorSafe ME3441 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 1555

ISO 4437

Pipe wall thickness $e < 22,7$ mm; MOP ≤ 5 bar

The material shows excellent mechanical toughness and crack resistance also at lower temperatures. 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	945	kg/m ³	ISO 1183-1/Method A
Melt flow rate (190 °C/5 kg)	0.80	g/10min	ISO 1133-1
Oxidation induction time (210 °C)	≥ 30	min	ISO 11357-6
Resistance to weathering ≥ 7 GJ/m ²	Pass	Pass	EN 1555-1
Resistance to slow crack growth (8 bar 80 °C)	> 2000	h	ISO 13479
Moisture content ¹	≤ 300	ppm	ISO 15512
Pigment dispersion	≤ 3	-	ISO 18553
Tensile stress at yield (50 mm/min)	20	MPa	ISO 527
Tensile modulus (1 mm/min)	800	MPa	ISO 527-2
Tensile strain at break	> 600	%	ISO 527-2
Resistance to gas condensate	Pass	-	EN1555-1

¹ Karl Fischer-titration

* 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	180 - 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 ME3441 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 be stored for a period of up to 3 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

North America

South 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.