



Polyethylene

Borstar® HE6062A

Black Bimodal High Density Polyethylene Jacketing Compound for Energy Cables

Description

Borstar HE6062A is a black high density (HD) jacketing compound, which is produced with the Borealis proprietary Borstar bimodal process technology.

Borstar technology allows the manufacturing of polymers outside the traditional MFR and density range making it possible to optimize processability, reduce shrinkage and yet provide excellent physical toughness and environmental stress crack resistance (ESCR).

Borstar HE6062A contains carbon black to provide good weathering performance.

Applications

Borstar HE6062A is designed for jacketing of energy cables.

The physical toughness and very low water permeability of the compound make it an ideal solution especially for buried power cables. Borstar HE6062A offers a balance of properties giving advantages in manufacturing, installation and lifetime performance of energy and communication cables.

Specifications

Borstar HE6062A meets the following material classification:

ISO 1872-PE, KCHL, 45 D-006

ASTM D 1248 Type III, Class C, Category 4, Grade E8, E9, J4, W8,9

The following cable material standards are met by Borstar HE6062A:

EN 50290-2-24
DIN VDE 0207, Type 2YM3DMP 2
DMP 5, 7, 8, 9, 10, 11, 12, 14, 15

Cables manufactured with Borstar HE6062A using sound extrusion practice normally comply with the following cable product standards:

DIN VDE 0818
EN 187105
HD 603 S1, DMP 1, 2, 5, 7, 8
HD 632 S2, ST7
IEC 60502, Part 2, Type ST7IEC 60708
IEC 60794
IEC 60840, Type ST7
HD 620 S2, Part 1, table 4B, DMP 2, 8-12, 14-15, 17
UL 1072 Oil resistance I & II

Special Features

Borstar HE6062A consists of specially selected components to offer:

Superior processability
Excellent environmental stress cracking resistance (ESCR)
Excellent abrasion & scratch resistance
Low water permeability
Termite resistanceLow heat deformation
Good UV resistance
Low shrinkage
Excellent surface hardness

Borstar is a registered trademark of the Borealis group.

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Physical Properties

Property	Typical Value	Test Method
Data should not be used for specification work		
Density (Compound)	959 kg/m ³	ISO 1183-1, Method A
Density (Base Resin)	949 kg/m ³	ISO 1183-1, Method A
Melt Flow Rate (190 °C/2,16 kg)	0,05 g/10min	ISO 1133-1, Method A
Melt Flow Rate (190 °C/5 kg)	0,25 g/10min	ISO 1133-1, Method A
Flexural Modulus	1.200 MPa	ISO 178
Tensile Strain at Break (50 mm/min)	> 500 %	ISO 527-2
Tensile Strength (50 mm/min)	36 MPa	ISO 527-2
Retention of Tensile Strength after Ageing (48 h, 100 °C)	> 75 %	ISO 527-2
Retention of Elongation after Ageing (48 h, 100 °C)	> 75 %	ISO 527-2
Absorption coefficient, at 375 nm (abs/m)	320	ASTM D3349
Heat distortion (110 °C)	< 30 %	ICEA T-27-581/NEMA
Environmental Stress Crack Resistance (50 °C, Igepal 10 % ₁ , F0) ¹	> 7.000 h	IEC 60811-406
Hardness, Shore D (1 s)	61	ISO 868
Pressure Test at High Temperature (115 °C, 6 h)	< 10 %	IEC 60811-508
PENT	> 8.760 h	ASTM F1473

¹ No crack

Processing Techniques

Borstar HE6062A provides excellent surface finish and allows a broad processing window. Borstar HE6062A is suitable for most equipment designed for PVC/PE extrusion. To minimise shrink back gradient cooling with hot water, minimum 60°C in the first part of the cooling trough, is strongly recommended.

Extrusion

If preheating and/or drying is used, the maximum temperature should be 90°C.

Melt temperature	200 - 220 °C	
Cooling water	60 °C	Minimum Temperature First part of cooling trough

Packaging

Package: Octabins

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Borstar HE6062A**Safety**

The product is not classified as dangerous and is intended for industrial use only. Check and follow local codes and regulations!

Please see our "Safety data sheet" / "Product safety information sheet" for details on various aspects of safety 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.