

# Polyethylene Borstar® HE6062

Black Bimodal High Density Polyethylene Jacketing Compound for Energy and Communication Cables

## Description

**Borstar HE6062** 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 HE6062 contains 2.5% well-dispersed carbon black in order to ensure excellent weathering resistance.

## Applications

**Borstar HE6062** is designed for:

Jacket for energy and communication cables

The physical toughness and very low water permeability of the compound make it an ideal solution especially for buried power cables. Borstar HE6062 offers a balance of properties giving advantages in manufacturing, installation and lifetime performance of energy and communication cables.

## Specifications

**Borstar HE6062** 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 HE6062:

EN 50290-2-24

DMP 2, 5, 7, 8, 9, 10, 11, 12, 14, 15

DIN VDE 0207 Type 2YM3

Cables manufactured with Borstar HE6062 using sound extrusion practice normally comply with the following cable product standards:

IEC 60502, Part 2, Type ST7

HD 632 S1 ST7

IEC 60708

DIN VDE 0818

IEC 60840, Type ST7

HD 620 S2, Part 1, table 4B, DMP 2, 8-12, 14-15, 17

IEC 60794

UL 1072 Oil resistance I & II

EN 187105

HD 603 S1 DMP 1, 2, 5, 7, 8

## Special features

**Borstar HE6062** consists of specially selected components to offer:

Superior processability

Excellent abrasion & scratch resistance

Excellent environmental stress cracking resistance (ESCR)

Low water permeability

Borstar is a registered trademark of Borealis group.



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## Borstar HE6062

Low heat deformation  
Termite resistance  
Outstanding UV resistance

Low shrinkage  
Excellent surface hardness

### Physical Properties

Property	Typical Value	Test Method
Data should not be used for specification work		
Density (Base Resin)	946 kg/m <sup>3</sup>	ISO 1872-2/ISO 1183
Density (Compound)	958 kg/m <sup>3</sup>	ISO 1872-2/ISO 1183
Melt Flow Rate (190 °C/2,16 kg)	0,5 g/10min	ISO 1133
Melt Flow Rate (190 °C/5 kg)	2,0 g/10min	ISO 1133
Flexural Modulus	1.000 MPa	ISO 178
Tensile Strain at Break (50 mm/min)	1.000 %	ISO 527
Tensile Strength (50 mm/min)	33 MPa	ISO 527
Brittleness temperature	< -76 °C	ASTM D 746
Environmental Stress Crack Resistance (50 °C) (Igepal 10 %), (F0) <sup>1</sup>	> 5.000 h	IEC 60811-4-1/B
Hardness, Shore D ( 1 s)	61	ISO 868
Hardness, Shore D ( 3 s)	60	DIN 53505
Pressure Test at High Temperature (115 °C, 6 h)	< 10 %	IEC 60811-3-1

<sup>1</sup> No crack

### Electrical Properties

Property	Typical Value	Test Method
Data should not be used for specification work		
DC Volume Resistivity	10 POhm.cm	IEC 60093
Dielectric Strength	20 kV/mm	IEC 60243

### Processing Techniques

Borstar HE6062 provides excellent surface finish and allows a broad processing window. Borstar HE6062 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.

Preheating	90 °C	Maximum recommended temperature
Melt temperature	180 - 190 °C	
Cooling water	60 °C	First part of cooling trough Minimum Temperature



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## Packaging

Package:           Bulk  
                      Octabins  
                      Bags

## 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.

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