

Borstar® HE6063

High Density Polyethylene

Borealis AG

Message:

Borstar HE6063 is a natural, UV-stabilised, colourable, bimodal 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 HE6063 contains a well dispersed UV-stabiliser in sufficient amount providing a measure of weathering resistance. In order to fully utilise the unique low shrink properties of Borstar HE6063 we recommend the use of non-warping colour masterbatches.

The physical toughness and very low water permeability of the compound make it an ideal solution especially for buried power cables. Borstar HE6063 offers a balance of properties giving advantages in manufacturing, installation and lifetime performance of communication and energy cables.

Borstar HE6063 meets the applicable requirements as below when processed using sound extrusion practice and testing procedure:

ASTM D 1248 Type III, Class A, Category 4, Grade E9, J5

BS 6234: Type H03, TS2

DIN 57818/VDE 0818

EN 50290-2-24

D 620 S1, Part 1, table 4B, DMP 5, 13, 16

IEC 60502, Type ST7

IEC 60840, Type ST7

ISO 1872-PE, KHLN, 45 D-006

NF C32-060

General Information	
Additive	UV stabilizer
Features	Moisture resistance
	High ESCR (Stress Cracking Resistance)
	Good UV resistance
	Workability, good
	Good coloring
	Good wear resistance
	Scratch resistance
	Good weather resistance
	Good toughness
	Low shrinkage
	High hardness
Uses	Communication Cable Jacketing
	Cable sheath
	Wire and cable applications
Agency Ratings	ASTM D 1248, II, Class A, Cat. 4, Grade E9 , J5
	BS 6234 Type H03 TS2
	EN 50290-2-24
	HD 620 S1 Part 1, table 4B, DMP 5, 13, 16
	ICEA S-61-402

IEC 60502 Type ST7

IEC 60840 Type ST7

NF C 32-060

Appearance	Natural color		
Forms	Particles		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Density ¹ (Base Resin)	0.946	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)			ISO 1133
190°C/2.16 kg	0.50	g/10 min	ISO 1133
190°C/5.0 kg	2.0	g/10 min	ISO 1133
Environmental Stress-Cracking Resistance (Condition B, 50°C, 10% Igepal, F0)	> 5000	hr	IEC 60811-4-1/B
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			
Shaw D, 1 sec	61		ISO 868
Shaw D, 3 seconds	60		DIN 53505
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Yield)	35.0	MPa	ISO 527-2/50
Tensile Strain (Break)	900	%	ISO 527-2/50
Flexural Modulus	850	MPa	ASTM D790
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -76.0	°C	ASTM D746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	10	ohms · cm	IEC 60093
Dielectric Strength	70	kV/mm	IEC 60243-1
Additional Information	Nominal Value	Unit	Test Method
Pressure Test ² (115°C)		%	IEC 60811-3-1
Extrusion	Nominal Value	Unit	
Melt Temperature	180 - 190	°C	
Extrusion instructions			
Preheating: 90 °CCooling water: 60 °C			
NOTE			
1.	ISO 1872-2		
2.	at high temperature, 6 hrs		

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