Borstar® LE8706

Linear Low Density Polyethylene

Borealis AG

Message:

Borstar LE8706 is a natural colourable linear low density (LLD) 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 LE8706 contains a well dispersed UV-stabiliser in sufficient amount providing a measure of weathering resistance.

The abrasion resistance combined with low coefficient of friction makes it ideally suitable for the jacketing of energy and communication cables. Borstar LE8706 offers a balance of properties giving advantages in manufacturing, installation and lifetime performance of communication and energy cables. Borstar LE8706 meets the applicable requirements as below when processed using sound extrusion practice and testing procedure: ASTM D 1248 Type I, Class A, Category 4, Grade E4, E5, J3

DMP 5, 6, 13, 16, 18 EN 50290-2-24 IEC 60502, Part 2, Type ST7 IEC 60840, Type ST7 HD 603 S1 DMP 6

HD 620 S2 Part 1, table 4B

General Information	
Additive	UV stabilizer
Features	Low density
	Low friction coefficient
	High ESCR (Stress Cracking Resistance)
	Good UV resistance
	Workability, good
	Good coloring
	Good wear resistance
	Good weather resistance
	Good toughness
	Low shrinkage
	Low or no water absorption
Uses	Communication Cable Jacketing
	Cable sheath
	Wire and cable applications
Agency Ratings	ASTM D 1248, I, Class A, Cat. 4, Grade E4 , E5, J3
	EN 50290-2-24
	HD 603 S1 DMP 6
	IEC 60502-2 Type ST7
	IEC 60840 Type ST7
Appearance	Natural color

Forms	Particles		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Density ¹ (Base Resin)	0.920	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.70	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	52		ISO 868
Shaw D, 3 seconds	50		DIN 53505
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Break)	28.0	MPa	ISO 527-2/50
Tensile Strain (Break)	800	%	ISO 527-2/50
Flexural Modulus	400	MPa	ASTM D790
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -76.0	°C	ASTM D746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+16	ohms·cm	IEC 60093
Dielectric Strength	> 20	kV/mm	IEC 60243-1
Dielectric Constant (1 MHz)	2.30		IEC 60250
Dissipation Factor (1 MHz)	1.5E-4		IEC 60250
Additional Information	Nominal Value	Unit	Test Method
Pressure Test ² (115°C)		%	IEC 60811-3-1
Extrusion	Nominal Value	Unit	
Drying Temperature	90.0	°C	
Hopper Temperature	150	°C	
Die Temperature	190	°C	
Extrusion instructions			
Metering section: 170°CPreheating: 90°C			
NOTE			
1.	ISO 1872-2		
2.	at high temperature, 6 hrs		

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