

Borealis PP HE4872

High Density Polyethylene

Borealis AG

Message:

It is a HDPE compound for solid insulation of symmetric data cable at high extrusion speed.

HE4872 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 E8, E9

EN 50288

EN 50290-2-23

ISO 1872-PE, KHN, 45-D006

General Information			
Features	Lower die-out expansion		
	Fast molding cycle		
	Good liquidity		
	Good adhesion		
	Excellent appearance		
Uses	Foam		
	Communication wire insulation material		
Agency Ratings	ASTM D 1248, III, Class A, Cat. 4, Grade E8 , E9		
	EN 50288		
	EN 50290-2-23		
	ISO 1872 PE KHN 45D006		
Forms	Particles		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Density ¹	0.945	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.70	g/10 min	ISO 1133
Environmental Stress-Cracking Resistance (50°C, 10% Igepal, F20)	> 80.0	hr	IEC 60811-4-1/B
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 15 sec)	58		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Yield)	20.0	MPa	ISO 527-2
Tensile Strain (Yield)	> 600	%	ISO 527-2
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -76.0	°C	ASTM D746
Oxidation Induction Time (200°C)	> 60	min	IEC 60811-4-2/B

Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+16	ohms·cm	IEC 60093
Dielectric Constant (1 MHz)	2.33		IEC 60250
Dissipation Factor (1 MHz)	7.0E-5		IEC 60250
Extrusion	Nominal Value	Unit	
Melt Temperature	220 - 250	°C	
Extrusion instructions			
Conductor Preheating Temperature: 100 to 120°C Cooling Water Temperature, first part of the cooling trough: 30 to 50°C			
NOTE			
1.	ISO 1872-2		

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