

Petrothene® LR686001

High Density Polyethylene
LyondellBasell Industries

Message:

Applications:
PETROTHENE LR686001 is designed for use as insulation for foam/skin telephone singles, and is a natural, expandable, high density polyethylene compound containing a chemical blowing agent. LR686001 is highly stabilized to ensure OIT retention and thermal stability during processing, oven aging, and in pedestal testing. This product contains a processing aid and a metal deactivator to prevent degradation from copper while the cable is in service. Manufacturing advancements have improved dispersion of the chemical blowing agent in LR686001, resulting in superior cellular structure in the expanded insulation. The improved cellular structure may result in decreased spark failures and increased foaming level.

General Information			
Additive	Foaming agent		
	Processing aid		
	Metal deactivator		
Features	Can foam		
	Thermal stability, good		
Uses	Telephone insulator		
	Wire and cable applications		
Agency Ratings	ASTM D 1248, III, Class A, Cat. 4, Grade E9		
	FED L-P-390C, Type II, Class H, Category 4, Grade 1		
	REA PE-89		
Appearance	Natural color		
Forms	Particle		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Density	0.948	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.80	g/10 min	ASTM D1238
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
Yield, molding	20.7	MPa	ASTM D638
Fracture, molding	24.8	MPa	ASTM D638
Tensile Elongation (Break, Compression Molded)	800	%	ASTM D638
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-76.0	°C	ASTM D746
Electrical	Nominal Value	Unit	Test Method

Volume Resistivity	1.0E+20	ohms · cm	ASTM D257
Dielectric Constant (1 MHz)	2.35		ASTM D150
Dissipation Factor (1 MHz)	2.6E-4		ASTM D150

Additional Information

The value listed as Dielectric Constant, ASTM D150, was tested in accordance with ASTM D1531. The value listed as Dissipation Factor, ASTM D150, was tested in accordance with ASTM D1531.

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	149 - 163	°C
Cylinder Zone 2 Temp.	177 - 204	°C
Cylinder Zone 3 Temp.	204 - 213	°C
Cylinder Zone 4 Temp.	210 - 216	°C
Adapter Temperature	210 - 216	°C
Melt Temperature	210 - 216	°C
Die Temperature	210 - 216	°C

Extrusion instructions

Wire Preheat: 270 to 280°F

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