

Petrothene® LR590001

High Density Polyethylene

LyondellBasell Industries

Message:

PETROTHENE LR590001 is designed as primary insulation for telephone singles. LR590001 is a high density resin designed for low shrinkback after extrusion. Antioxidant has been added to ensure thermal stability during processing. The resin also contains a metal deactivator to prevent degradation from copper while the cable is in service.

General Information			
Additive	Antioxidant		
	Metal Deactivator		
Features	Antioxidant		
	Low Shrinkage		
Uses	Telephone Insulation		
	Wire & Cable Applications		
Agency Ratings	ASTM D 1248, III, Class A, Cat. 4, Grade E8		
	ASTM D 1248, III, Class A, Cat. 4, Grade E9		
	FED L-P-390C, Type II, Class H, Category 4, Grade 1		
	REA PE-22		
	REA PE-39		
Forms	Pellets		
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
Environmental Stress-Cracking Resistance (100% Igepal, Compression Molded, F0)	48.0	hr	ASTM D1693
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
Yield, Compression Molded	21.7	MPa	
Break, Compression Molded	16.2	MPa	
Tensile Elongation (Break, Compression Molded)	590	%	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+18	ohms·cm	ASTM D991
Dielectric Constant (1 MHz)	2.33		ASTM D1531
Dissipation Factor (1 MHz)	7.0E-5		ASTM D1531
Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	149 to 163	°C	
Cylinder Zone 2 Temp.	177 to 204	°C	
Cylinder Zone 3 Temp.	204 to 232	°C	
Cylinder Zone 4 Temp.	246 to 260	°C	
Adapter Temperature	246 to 260	°C	
Melt Temperature	246 to 260	°C	
Die Temperature	246 to 260	°C	

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