

LyondellBasell Petrothene[®] LR686001 High Density Polyethylene

Category : Polymer , Thermoplastic , Polyethylene (PE) , HDPE , High Density Polyethylene (HDPE), Extruded

Material Notes:

ApplicationsPETROTHENE 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.**Processing Techniques**LR686001, like other thermoplastic polyolefin compounds, can be extruded as wire and cable insulation using a conventional extruder. Below are suggested extrusion conditions for LR686001. These conditions are intended as general guidelines, not optimum values, since manufacturing variables such as extruder type and size have an effect on processing of thermoplastic compounds.**Industry Specifications**LR686001 meets the requirements of the following: ASTM D 1248, Type III, Class A, Category 4, Grade E9; Federal LP 390C, Type II, Class H, Category 4, Grade 1; REA PE-89.

Order this product through the following link:

http://www.lookpolymers.com/polymer_LyondellBasell-Petrothene-LR686001-High-Density-Polyethylene.php

Physical Properties	Metric	English	Comments
Density	0.948 g/cc	0.0342 lb/in ³	ASTM D1505
Melt Flow	0.80 g/10 min	0.80 g/10 min	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	24.8 MPa	3600 psi	ASTM D638
Tensile Strength, Yield	20.7 MPa	3000 psi	ASTM D638
Elongation at Break	800 %	800 %	ASTM D638

Thermal Properties	Metric	English	Comments
Brittleness Temperature	<= -76.1 Â°C	<= -105 Â°F	F₅₀; ASTM D746

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+20 ohm-cm	1.00e+20 ohm-cm	ASTM D991
Dielectric Constant	2.35	2.35	ASTM D1531
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dissipation Factor	0.00026	0.00026	ASTM D1531
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Electrical Properties	Metric	English	Comments
Processing Properties	Metric	English	Comments
Feed Temperature	149 - 163 Â°C	300 - 325 Â°F	
Zone 2	177 - 204 Â°C	350 - 400 Â°F	
Zone 3	204 - 213 Â°C	400 - 415 Â°F	
Zone 4-x	210 - 216 Â°C	410 - 420 Â°F	
Adapter Temperature	210 - 216 Â°C	410 - 420 Â°F	
Die Temperature	210 - 216 Â°C	410 - 420 Â°F	
Melt Temperature	210 - 216 Â°C	410 - 420 Â°F	

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