Technical Data Sheet

Petrothene LR686001

W&C Polyolefin Compound

Product Description

Petrothene LR686001 is selected by customers 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.

Petrothene LR686001 meets the requirements of the following: ASTM D 1248, Type III, Class A, Category 4, Grade E9; Federal LP390C, Type II, Class H, Category 4, Grade 1; REA PE-89.

Regulatory Status

For regulatory compliance information, see *Petrothene* LR686001 Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

Status	Commercial: Active
Availability	North America
Application	Wire & Cable
Market	Wire & Cable
Processing Method	Wire & Cable

Typical Properties	Nominal Value	English Units	Nominal Value	SI Units	Test Method
Physical					
Melt Flow Rate, (190 °C/2.16 kg)	0.80	g/10 min	0.80	g/10 min	ASTM D1238
Density, (23 °C)	0.948	g/cm³	0.948	g/cm³	ASTM D1505
Mechanical					
Tensile Stress at Break	3600	psi	24.8	MPa	ASTM D638
Tensile Stress at Yield	3000	psi	20.7	MPa	ASTM D638
Tensile Elongation at Break	800	%	800	%	ASTM D638
Thermal					
Low Temperature Brittleness, F_{50}	<-105	°F	<-76	°C	ASTM D746
Electrical					
Volume Resistivity	1 x 10^{20}	ohm*cm	1 x 10^{20}	ohm*cm	ASTM D257
Dielectric Constant, 1 MHz	2.35		2.35		ASTM D150
Dissipation Factor, 1 MHz	0.00026		0.00026		ASTM D150

Manufacturer website: https://www.lyondellbasell.com/en/

Notes

These are typical property values not to be construed as specification limits.

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Petrothene LR686001, like other thermoplastic polyolefin resins, can be extruded using a conventional extruder. Below are suggested extrusion conditions for *Petrothene* LR686001. These conditions are intended as general guidelines only, and are not optimum values, since manufacturing variables such as extruder type and size have an effect on processing of thermoplastic resins.

Extruder Zone	Temperature Range	Extruder Zone	Temperature Range
Wire Preheat	270 - 280 °F (132 - 138 °C)	Zone 4-X	410 - 420 °F (210 - 216 °C)
Feed	300 - 325 °F (149 - 163 °C)	Adapter	410 - 420 °F (210 - 216 °C)
Zone 2	350 - 400 °F (177 - 204 °C)	Die	410 - 420 °F (210 - 216 °C)
Zone 3	400 - 415 °F (204 - 213 °C)	Melt Temperature	410 - 420 °F (210 - 216 °C)

Company Information

For further information regarding the LyondellBasell company, please visit http://www.lyb.com/.

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