

LyondellBasell Petrothene[®] LR590001 High Density Polyethylene

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

Material Notes:

ApplicationsPETROTHENE 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.**Processing Techniques**LR590001, like other thermoplastic polyolefin resins, can be extruded as wire and cable insulation using a conventional extruder. Below are suggested extrusion conditions for LRWC409. 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.**Industry Specifications**LR590001 meets the requirements of the following: ASTM D 1248-2, Type III, Class A, Category 4, Grades E8 and E9; Federal LP 390C, Type II, Class H, Category 4, Grade 1, REA PE-22, REA PE-39.

Order this product through the following link:

http://www.lookpolymers.com/polymer_LyondellBasell-Petrothene-LR590001-High-Density-Polyethylene.php

Physical Properties	Metric	English	Comments
Density	0.948 g/cc	0.0342 lb/in ³	ASTM D1505
ESCR 100% Igepal [®]	48 hour	48 hour	ASTM D1693
Melt Flow	0.80 g/10 min	0.80 g/10 min	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	16.2 MPa	2350 psi	ASTM D638
Tensile Strength, Yield	21.7 MPa	3150 psi	ASTM D638
Elongation at Break	590 %	590 %	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+18 ohm-cm	1.00e+18 ohm-cm	ASTM D991
Dielectric Constant	2.33	2.33	ASTM D1531
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dissipation Factor	0.000070	0.000070	ASTM D1531
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

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 - 232 Â°C	400 - 450 Â°F	
Zone 4-x	246 - 260 Â°C	475 - 500 Â°F	
Adapter Temperature	246 - 260 Â°C	475 - 500 Â°F	
Die Temperature	246 - 260 Â°C	475 - 500 Â°F	
Melt Temperature	246 - 260 Â°C	475 - 500 Â°F	

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