

Petrothene®

# LP540300

High Density Polyethylene

Wire and Cable Grade

Melt Index 0.17 Density 0.942

## Applications

PETROTHENE LP540300 is a high molecular weight, high density polyethylene resin for primary insulation and compounding. An antioxidant package has been added to provide thermal stability during processing. Typical applications for wire and cable include primary insulation or a base resin for conduit or cable jacketing.

## Processing Techniques

LP540300, like other thermoplastic polyolefin resins, can be extruded as wire and cable insulation using a conventional extruder. Below are suggested extrusion conditions for LP540300. These conditions are intended as general guidelines only and are not optimum values, since manufacturing conditions such as extruder type and size affect the processing of thermoplastic resins. For additional information please contact your Equistar sales or technical service representative.

## Suggested General Extrusion Conditions

Extruder Zone	Temperature Range	Extruder Zone	Temperature Range
Feed	300°-325°F (149°-163°C)	Adapter	475°-500°F (246°-260°C)
Zone 2	350°-400°F (177°-204°C)	Die	475°-500°F (246°-260°C)
Zone 3	400°-450°F (204°-232°C)	Melt Temperature	475°-500°F (246°-260°C)
Zone 4-X	475°-500°F (246°-260°C)		

## Industry Specifications

LP540300 meets the requirements of the following: ASTM D 1248, Type III, Class A, Category 5, Grade E10. Federal LP390C, Type II, Class H, Category 5, Grade 5.

## Typical Melt Properties

Property*	Nominal Value	Units	ASTM Test Method
Melt Index	0.17	g/10 min.	D 1238
Density	0.942	g/cc	D 1505
Tensile Strength @ Break	4,800 (33.1)	psi (MPa)	D 638
Tensile Stress @ Yield	2,900 (20.0)	psi (MPa)	D 638
Elongation @ Break	800	%	D 638
Low Temperature Brittleness, F <sub>50</sub>	<-76	°C	D 746
ESCR, 10% Igepal	> 1,000	hours	D 1693
Dielectric Constant @ 1 MHz	2.32		D 1531
Dissipation Factor @ 1 MHz	0.00007		D 1531

\*All properties determined from compression molded plaques.

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