EQUISTAR
A Lyondell Company

Petrothene®

KR92717

High Density Polyethylene
Wire and Cable Grade
Melt Index 0.50 Density 0.952

Applications

PETROTHENE KR92717 is a high molecular weight, high density polyethylene-based compound designed for use in cable insulation and cable jacketing applications. This black compound contains additive packages to ensure UV and processing stability.

Processing Techniques

KR92717, like other thermoplastic polyolefin compounds, can be extruded using a conventional extruder. Below are suggested extrusion conditions for KR92717. These conditions are intended as general guidelines only, and are not optimum values, because manufacturing conditions such as extruder type and size affect the processing of thermoplastic compounds. For further recommendations, please contact your Equistar sales or technical service representative.

Suggested General Extrusion Conditions

Extruder Zone	Temperature Range
Feed	300°- 325°F (149° - 163°C)
Zone 2	350°- 400°F (177° - 204°C)
Zone 3	375°- 400°F (204° - 232°C)
Zone 4-X	460°- 500°F (204° - 232°C)
Adapter	475°- 500°F (246° - 260°C)
Die	475°- 500°F (246° - 260°C)
Melt Temperature	475°- 500°F (246° - 260°C)

Industry Specifications

KR92717 meets the requirements of the following: ASTM D 1248 Type III, Class B, Category 4 or 5, Grades E9, Ell and J5.

Physical Properties

Typical physical and electrical properties for KR92717 are provided in the table below. For information on resins and compounds for Wire and Cable, contact your Equistar sales or technical service representative.

Property	Nominal Value	Units	ASTM Test Method
Melt Index	0.50	g/10 min.	D 1238
Density	0.952	g/CM³	D 1505
Low Temperature Brittleness, F_{50}	<-76	°C	D 746
Tensile Strength @ Yield	3,200 (22.1)	psi (MPa)	D 638
Tensile Strength @ Break	2,200 (15.2)	psi (MPa)	D 638
Elongation @ Break	700	%	D 638
Hardness, Shore D	61		D 2240
Dielectric Constant @ 1 KHz	2.30		D 1531
Dielectric Constant @ @ 1 MHz	2.38		D 1531
Dissipation Factor @ 1 KHz	0.0002		D 1531
Dissipation Factor @ 1 MHz	0.0002		D 1531

See Page 2 for tracking resistance information regarding Petrothene® KR92717

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Tracking Resistance

KR92717 was tested for its resistance to tracking by ASTM D 2132 (Standard Test Method for Dust-and-Fog Tracking and Corrosion Resistance of Electrical Insulating Materials) and ASTM D 2303 (Standard Test Method for Liquid Contaminant, Inclined-Plane Tracking and Erosion of Insulating Materials). The results are listed in the following table.

ASTM D 2132: Specimen	Time to Failure (h)	Type of Failure
A	216.0	No failure
B	176.2	Erosion
C	216.0	No failure

ASTM D 2303:
The time-to-track was 1,028 minutes at 2.5 kV.