EQUISTAR
A Lyondell Company

Petrothene®

KR92828

High Density Polyethylene
Wire and Cable Grade
Melt Index 0.17 Density 0.955

Applications

PETROTHENE KR92828 is a high molecular weight, high density polyethylene-based compound designed for use in jacketing, conduit or wire insulation. KR92828 contains a carbon black content of 2.5%. Antioxidant has been added to ensure thermal stability during processing.

Processing Techniques

KR92828, like other thermoplastic polyolefin compounds, can be extruded as wire or cable insulation using a conventional extruder. Below are suggested extrusion conditions for KR92828. 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 compounds.

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	375°-400°F (191°-204°C)	Melt Temperature	475°-500°F (246°-260°C)
Zone 4-X	460°-500°F (238°-260°C)		

Industry Specifications

KR92828 meets the requirements of the following: Federal LP390C Type III, Class H, Category 5, Grades 1 and 2; ASTM D 1248, Type III, Class C, Category 5, Grades J4 and E10.

Typical Properties

Property	Nominal Value	Units	ASTM Test Method
Melt Index	0.17	g/10 min.	D 1238
Density	0.955	g/CM³	D 1505
Tensile Strength @ Break	4,600 (31.6)	psi (MPa)	D 638
Tensile Stress @ Yield	2,800 (19.2)	psi (MPa)	D 638
Elongation @ Break	800	%	D 638
Tensile Modulus (1% Secant)	77,000 (531)	psi (MPa)	D 638
Flexural Modulus (1% Secant)	110,000 (760)	psi (MPa)	D 780
Hardness, Shore D	65		D 2240
Low Temperature Brittleness, F_{50}	<-76	°C	D 746
ESCR, 10% Igepal®	>1,000	hours	D 1693
Dielectric Constant @ 1 MHz	2.50		D 1531
Dissipation Factor @ 1 MHz	0.0002		D 1531
Dielectric Strength	550	V/mil	D 149
Volume Resistivity	$2x10^{17}$	Ohm-cm	D 257
Carbon Black Content	2.60	%	
Absorption Coefficient	440		D 3349
Linear Coefficient of Thermal Expansion @ 23°C	1.50×10^{-4}	in/in/°C	D 696

® Igepal is a registered trademark of the Rhône-Poulenc Co., Inc.