EQUISTAR
A Lyondell Company

Petrothene®

HR92953

Medium Density Polyethylene
Wire and Cable Grade
Melt Index 0.65 Density 0.945

Applications

PETROTHENE HR92953 is a medium density polyethylene-based resin designed for use as jacketing for communications cable, including CATV and FOC. HR92953 has a nominal carbon black content of 2.6% and antioxidant has been added to ensure thermal stability during processing.

Processing Techniques

HR92953, like other thermoplastic polyolefin compounds, can be extruded as wire and cable jacketing using a conventional extruder. Below are suggested extrusion conditions for HR92953 These conditions are intended as general guidelines only and are not optimum values, since manufacture conditions, such as extruder type and size, affect the processing of thermoplastic compounds. For recommendations, contact your Equistar sales representative.

Suggested General Extrusion Conditions

Extruder Zone	Temperature Range	Extruder Zone	Temperature Range
Feed	310°-325°F (154°-163°C)	Zone 4-X	400°-425°F (204°-218°C)
Zone 2	350°-380°F (177°-193°C)	Adapter	400°-425°F (204°-218°C)
Zone 3	380°-410°F (193°-210°C)	Die	400°-425°F (204°-218°C)

Industry Specifications

HR92953 meets the requirements of the following: ASTM D 1248, Type II, Category 4, Class C, Grades E10 and J5; Federal LP390C, Type III, Class M, Category 4, Grade 3.

Typical Properties

Property	Nominal Value	Units	ASTM Test Method
Melt Index	0.65	g/10 min.	D 1238
Density	0.945	g/cc	D 1505
Tensile Strength @ Break	4,000 (27.6)	psi (MPa)	D 638
Tensile Stress @ Yield	2,400 (16.6)	psi (MPa)	D 638
Elongation @ Break	880	%	D 638
Low Temperature Brittleness, F_{50}	<-76	°C	D 2240
Carbon Black Content	2.60	%	
Dielectric Constant @ 1 MHz	2.55		D 1531
Dissipation Factor @ 1 MHz	0.0005		D 1531
Dielectric Strength (DC Voltage)	550	V/mil	D 149
Absorption Coefficient	450		D 3349
ESCR, 10% Igepall®	>1,000	hours	D 1693
Hardness, Shore D	60		D 2240
Linear Coefficient of Thermal Expansion @23°C	$1.75x10^{4}$	in/in/°C	D 696

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