EQUISTAR
A Lyondell Company

Petrothene®

NA217080

Low Density Polyethylene
Wire and Cable Grade
Melt Index 5.6 Density 0.923

Applications

PETROTHENE NA 217080 is a natural low density polyethylene resin formulated for use as primary insulation for coaxial and control cable applications. NA217080 has also been designed for use as a base resin for compounding materials including gas-injected or chemically expanded insulation.

Processing Techniques

NA217080, like other thermoplastic polyolefin resins, can be extruded as wire and cable insulation using a conventional extruder. Below are suggested extrusion conditions for NA217080. These conditions are intended as general guidelines only and are not optimum values, since manufacturing conditions, such as extruder type and size have an effect on the processing of thermoplastic resins. For further information on resins and compounds for wire and cable, contact your Equistar sales or technical service representative.

Suggested General Extrusion Conditions

Extruder Zone	Temperature Range	Extruder Zone	Temperature Range
Feed	280°-300°F (138°-149°C)	Adapter	400°-425°F (204°-218°C)
Zone 2	300°-325°F (149°-163°C)	Die	400°-425°F (204°-218°C)
Zone 3	375°-400°F (190°-204°C)	Melt Temperature	400°-425°F (204°-218°C)
Zone 4-X	400°-425°F (204°-218°C)		

Industry Specifications

NA217080 meets the requirements of the following: ASTM D 1248, Type 1, Category 3, Class A, Grade E3. Federal LP390C, Type II, Class L, Category 3, Grade 1.

Typical Properties

Property	Nominal Value	Units	Test Method
Melt Index	5.6	g/10 min.	ASTM D 1238
Density	0.923	g/cc	ASTM D 1505
Tensile Strength @ Break	1,800 (12.7)	psi (MPa)	ASTM D 638
Tensile Stress @ Yield	1,500 (10.4)	psi (MPa)	ASTM D 638
Elongation @ Break	550	%	ASTM D 638
Flexural Modulus, 1% Secant	40,000 (282)	psi (MPa)	ASTM D 790
Hardness, Shore D	53		ASTM D 2240
Dielectric Constant @ 1 MHz	2.28		ASTM D 1531
Dissipation Factor @ 1 MHz	0.00004		ASTM D 1531
Dissipation Factor @ 2 GHz	0.00004		Equistar
Low Temperature Brittleness, F_{50}	<-76	°C	ASTM D 746