EQUISTAR
A Lyondell Company

Alathon®

M5370WC

High Density Polyethylene
Wire and Cable Grade
Melt Index 7.3 Density 0.953

Applications

ALATHON M5370WC is a natural, high density, polyethylene copolymer resin with a narrow molecular weight distribution formulated for use as primary insulation for coaxial and control cable applications including gas-injected or chemically expanded insulation. M5370WC provides high impact strength and stress crack resistance, excellent color, low odor and good processability.

Processing Techniques

M5370WC, like other thermoplastic polyolefin resins, can be extruded as wire and cable insulation using a conventional extruder. Below are suggested extrusion conditions for M5370WC. 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.

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

M5370WC meets the requirements of the following: ASTM D 1248, Type III, Category 3, Class A, Grade E11.

Typical Properties

Property	Nominal Value	Units	Test Method
Melt Index	7.3	g/10 min	ASTM D 1238
Density	0.953	g/cc	ASTM D 1505
Tensile Strength @ Yield	3,700 (25.5)	psi (MPa)	ASTM D 638
Tensile Stress @ Break	3,500 (24.1)	psi (MPa)	ASTM D 638
Elongation @ Break	1,700	%	ASTM D 638
Flexural Modulus, 1% Secant	185,000 (1,276)	psi (MPa)	ASTM D 790
Hardness, Shore D	67		ASTM D 2240
Dielectric Constant @ 1 MHz	2.34		ASTM D 1531
Dissipation Factor @ 1 MHz	0.00002		ASTM D 1531
Dissipation Factor @ 2 GHz	0.00002		Equistar
Dielectric Strength (DC)	700	Volts/mil	ASTM D 149
Volume Resistivity	4×10^{17}	Ohms-cm	ASTM D 257
Low Temperature Brittleness, F_{50}	<-76	°C	ASTM D 746
Vicat Softening Point	124	°C	ASTM D 1525