

Alathon®

M6080WC

High Density Polyethylene
Wire and Cable Grade

Melt Index 8.0 Density 0.958

Applications

ALATHON M6080WC is a natural high density polyethylene homopolymer 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. This resin provides enhanced processability and stiffness and exhibits excellent color, low odor and good processing stability.

Processing Techniques

ALATHON M6080WC, like other thermoplastic polyolefin resins, can be extruded as wire and cable insulation using a conventional extruder. Below are suggested extrusion conditions for M6080WC. 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

ALATHON M6080WC meets the requirements of the following: ASTM D 1248, Type III, Category 3, Class A, Grade E11, LP 390C Type II, Class H Grade 4, Category 3.

Typical Properties

Property	Nominal Value	Units	ASTM Test Method
Melt Index	8.0	g/10 min	D 1238
Density	0.958	g/cm ³	D 1505
Tensile Strength @ Yield	3,900 (26.9)	psi (MPa)	D 638
Tensile Stress @ Break	3,100 (21.4)	psi (MPa)	D 638
Elongation @ Break	1,900	%	D 638
Flexural Modulus, 1% Secant	192,000 (1,324)	psi (MPa)	D 790
Hardness, Shore D	67		D 2240
Dielectric Constant @ 1 MHz	2.36		D 1531
Dissipation Factor @ 1 MHz	0.00003	Radians	D 1531
Dielectric Strength (DC)	700	Volts/mil	D 149
Volume Resistivity	3 x 10 ¹⁷	Ohms-cm	D 257
Low Temperature Brittleness, F ₅₀	<-76	°C	D 746
Vicat Softening Point	130	°C	D 1525