EQUISTAR
A Lyondell Company

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/cm³ | 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 | $3 \times 10^{17}$ | Ohms-cm | D 257 |
| Low Temperature Brittleness, $F_{50}$ | <-76 | °C | D 746 |
| Vicat Softening Point | 130 | °C | D 1525 |