

Aquathene

PM92949C

Black Masterbatch
Wire and Cable Grade
Density 1.14

Applications

Aquathene PM92949C is a black masterbatch designed for use with [Aquathene AQ120000](#) ethylene vinylsilane copolymer for producing low voltage, power cable insulation. A processing aid and an antioxidant, to ensure long-term stability, have been added to enhance the performance of this black masterbatch.

Processing Techniques

When PM92949C is added at 6.3 wt % to AQ120000 and the appropriate catalyst masterbatch such as *Aquathene* [CM04482](#) or [CM04483](#), the resulting material is suitable for use in applications such as USE, USE-2 and sunlight resistant cable. The compound is crosslinked by exposure to moisture.

The combination of 88.7 percent AQ120000, 6.3 percent PM92949C and 5 percent CM04482 or CM04483 can be extruded onto wire using conventional extrusion equipment. A suggested temperature profile for use with a 2.5", 20:1 extruder equipped with a Maddock mixing screw follows:

Extruder Zone	Temperature	Extruder Zone	Temperature
Feed	135°C / 275°F	Zone 4-X	160°C / 320°F
Zone 2	145°C / 293°F	Adapter	165°C / 329°F
Zone 3	155°C / 311°F	Die	170°C / 338°F

The total system, (AQ120000 and catalyst masterbatch CM04482 or CM04483), crosslinks after the materials are mixed during extrusion and subsequently exposed to moisture. Crosslinking can be achieved by exposure to steam, immersion in water or storage at ambient conditions. Since cure time varies considerable with environmental conditions and cable constructions, contact your Equistar sales representative for information regarding cure conditions.

PM92949C black masterbatch should be stored separately from AQ120000 resin until extrusion. PM92949C contains carbon black, which can increase moisture absorption. Because of this factor, this product is packaged in boxes with barrier liners to minimize exposure to moisture that can occur during shipping and handling. This product should be dried for approximately 8-16 hours at 140°F (60°C) before use. Equistar recommends that samples be produced and that users conduct their own testing in order to make their own independent determination that PM92949C is suitable and safe for their intended use and applications.

Typical Properties

Property Method	Nominal Value	Units	ASTM Test
Density	1.14	g/cc	D 1505
Carbon Black Content	40.0	wt %	D 1603

The values listed for physical electrical properties are nominal values only and are subject to normal variations consistent with the test methods and/or variations found acceptable to the industry.

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