

Technical Data Sheet

Aquathene FR439800X01

W&C Polyolefin Compound



Product Description

Aquathene FR439800 is a colorable flame retardant catalyst masterbatch selected by customers for use in moisture cure applications. When FR439800 is melt blended with *Aquathene* AQ120000 in a 35% / 65% ratio, respectively, and crosslinked after exposure to moisture, this formulation is typically used in low voltage power and control cable applications where UL44 specifies horizontal flame rating with 90°C service in wet locations.

Regulatory Status

For regulatory compliance information, see *Aquathene* FR439800X01 [Product Stewardship Bulletin \(PSB\)](#) and [Safety Data Sheet \(SDS\)](#).

Status	Developmental
Availability	North America
Application	Wire & Cable
Market	Wire & Cable
Processing Method	Wire & Cable

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Flow Rate, (190 °C/2.16 kg)	0.85	g/10 min	ASTM D1238
Density, (23 °C)	1.47	g/cm ³	ASTM D1505

Notes

These are typical property values not to be construed as specification limits.

Processing Techniques

Users should determine the conditions necessary to obtain optimum product properties and suitability of the product for the intended application.

The total system 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 LyondellBasell sales or technical service representative for detailed cure conditions.

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

General Extrusion Conditions

Aquathene FR439800X01, like other thermoplastic polyolefin compounds, can be extruded using a conventional extruder. Below are suggested extrusion conditions for *Aquathene* FR439800X01. These conditions are intended as general guidelines only, and are not optimum values, since manufacturing variables such as extruder type and size have an effect on processing of thermoplastic compounds.

A suggested temperature profile for use with a 2.5", 24:1 extruder equipped with a Maddock mixing screw follows:

<u>Extruder Zone</u>	<u>Temperature Range</u>	<u>Extruder Zone</u>	<u>Temperature Range</u>
Feed	130 - 140 °C (266 - 284 °F)	Zone 5	165 - 170 °C (329 - 338 °F)
Zone 2	140 - 150 °C (284 - 302 °F)	Adapter	165 - 170 °C (329 - 338 °F)
Zone 3	150 - 160 °C (302 - 320 °F)	Die / Head	165 - 170 °C (329 - 338 °F)
Zone 4	155 - 165 °C (311 - 329 °F)	Melt	175 - 185 °C (347 - 365 °F)

Material Handling

Pre-drying material may be required. For additional handling information see the material's safety data sheet (SDS).

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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