Technical Data Sheet

Alathon M5370RF

W&C Polyolefin Compound

Product Description

Alathon M5370RF is a natural, high density polyethylene copolymer resin selected by customers for high-frequency coaxial cable primary insulation. *Alathon* M5370RF achieves low dissipation factors at high frequencies, and provides high impact strength, stress crack resistance, excellent color, and good processability.

For optimal performance in foamed insulation, *Alathon* M5370RF should be blended wiht *Petrothene* NA217080 and a nucleating package.

Alathon M5370RF meets the requirements of the following: ASTM D 1248, Type III, Class A, Category 3,Grade E11.

Regulatory Status

For regulatory compliance information, see *Alathon* M5370RF Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

Status	Commercial: Active
Availability	North America
Application	Wire & Cable
Market	Wire & Cable
Processing Method	Wire & Cable

Typical Properties	Nominal Value	English Units	Nominal Value	SI Units	Test Method
Physical					
Melt Flow Rate, (190 °C/2.16 kg)	7.3	g/10 min	7.3	g/10 min	ASTM D1238
Density, (23 °C)	0.953	g/cm³	0.953	g/cm³	ASTM D1505
Mechanical					
Flexural Modulus, (1% Secant)	185000	psi	1280	MPa	ASTM D790
Tensile Stress at Break	3500	psi	24.1	MPa	ASTM D638
Tensile Stress at Yield	3700	psi	25.5	MPa	ASTM D638
Tensile Elongation at Break	1700	%	1700	%	ASTM D638
Hardness					
Shore Hardness, (Shore D)	67		67		ASTM D2240
Thermal					
Vicat Softening Temperature	255	°F	124	°C	ASTM D1525
Low Temperature Brittleness, F_{50}	<-105	°F	<-76	°C	ASTM D746
Electrical					
Volume Resistivity	4 x 10^{17}	ohm*cm	4 x 10^{17}	ohm*cm	ASTM D257
Dielectric Constant, 1 MHz	2.34		2.34		ASTM D150
Dissipation Factor, 1 MHz	0.00002		0.00002		ASTM D150
Dielectric Strength	700	V/mil			ASTM D149

Manufacturer website: https://www.lyondellbasell.com/en/

Notes

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

Processing Techniques

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

Alathon M5370RF, like other thermoplastic polyolefin resins, can be extruded using a conventional extruder. Below are suggested extrusion conditions for *Alathon* M5370RF. 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 resins.

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)		

Company Information

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

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