

Alathon®

M 5350

High Density Polyethylene Injection Molding Grade Melt Index 4.5 Density 0.953

Applications

ALATHON M 5350 is a copolymer with narrow molecular weight distribution. This resin provides high impact strength and stress crack resistance, excellent color, low odor and good processing stability. Typical applications include open head pails, large shipping containers and 55-gallon drum lids.

Regulatory Status

M 5350 meets the requirements of the Food and Drug Administration regulation 21 CFR 177.1520. This regulation allows the use of this olefin polymer in "...articles or components of articles intended for use in contact with food." Specific limitations or conditions of use may apply. Contact your Equistar sales representative for more information.

Processing Techniques

Specific recommendations for processing M 5350 can only be made when the processing conditions, equipment and end use are known. For further suggestions, please contact your Equistar sales representative.

Suggested Start-up Conditions

Extruder Zone	Rear	Center	Front	Nozzle
Cylinder Temperature °F (°C)	450 (232)	470 (243)	475 (246)	475 (246)

Physical Properties

Property	Nominal Value	Units	Test Method
Melt Index	4.5	g/10 min	ASTM D 1238
Density	0.953	g/cc	ASTM D 1505
Spiral Flow ¹	8.4 (21.3)	in (cm)	Equistar
Tensile Strength @ Break ²	3,870 (27)	psi (MPa)	ASTM D 638
Tensile Strength @ Yield ²	4,090 (28)	psi (MPa)	ASTM D 638
Elongation @ Yield ²	7.2	%	ASTM D 638
1% Secant Modulus ³	186,000 (1,280)	psi (MPa)	ASTM D 790B
2% Secant Modulus ³	156,000 (1,080)	psi (MPa)	ASTM D 790B
Vicat Softening Point ⁴	261 (127)	°F (°C)	ASTM D 1525
Hardness, Shore D	68		ASTM D 2240
Heat Deflection Temperature @ 66psi	162 (72)	°F (°C)	ASTM D 648
Low Temperature Brittleness, F ₅₀	<-105 (<-76)	°F (°C)	ASTM D 746

¹ Measures the number of inches of flow produced when molten resin is injected into a long, spiral channel (0.625" insert), at a constant injection pressure of 1000 psi with a melt temperature of 440°F.

² Crosshead speed - 2" min

³ Crosshead speed - 0.5" min

⁴ Data are for control and development work and not intended for use in design or predicting at elevated or sub-ambient temperatures.

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