

LyondellBasell Alathon® M5352 High Density Polyethylene, Injection Molding Grade

Category : Polymer , Thermoplastic , Polyethylene (PE) , HDPE , High Density Polyethylene (HDPE), Injection Molded

Material Notes:

ALATHON M5352 is a high density copolymer with a narrow molecular weight distribution. This resin provides high impact strength and stress crack resistance, excellent color, low odor and good processability. Typical applications include open head pails, large shipping containers and 55-gallon drum lids. Regulatory Status: M5352 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. Specific recommendations for processing M5352 can only be made when the processing conditions, equipment and end use application are known. This product is from the former Equistar product line.

Order this product through the following link:

http://www.lookpolymers.com/polymer_LyondellBasell-Alathon-M5352-High-Density-Polyethylene-Injection-Molding-Grade.php

Physical Properties	Metric	English	Comments
Bulk Density	0.593 - 0.625 g/cc	0.0214 - 0.0226 lb/in ³	ASTM D1895
Density	0.953 g/cc	0.0344 lb/in ³	ASTM D1505
Melt Flow	4.5 g/10 min @Load 2.16 kg, Temperature 190 °C	4.5 g/10 min @Load 4.76 lb, Temperature 374 °F	ASTM D1238
Spiral Flow	19.8 cm	7.80 in	Equistar test

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	27.6 MPa	4000 psi	50 mm/min; ASTM D638
Tensile Strength, Yield	27.6 MPa	4000 psi	50 mm/min; ASTM D638
Elongation at Break	1700 %	1700 %	50 mm/min; ASTM D638
Elongation at Yield	11 %	11 %	50 mm/min; ASTM D638
Tensile Modulus	0.7274 GPa	105.5 ksi	1% Secant; 50mm/min; ASTM D638
	0.8970 GPa	130.1 ksi	50mm/min; ASTM D638
Flexural Modulus	0.9777 GPa	141.8 ksi	2% Secant; 12.5 mm/min; ASTM D790
	1.194 GPa	173.2 ksi	1% Secant; 12.5 mm/min; ASTM D790
	1.291 GPa	187.3 ksi	12.5 mm/min; ASTM D790
Izod Impact, Notched	0.641 J/cm	1.20 ft-lb/in	ASTM D256

Mechanical Properties	Metric	English	Comments
	@Temperature -18.0 °C	@Temperature -0.400 °F	ASTM D4812

Thermal Properties	Metric	English	Comments
Melting Point	131.2 °C	268.2 °F	ASTM D3418
Crystallization Temperature	116.1 °C	241.0 °F	ASTM D3418
Deflection Temperature at 0.46 MPa (66 psi)	73.1 °C	164 °F	ASTM D648
Vicat Softening Point	128 °C	262 °F	ASTM D1525
Brittleness Temperature	<= -76.0 °C	<= -105 °F	ASTM D746

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	232 °C	450 °F	
Middle Barrel Temperature	243 °C	470 °F	
Front Barrel Temperature	246 °C	475 °F	
Nozzle Temperature	246 °C	475 °F	

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