

LyondellBasell Alathon[®] M6080 High Density Polyethylene, Injection Molding Grade

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

Material Notes:

ALATHON M6080 is a narrow molecular weight distribution homopolymer that exhibits enhanced flow characteristics and good balance of stiffness and impact resistance. Typical applications include cases, tote bins, crates and trays and open-head pails. Regulatory Status: M6080 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 M6080 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-M6080-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	0.960 g/cc	0.0347 lb/in ³	ASTM D1505
Melt Flow	7.9 g/10 min @Load 2.16 kg, Temperature 190 °C	7.9 g/10 min @Load 4.76 lb, Temperature 374 °F	ASTM D1238
Spiral Flow	21.8 cm	8.60 in	Equistar test

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	70	70	ASTM D2240
Tensile Strength at Break	15.9 MPa	2300 psi	50 mm/min; ASTM D638
Tensile Strength, Yield	29.3 MPa	4250 psi	50 mm/min; ASTM D638
Elongation at Break	380 %	380 %	50 mm/min; ASTM D638
Tensile Modulus	0.8453 GPa	122.6 ksi	1% Secant; 50mm/min; ASTM D638
	1.009 GPa	146.4 ksi	50mm/min; ASTM D638
Flexural Modulus	1.071 GPa	155.4 ksi	2% Secant; 12.5 mm/min; ASTM D790
	1.311 GPa	190.2 ksi	1% Secant; 12.5 mm/min; ASTM D790
	1.414 GPa	205.1 ksi	12.5 mm/min; ASTM D790
Izod Impact, Notched	0.747 J/cm	1.40 ft-lb/in	ASTM D256
	NB	NB	

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

Thermal Properties	Metric	English	Comments
Melting Point	132.7 Â°C	270.9 Â°F	ASTM D3418
Crystallization Temperature	115.9 Â°C	240.6 Â°F	ASTM D3418
Deflection Temperature at 0.46 MPa (66 psi)	80.0 Â°C	176 Â°F	ASTM D648
Brittleness Temperature	<= -76.0 Â°C	<= -105 Â°F	ASTM D746

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

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