

LyondellBasell Alathon® M4612 High Density Polyethylene

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

Material Notes:

ApplicationsALATHON M 4612 is a copolymer that provides outstanding ESCR and low temperature impact strength. Typical applications include food containers, seat hinges, tube headers.**Regulatory Status**M 4612 meets the requirements of 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 4612 can only be made when the processing conditions, equipment and end use are known. For further suggestions, please contact your Equistar sales representative.This product is from the former Equistar product line.

Order this product through the following link:

http://www.lookpolymers.com/polymer_LyondellBasell-Alathon-M4612-High-Density-Polyethylene.php

Physical Properties	Metric	English	Comments
Density	0.946 g/cc	0.0342 lb/in ³	ASTM D1505
Melt Flow	1.2 g/10 min	1.2 g/10 min	ASTM D1238
Spiral Flow	18.3 cm	7.20 in	Measures the number on 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; Equistar

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	66	66	ASTM D2240
Tensile Strength at Break	16.0 MPa	2320 psi	Crosshead speed - 2"min.; ASTM D638
Tensile Strength, Yield	24.6 MPa	3570 psi	Crosshead speed - 2"min.; ASTM D638
Elongation at Yield	9.4 %	9.4 %	Crosshead speed - 2"min.; ASTM D638
1% Secant Modulus	995.6 MPa	144400 psi	Crosshead speed - 0.5"min.; ASTM D790
2% Secant Modulus	0.8267 GPa	119.9 ksi	Crosshead speed - 0.5"min.; ASTM D790

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	61.0 °C	142 °F	ASTM D648
Vicat Softening Point	123 °C	253 °F	ASTM D1525

Brittleness Temperature
Thermal Properties

≤ -76.0 °C
Metric

≤ -105 °F
English

F_{50} ; ASTM D746
Comments

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