

LyondellBasell Alathon[®] H5112 High Density Polyethylene, Injection Molding Grade

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

Material Notes:

ALATHON H5112 is a medium-molecular-weight-distribution resin with balanced impact/ESCR and high flow characteristics. Typical applications include housewares, food containers, pail handles and toys. Regulatory Status: H5112 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 H5112 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-H5112-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	0.951 g/cc	0.0344 lb/in ³	ASTM D1505
Melt Flow	12 g/10 min @Load 2.16 kg, Temperature 190 °C	12 g/10 min @Load 4.76 lb, Temperature 374 °F	ASTM D1238
Spiral Flow	35.1 cm	13.8 in	Equistar test

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	71	71	ASTM D2240
Tensile Strength at Break	26.4 MPa	3830 psi	50 mm/min; ASTM D638
Elongation at Break	11 %	11 %	50 mm/min; ASTM D638
Tensile Modulus	0.7274 GPa	105.5 ksi	1% Secant; 50mm/min; ASTM D638
	0.8839 GPa	128.2 ksi	50mm/min; ASTM D638
Flexural Modulus	0.9094 GPa	131.9 ksi	2% Secant; 12.5 mm/min; ASTM D790
	1.092 GPa	158.4 ksi	1% Secant; 12.5 mm/min; ASTM D790
	1.175 GPa	170.4 ksi	12.5 mm/min; ASTM D790
Izod Impact, Notched	0.299 J/cm	0.560 ft-lb/in	ASTM D256
	NB	NB	ASTM D4812
	@Temperature -18.0 °C	@Temperature -0.400 °F	

Mechanical Properties	Metric	English	Comments
Melting Point	128.2 Â°C	262.8 Â°F	ASTM D3418
Crystallization Temperature	114.2 Â°C	237.6 Â°F	ASTM D3418
Deflection Temperature at 0.46 MPa (66 psi)	70.0 Â°C	158 Â°F	ASTM D648
Vicat Softening Point	124 Â°C	255 Â°F	ASTM D1525
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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