

LyondellBasell Alathon® H4250 High Density Polyethylene, Injection Molding Grade

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

Material Notes:

ALATHON H4250 is a high-flow "freezer†grade resin that exhibits enhanced cold temperature impact performance, enhanced processing and thermal stability, with good color and organoleptic properties. Typical applications are rigid food containers such as four, five and six-quart ice cream containers that are produced at high speeds in fast cycling multi-cavity stack molds. Regulatory Status: H4250 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 H4250 can only be made when the processing conditions, equipment and end use application are knownThis product is from the former Equistar product line.

Order this product through the following link: http://www.lookpolymers.com/polymer_LyondellBasell-Alathon-H4250-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/in³	ASTM D1895
Density	0.942 g/cc	0.0340 lb/in³	ASTM D1505
Melt Flow	50 g/10 min	50 g/10 min	
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	ASTM D1238
Spiral Flow	43.7 cm	17.2 in	Equistar test

Mechanical Properties	Metric	English	Comments	
Hardness, Shore D	61	61	ASTM D2240	
Tensile Strength at Break	21.1 MPa	3060 psi	50 mm/min; ASTM D638	
Elongation at Break	12 %	12 %	50 mm/min; ASTM D638	
Tensile Modulus	0.6922 GPa	100.4 ksi	1% Secant; 50mm/min; ASTM D638	
	0.9425 GPa	136.7 ksi	50mm/min; ASTM D638	
Flexural Modulus	0.7040 GPa	102.1 ksi	2% Secant; 12.5 mm/min; ASTM D790	
	0.8260 GPa	119.8 ksi	1% Secant; 12.5 mm/min; ASTM D790	
	0.9411 GPa	136.5 ksi	12.5 mm/min; ASTM D790	
Izod Impact, Notched	0.347 J/cm	0.650 ft-lb/in	ASTM D256	
	NB	NB	ASTM D4812	



Mechanical Properties	@Temperature -18.0 Metric	@Temperature -0.400 English	Comments
Thermal Properties	Metric	English	Comments
Melting Point	124.0 °C	255.2 °F	ASTM D3418
Crystallization Temperature	112.5 °C	234.5 °F	ASTM D3418
Deflection Temperature at 0.46 MPa (66 psi)	59.5 °C	139 °F	ASTM D648
Vicat Softening Point	116 °C	241 °F	ASTM D1525

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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