

High Density Polyethylene
Grade Used in Injection Molding
Melt Index: 62 Density: 0.942

Applications

Alathon H4262 is a high-flow resin that exhibits very good cold temperature impact performance, optimum processing and thermal stability, with good color and organoleptic properties. Typical customer applications include rigid food packaging such as four, five and six-quart ice cream containers produced at high speeds in fast-cycling, multi-cavity stack molds.

Regulatory Status

H4262 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.

Processing Techniques

Specific recommendations for processing H4262 can only be made when the processing conditions, equipment and end-use applications are known. For additional information, please contact your Equistar Sales Representative or refer to the [Start-up Conditions for HDPE](#) on www.lyondellbasell.com. Additional [Injection Molding Technical Topics](#) can also be found on the LyondellBasell website.

Suggested Start-up Conditions

Extruder Zone	Rear	Center	Front	Nozzle
Cylinder Temperature, °F (°C)	450 (232)	470 (243)	475 (246)	475 (246)

Physical Properties

Resin Properties	Nominal Values		Test Method
	English Units	SI Units	
Melt Index, 190°C, 2.16 kg Spiral Flow ¹	18.7 in	62 g/10 min (cm)	ASTM D 1238 Equistar
Density		0.942 g/cc	ASTM D 1505
Bulk Density	37-39 lb/ft ³	593-625 kg/m ³	ASTM D 1895
Molded Properties			ASTM D 4796
Tensile Stress, Break	2,690 psi	18.5 MPa	ASTM D 638*
Elongation, Break		5 %	ASTM D 638*
Flexural Modulus, 1% Secant	121,900 psi	840 MPa	ASTM D 790**
Izod Impact, 23 °C	0.56 ft-lbs/in	30 J/m	ASTM D 256
Unnotched Impact, -18 °C		No Break	ASTM D 4812
Vicat Softening Point	241 °F	116 °C	ASTM D 1525
Hardness, Shore D		67	ASTM D 2240
Heat Deflection Temperature, 66 psi ²	144 °F	62 °C	ASTM D 648

¹ Measures the number of inches of flow produced when molten resin is injected into a long, spiral channel (0.0625" insert), at a constant injection pressure of 1,000 psi with a melt temperature of 440°F.

² Data are for control and development work and not intended for use in design or predicting performance at elevated temperatures.

* Conditions: 50 mm/min, Type IV

** Conditions: 12.5 mm/min

See Page 2 for Other Properties

Alathon

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Other Properties

	Nominal Values			Test Method
	English Units	SI Units		
Thermal Properties				
Melting Temperature	257.7 °F	125.4 °C		ASTM D 3418
Crystallization Temperature	234.5 °F	112.5 °C		ASTM D 3418
Molded Properties	English Units	SI Units		Test Method
Flexural Modulus, 2% Secant	130,800 psi	716 MPa		ASTM D 4976
Flexural Young's Modulus	140,800 psi	971 MPa		ASTM D 790**
Tensile Modulus, 1% Secant	115,700 psi	798 MPa		ASTM D 638***
Tensile Young's Modulus	146,200 psi	1,010 MPa		ASTM D 638***

** Conditions: 12.5 mm/min

*** Conditions: 50 mm/min, Type I

Alathon ETP (Enhanced Toughness and Processing), a Family of High-flow Resins

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Users should review the applicable Material Safety Data Sheet before handling the product.

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