Technical Data Sheet

Alathon H5234

High Density Polyethylene

Product Description

Alathon H5234 is a high flow injection molding grade of resin selected by customers for fast cycle and thin wall molding. It provides good cold temperature impact resistance. Typical applications include frozen food, ice cream, and deli/condiment containers.

Regulatory Status

For regulatory compliance information, see *Alathon* H5234 Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

Status	Commercial: Active
Availability	North America
Application	Housewares; TWIM Food Containers
Market	Rigid Packaging
Processing Method	Injection Molding

Typical Properties	Nominal Value	English Units	Nominal Value	SI Units	Test Method
Physical					
Melt Flow Rate, (190 °C/2.16 kg)	34	g/10 min	34	g/10 min	ASTM D1238
Density, (23 °C)	0.952	g/cm³	0.952	g/cm³	ASTM D1505
Bulk Density	37-39	lb/ft³	593-625	kg/m³	ASTM D1895
Spiral Flow	15.5	in	39.4	cm	LYB Method
Mechanical					
Flexural Modulus					
(1% Secant)	169000	psi	1170	MPa	ASTM D790
(2% Secant)	137000	psi	946	MPa	ASTM D790
Flexural Young's Modulus	175400	psi	1210	MPa	ASTM D790
Tensile Modulus, (1% Secant)	110000	psi	758	MPa	ASTM D638
Tensile Young's Modulus	136000	psi	938	MPa	ASTM D638
Tensile Stress at Break, (23 °C)	3820	psi	26	MPa	ASTM D638
Tensile Elongation at Break, (23 °C)	9.0	%	9.0	%	ASTM D638
Impact					
Notched Izod Impact Strength, (23 °C)	0.49	ft-lb/in	26	J/m	ASTM D256
Unnotched Impact Strength, (-18 °C)	10	ft-lb/in	530	J/m	ASTM D4812
Hardness					
Shore Hardness, (Shore D, max)	68		68		ASTM D2240
Thermal					
Vicat Softening Temperature	250	°F	121	°C	ASTM D1525
Low Temperature Brittleness, F_{50}	<-105	°F	<-76	°C	ASTM D746
Deflection Temperature Under Load, (66 psi, Unannealed)	157	°F	69	°C	ASTM D648
Melting Temperature	262.9	°F	128.3	°C	ASTM D3418
Crystallization Temperature	237.2	°F	114.0	°C	ASTM D3418

Manufacturer website: https://www.lyondellbasell.com/en/

Notes

Conditions of Tensile Stress and Elongation values are: 50 mm/min, Type IV specimen.

Conditions of Flexural Modulus values are: 0.5 inches/min or 12.5 mm/min.

Conditions of Tensile Modulus values are: 50 mm/min, Type I Specimen.

Spiral Flow 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 1000 psi with a melt temperature of 440 °F.

Deflection Temperature Under Load and Low Temperature Brittleness data are for control and development work and are not intended for use in design or predicting performance at elevated or sub-ambient temperatures.

These are typical property values not to be construed as specification limits.

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Company Information

For further information regarding the LyondellBasell company, please visit http://www.lyb.com/.

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