Technical Data Sheet

Alathon H5520

High Density Polyethylene

Product Description

Alathon H5520 provides good processing characteristics and exhibits excellent toughness and color as well as low odor and good molded-part stability. Typical applications include housewares, caps, closures and various food containers.

Regulatory Status

For regulatory compliance information, see *Alathon* H5520 Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

Status	Commercial: Active
Availability	North America
Application	Caps & Closures; Containers; Housewares
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)	20	g/10 min	20	g/10 min	ASTM D1238
Density, (23 °C)	0.955	g/cm³	0.955	g/cm³	ASTM D1505
Bulk Density	37-39	lb/ft³	593-625	kg/m³	ASTM D1895
Spiral Flow	14.8	in	37.6	cm	LYB Method
Mechanical					
Flexural Modulus					
(1% Secant)	167000	psi	1150	MPa	ASTM D790
(2% Secant)	140000	psi	965	MPa	ASTM D790
Flexural Young's Modulus	181000	psi	1250	MPa	ASTM D790
Tensile Modulus, (1% Secant)	108000	psi	745	MPa	ASTM D638
Tensile Young's Modulus	124000	psi	855	MPa	ASTM D638
Tensile Stress at Yield, (23 °C)	3920	psi	27	MPa	ASTM D638
Tensile Elongation at Yield, (23 °C)	9	%	9	%	ASTM D638
Impact					
Notched Izod Impact Strength, (23 °C)	0.55	ft-lb/in	29	J/m	ASTM D256
Unnotched Impact Strength, (-18 °C)	14	ft-lb/in	750	J/m	ASTM D4812
Hardness					
Shore Hardness, (Shore D, max)	70		70		ASTM D2240
Thermal					
Vicat Softening Temperature	257	°F	125	°C	ASTM D1525
Low Temperature Brittleness, F_{50}	-4	°F	-20	°C	ASTM D746
Deflection Temperature Under Load, (66 psi, Unannealed)	162	°F	72	°C	ASTM D648
Melting Temperature	268.2	°F	129	°C	ASTM D3418
Crystallization Temperature	241.0	°F	115	°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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