

# 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 \(SDS\)](#).

<b>Status</b>	Commercial: Active
<b>Availability</b>	North America
<b>Application</b>	Caps & Closures; Containers; Housewares
<b>Market</b>	Rigid Packaging
<b>Processing Method</b>	Injection Molding

Typical Properties	Nominal Value	English Units	Nominal Value	SI Units	Test Method
<b>Physical</b>					
Melt Flow Rate, (190 °C/2.16 kg)	20	g/10 min	20	g/10 min	ASTM D1238
Density, (23 °C)	0.955	g/cm <sup>3</sup>	0.955	g/cm <sup>3</sup>	ASTM D1505
Bulk Density	37-39	lb/ft <sup>3</sup>	593-625	kg/m <sup>3</sup>	ASTM D1895
Spiral Flow	14.8	in	37.6	cm	LYB Method
<b>Mechanical</b>					
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 Break, (23 °C)	3920	psi	27	MPa	ASTM D638
Tensile Elongation at Break, (23 °C)	9	%	9	%	ASTM D638
<b>Impact</b>					
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
<b>Hardness</b>					
Shore Hardness, (Shore D, max)	70		70		ASTM D2240
<b>Thermal</b>					
Vicat Softening Temperature	257	°F	125	°C	ASTM D1525
Low Temperature Brittleness, F <sub>50</sub>	-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

**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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