

## LyondellBasell Alathon® H5642 High Density Polyethylene, Injection Molding Grade (discontinued \*\*)

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

### Material Notes:

ALATHON H5642 is a multi-purpose, narrow molecular weight distribution high-flow resin featuring enhanced processing and thermal stability for fast cycling. This resin exhibits good color and organoleptic properties. Typical applications are caps and closures. Regulatory Status: H5642 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 H5642 can only be made when the processing conditions, equipment and end use application are known. This product is from the former Equistar product line.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_LyondellBasell-Alathon-H5642-High-Density-Polyethylene-Injection-Molding-Grade-nbspdiscontinued-.php](http://www.lookpolymers.com/polymer_LyondellBasell-Alathon-H5642-High-Density-Polyethylene-Injection-Molding-Grade-nbspdiscontinued-.php)

Physical Properties	Metric	English	Comments
Bulk Density	0.593 - 0.625 g/cc	0.0214 - 0.0226 lb/in <sup>3</sup>	ASTM D1895
Density	0.956 g/cc	0.0345 lb/in <sup>3</sup>	ASTM D1505
Melt Flow	42 g/10 min @Load 2.16 kg, Temperature 190 °C	42 g/10 min @Load 4.76 lb, Temperature 374 °F	ASTM D1238
Spiral Flow	42.4 cm	16.7 in	Equistar test

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	70	70	ASTM D2240
Tensile Strength at Break	27.8 MPa	4030 psi	50 mm/min; ASTM D638
Elongation at Break	6.3 %	6.3 %	50 mm/min; ASTM D638
Tensile Modulus	0.862 GPa	125 ksi	1% Secant; 50mm/min; ASTM D638
	0.931 GPa	135 ksi	50mm/min; ASTM D638
Flexural Modulus	1.05 GPa	153 ksi	2% Secant; 12.5 mm/min; ASTM D790
	1.23 GPa	179 ksi	1% Secant; 12.5 mm/min; ASTM D790
	1.37 GPa	198 ksi	12.5 mm/min; ASTM D790
Izod Impact, Notched	0.299 J/cm	0.560 ft-lb/in	ASTM D256
	2.67 J/cm	5.00 ft-lb/in @Temperature -0.400	ASTM D4812

Mechanical Properties	@Temperature -18.0 °C Metric	°F English	Comments
<b>Thermal Properties</b>	<b>Metric</b>	<b>English</b>	<b>Comments</b>
Melting Point	129.0 °C	264.2 °F	ASTM D3418
Crystallization Temperature	116.5 °C	241.7 °F	ASTM D3418
Deflection Temperature at 0.46 MPa (66 psi)	77.0 °C	171 °F	ASTM D648
Vicat Softening Point	125 °C	257 °F	ASTM D1525
<b>Processing Properties</b>	<b>Metric</b>	<b>English</b>	<b>Comments</b>
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	

## Contact Songhan Plastic Technology Co.,Ltd.

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