

Preliminary  
Data Sheet

Alathon® ETP

# H4557X02

High Density Polyethylene  
Injection Molding Grade

Melt Index 57 Density 0.945

**Applications**

ALATHON H4557X02 is a high-flow freezer grade resin that exhibits enhanced cold temperature impact performance, enhanced processability and thermal stability, with good color and organoleptic properties. Typical applications are rigid food containers such as four, five, and six-quart ice cream containers that are produced at high speeds in fast cycling multi-cavity stack molds.

**Regulatory Status**

H4557X02 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 H4557X02 can only be made when the processing conditions, equipment and end use application are known. For further suggestions, please contact your Equistar sales representative.

**Suggested Start-up Conditions**

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

**Typical Properties**

Property	Value	Units	Test Method
Melt Index	57	g/10 min	ASTM D 1238
Density	0.945	g/cc	ASTM D 1505
Spiral Flow <sup>1</sup>	18 (45.7)	in (cm)	Equistar
Tensile Stress @ Break <sup>2</sup>	3,290 (22)	psi (MPa)	ASTM D 638
1% Secant Modulus <sup>3</sup>	129,000 (895)	psi (MPa)	ASTM D 790
2% Secant Modulus <sup>3</sup>	111,000 (770)	psi (MPa)	ASTM D 790
Vicat Softening Point	244 (118)	°F (°C)	ASTM D 1525
Heat Deflection Temperature, 66 psi <sup>4</sup>	145 (63)	°F (°C)	ASTM D 648
Hardness, Shore D	63		ASTM D 2240

<sup>1</sup> Measures the number of inches of flow produced when molten resin is injected into a long, spiral channel (0.625" insert), at a constant injection pressure of 1000 psi with a melt temperature of 440°F.

<sup>2</sup> Crosshead speed - 2" min

<sup>3</sup> Crosshead speed - 0.5" min

<sup>4</sup> Data are for control and development work and not intended for use in design or predicting performance at elevated temperatures.

*Alathon® ETP (Enhanced Toughness and Processing), a Family of High Flow Resins*

The information on this document is, to our knowledge, true and accurate. However, since the particular uses and the actual conditions of use of our products are beyond our control, establishing satisfactory performance of our products for the intended application is the customer's sole responsibility. All uses of Equistar products and any written or oral information, suggestions or technical advice from Equistar are without warranty, express or implied, and are not an inducement to use any process or product in conflict with any patent.

Equistar materials are not designed or manufactured for use in implantation in the human body or in contact with internal body fluids or tissues. Equistar makes no representation, promise, express warranty or implied warranty concerning the suitability of these materials for use in implantation in the human body or in contact with internal body tissues or fluids.

More detailed safety and disposal information on our products is contained in the Material Safety Data Sheet (MSDS). All users of our products are urged to retain and use the MSDS. A MSDS is automatically distributed upon purchase/order execution. You may request an advance or replacement copy by calling our MSDS Hotline at (800) 700-0946.

® Alathon is a registered trademark of Equistar Chemicals, LP.



Lyondell Chemical Company  
1221 McKinney, Suite 700  
P.O. Box 2583  
Houston, Texas 77252-2583  
(800) 615-8999  
<http://www.Lyondell.com>