

Alathon® ETP H4837

High Density Polyethylene
LyondellBasell Industries

Technical Data

Product Description

ALATHON H4837 is a high-flow "freezer" grade resin that exhibits enhanced cold temperature impact performance, enhanced processing, and thermal stability with good color and organoleptic properties. Typical applications are rigid food containers such as 4-, 5- and 6- quart ice cream containers that are produced in fast cycling multi-cavity stack molds.

General

Material Status	• Commercial: Active		
Literature ¹	• Processing - Mold Shrink (English) • Processing - Polyolefin Injection Molding Guide (English) • Processing - Start-Up Guide (English) • Technical Datasheet (English)		
Search for UL Yellow Card	• LyondellBasell Industries • Alathon® ETP		
Availability	• Asia Pacific • Europe	• North America • South America	
Features	• Fast Molding Cycle • Food Contact Acceptable • Good Organoleptic Properties	• Good Processability • Good Thermal Stability • High Flow	• Low Temperature Impact Resistance
Uses	• Containers	• Food Containers	
Agency Ratings	• FDA 21 CFR 177.1520		
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical	Nominal Value Unit	Test Method
Density	0.948 g/cm ³	ASTM D1505
Apparent Density	0.61 g/cm ³	ASTM D1895
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	40 g/10 min	ASTM D1238
Spiral Flow ^{3, 4}	46.7 cm	

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus ⁵		ASTM D638
--	827 MPa	
1% Secant	663 MPa	
Tensile Strength ⁶ (Break)	21.8 MPa	ASTM D638
Tensile Elongation ⁶ (Break)	5.4 %	ASTM D638
Flexural Modulus ⁷		ASTM D790
--	1060 MPa	
1% Secant	985 MPa	
2% Secant	829 MPa	

Impact	Nominal Value Unit	Test Method
Notched Izod Impact (23°C)	23 J/m	ASTM D256
Unnotched Izod Impact (-18°C)	360 J/m	ASTM D256

Hardness	Nominal Value Unit	Test Method
Durometer Hardness (Shore D)	62	ASTM D2240

Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load 0.45 MPa, Unannealed	63.9 °C	ASTM D648
Vicat Softening Temperature	121 °C	ASTM D1525
Peak Melting Temperature	127 °C	ASTM D3418
Peak Crystallization Temperature (DSC)	114 °C	ASTM D3418

Injection	Nominal Value Unit
Rear Temperature	232 °C