

Alathon® ETP H4557X02

High Density Polyethylene
LyondellBasell Industries

Technical Data

Product Description

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.

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	• Good Colorability • Good Organoleptic Properties	• Good Processability • Good Thermal Stability	• High Flow • Low Temperature Impact Resistance
Uses	• Food Containers	• Molds/Dies/Tools	• Thin-walled Containers
Agency Ratings	• FDA 21 CFR 177.1520		

Physical	Nominal Value Unit	Test Method
Density	0.945 g/cm³	ASTM D1505
Melt Mass-Flow Rate (MFR)	57 g/10 min	ASTM D1238
Spiral Flow ^{3, 4}	45.7 cm	

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus ⁵		ASTM D638
1% Secant	895 MPa	
2% Secant	770 MPa	
Tensile Strength ⁶ (Break)	22.0 MPa	ASTM D638

Hardness	Nominal Value Unit	Test Method
Durometer Hardness (Shore D)	63	ASTM D2240

Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load ⁷		ASTM D648
0.45 MPa, Unannealed	63.0 °C	
Vicat Softening Temperature	118 °C	ASTM D1525

Extrusion	Nominal Value Unit
Cylinder Zone 1 Temp.	246 °C
Cylinder Zone 2 Temp.	246 °C
Cylinder Zone 3 Temp.	243 °C
Cylinder Zone 4 Temp.	232 °C
Cylinder Zone 5 Temp.	232 °C
Adapter Temperature	246 °C