

Alathon® ETP H5057

High Density Polyethylene
LyondellBasell Industries

Technical Data

Product Description

ALATHON H5057 is a multi-purpose high-flow resin that exhibits enhanced low temperature impact performance, enhanced processing and thermal stability for fast cycling in multi-cavity stack molds, good color and organoleptic properties. Typical applications are rigid food containers such as cultured dairy product containers, margarine tubs, butter tubs, small frozen food containers and promotional drink cups.

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	• Cups	• 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/cm³	ASTM D1505
Apparent Density	0.59 to 0.63 g/cm³	ASTM D1895
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	57 g/10 min	ASTM D1238
Spiral Flow ^{3, 4}	53.8 cm	Internal Method

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus ⁵		ASTM D638
--	795 MPa	
1% Secant	683 MPa	
Tensile Strength ⁶ (Break)	19.0 MPa	ASTM D638
Tensile Elongation ⁶ (Break)	4.1 %	ASTM D638
Flexural Modulus ⁷		ASTM D790
--	1050 MPa	
1% Secant	972 MPa	
2% Secant	820 MPa	

Impact	Nominal Value Unit	Test Method
Notched Izod Impact (23°C)	21 J/m	ASTM D256
Unnotched Izod Impact (-18°C)	330 J/m	ASTM D256

Hardness	Nominal Value Unit	Test Method
Durometer Hardness (Shore D)	69	ASTM D2240

Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load 0.45 MPa, Unannealed	64.0 °C	ASTM D648
Vicat Softening Temperature	118 °C	ASTM D1525
Peak Melting Temperature	126 °C	ASTM D3418
Peak Crystallization Temperature (DSC)	113 °C	ASTM D3418

Injection	Nominal Value Unit
Rear Temperature	232 °C