

Alathon® M5365X01

High Density Polyethylene
LyondellBasell Industries

Technical Data

Product Description

ALATHON M5365X01 is a high density copolymer with a narrow molecular weight distribution. This resin provides high impact strength and stress crack resistance, excellent color, low odor and good processability. Typical applications include open head pails, large shipping containers and 55-gallon drum lids.

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®		
Availability	• Asia Pacific • Europe	• North America • South America	
Features	• Copolymer • Good Colorability • Good Processability	• High ESCR (Stress Crack Resist.) • High Impact Resistance • Low to No Odor	• Narrow Molecular Weight Distribution
Uses	• Industrial Containers	• Lids	• Pails

Physical	Nominal Value Unit	Test Method
Density	0.953 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)	6.5 g/10 min	ASTM D1238
Spiral Flow ^{3, 4}	22.6 cm	

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus ⁵		ASTM D638
-- ⁶	1440 MPa	
1% Secant	1130 MPa	
Tensile Strength ⁷		ASTM D638
Yield	27.2 MPa	
Break	> 27.9 MPa	
Tensile Elongation ⁷		ASTM D638
Yield	10 %	
Break	> 2100 %	
Flexural Modulus ⁸		ASTM D790
-- ⁶	1340 MPa	
1% Secant	1210 MPa	
2% Secant	1020 MPa	

Impact	Nominal Value Unit	Test Method
Notched Izod Impact (23°C)	54 J/m	ASTM D256
Unnotched Izod Impact (-18°C)	No Break	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	72.0 °C	ASTM D648
Brittleness Temperature ⁹	< -76.0 °C	ASTM D746
Vicat Softening Temperature	127 °C	ASTM D1525
Peak Melting Temperature	130 °C	ASTM D3418
Peak Crystallization Temperature (DSC)	116 °C	ASTM D3418