

Alathon® M5372

High Density Polyethylene
LyondellBasell Industries

Message:

ALATHON M5372 is a copolymer with narrow molecular weight distribution. This resin provides high impact strength and stress crack resistance, excellent color, low odor and good processing stability. Typical applications include open head pails and large shipping containers.

General Information			
UL YellowCard	E62552-100150735		
Features	Copolymer		
	Food Contact Acceptable		
	Good Processability		
	High ESCR (Stress Crack Resist.)		
	High Impact Resistance		
	Low to No Odor		
	Narrow Molecular Weight Distribution		
Uses	Pails		
	Shipping Containers		
Agency Ratings	FDA 21 CFR 177.1520		
Forms	Pellets		
Processing Method	Injection Molding		
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)	6.9	g/10 min	ASTM D1238
Spiral Flow	22.4	cm	Internal Method
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	70		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹			ASTM D638
--	911	MPa	
1% Secant	765	MPa	
Tensile Strength ²			ASTM D638
Yield	27.2	MPa	
Break	21.9	MPa	
Tensile Elongation ³			ASTM D638
Yield	11	%	
Break	1200	%	

Flexural Modulus ⁴			ASTM D790
--	1290	MPa	
1% Secant	1190	MPa	
2% Secant	977	MPa	
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	48	J/m	ASTM D256
Unnotched Izod Impact (-18°C)	No Break		ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45 MPa, Unannealed)	70.0	°C	ASTM D648
Brittleness Temperature	< -76.0	°C	ASTM D746
Vicat Softening Temperature	127	°C	ASTM D1525
Peak Melting Temperature	131	°C	ASTM D3418
Peak Crystallization Temperature (DSC)	116	°C	ASTM D3418
Injection	Nominal Value	Unit	
Rear Temperature	232	°C	
Middle Temperature	243	°C	
Front Temperature	246	°C	
Nozzle Temperature	246	°C	
NOTE			
1.	Type I, 50 mm/min		
2.	Type IV, 50 mm/min		
3.	Type IV, 50 mm/min		
4.	13 mm/min		

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