

Alathon® M4661

High Density Polyethylene
LyondellBasell Industries

Message:

ALATHON M4661 exhibits excellent impact, warp and environmental stress crack resistance. Typical applications are closures, institutional seating and consumer durables. Through precise control of the molecular weight distribution M4661 shows enhanced processability for a product with this melt index

General Information			
Features	Food Contact Acceptable		
	Good Impact Resistance		
	Good Processability		
	High ESCR (Stress Crack Resist.)		
	Warp Resistant		
Uses	Closures		
	Consumer Applications		
	Seats		
Agency Ratings	FDA 21 CFR 177.1520		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	0.946	g/cm ³	ASTM D1505
Apparent Density	0.59 to 0.63	g/cm ³	ASTM D1895
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	6.1	g/10 min	ASTM D1238
Spiral Flow	22.4	cm	Internal Method
Environmental Stress-Cracking Resistance			ASTM D1693
10% Igepal	57.6	hr	
100% Igepal	115	hr	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹			ASTM D638
--	765	MPa	ASTM D638
1% Secant	621	MPa	
Tensile Strength ²			
Yield	23.6	MPa	ASTM D638
Break	14.8	MPa	
Tensile Elongation ³			ASTM D638
Yield	12	%	
Break	610	%	
Flexural Modulus ⁴			ASTM D790

--	1010	MPa	
1% Secant	938	MPa	
2% Secant	779	MPa	
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	53	J/m	ASTM D256
Unnotched Izod Impact (-18°C)	No Break		ASTM D4812
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45 MPa, Unannealed)	62.0	°C	ASTM D648
Brittleness Temperature	< -76.0	°C	ASTM D746
Vicat Softening Temperature	123	°C	ASTM D1525
Peak Melting Temperature	128	°C	ASTM D3418
Peak Crystallization Temperature (DSC)	113	°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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