

Alathon® H5112

High Density Polyethylene
LyondellBasell Industries

Message:

ALATHON H5112 is a medium-molecular-weight-distribution resin with balanced impact/ESCR and high flow characteristics. Typical applications include housewares, food containers, pail handles and toys.

General Information			
Features	Food Contact Acceptable		
	Good Impact Resistance		
	High ESCR (Stress Crack Resist.)		
	High Flow		
	Med.-Wide Molecular Weight Distrib.		
Uses	Containers		
	Food Containers		
	Handles		
	Household Goods		
	Toys		
Agency Ratings	FDA 21 CFR 177.1520		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	0.951	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)	12	g/10 min	ASTM D1238
Spiral Flow	35.1	cm	Internal Method
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	71		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹			ASTM D638
--	884	MPa	
1% Secant	727	MPa	
Tensile Strength ² (Break)	26.4	MPa	ASTM D638
Tensile Elongation ³ (Break)	11	%	ASTM D638
Flexural Modulus ⁴			ASTM D790
--	1170	MPa	
1% Secant	1090	MPa	
2% Secant	909	MPa	

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	30	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)	70.0	°C	ASTM D648
Brittleness Temperature	< -76.0	°C	ASTM D746
Vicat Softening Temperature	124	°C	ASTM D1525
Peak Melting Temperature	128	°C	ASTM D3418
Peak Crystallization Temperature (DSC)	114	°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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