

Alathon® ETP H4250

High Density Polyethylene
LyondellBasell Industries

Message:

ALATHON H4250 is a high-flow "freezer" grade resin that exhibits enhanced cold temperature impact performance, enhanced processing and thermal stability, with good color and organoleptic properties. Typical applications are rigid food containers such as four, five and six-quart ice cream containers that are produced at high speeds in fast cycling multi-cavity stack molds.

General Information			
Features	Fast Molding Cycle		
	Food Contact Acceptable		
	Good Organoleptic Properties		
	Good Processability		
	Good Thermal Stability		
	High Flow		
	Low Temperature Impact Resistance		
Uses	Food Containers		
Agency Ratings	FDA 21 CFR 177.1520		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	0.942	g/cm ³	ASTM D1505
Apparent Density	0.59 to 0.62	g/cm ³	ASTM D1895
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	50	g/10 min	ASTM D1238
Spiral Flow	43.7	cm	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	61		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			ASTM D638
-- ¹	943	MPa	
1% Secant ²	692	MPa	
Tensile Strength ³ (Break)	21.1	MPa	ASTM D638
Tensile Elongation ⁴ (Break)	12	%	ASTM D638
Flexural Modulus ⁵			ASTM D790
--	941	MPa	
1% Secant	826	MPa	
2% Secant	704	MPa	
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	35	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)	59.4	°C	ASTM D648
Vicat Softening Temperature	116	°C	ASTM D1525
Peak Melting Temperature	124	°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.	50 mm/min		
2.	Type I, 50 mm/min		
3.	Type IV, 50 mm/min		
4.	Type IV, 50 mm/min		
5.	13 mm/min		

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