

Technical Data Sheet

Alathon H5057

High Density Polyethylene

Product Description

Alathon H5057 is a multi-purpose high-flow resin that exhibits enhanced low temperature impact performance, enhanced processing and thermal stability for fast cycling in multi-cavity stack molds, good color and organoleptic properties. Typical applications are rigid food containers such as cultured dairy product containers, margarine tubs, butter tubs, small frozen food containers and promotional drink cups.

Application TWIM Food Containers

Market Rigid Packaging

Processing Method Injection Molding

Typical Properties	Nominal Value	English Units	Nominal Value	SI Units	Test Method
Physical					
Melt Flow Rate, (190 °C/2.16 kg)	57	g/10 min	57	g/10 min	ASTM D1238
Density, (23 °C)	0.948	g/cm ³	0.948	g/cm ³	ASTM D1505
Bulk Density	37-39	lb/ft ³	593-625	kg/m ³	ASTM D1895
Spiral Flow	21.2	in	53.8	cm	LYB Method
Mechanical					
Flexural Modulus					
(1% Secant)	141000	psi	972	MPa	ASTM D790
(2% Secant)	119000	psi	820	MPa	ASTM D790
Flexural Young's Modulus	152000	psi	1050	MPa	ASTM D790
Tensile Modulus, (1% Secant)	96000	psi	683	MPa	ASTM D638
Tensile Young's Modulus	115000	psi	795	MPa	ASTM D638
Tensile Stress at Break, (23 °C)	2760	psi	19	MPa	ASTM D638
Tensile Elongation at Break, (23 °C)	4.1	%	4.1	%	ASTM D638
Impact					
Notched Izod Impact Strength, (23 °C)	0.4	ft-lb/in	21	J/m	ASTM D256
Unnotched Impact Strength, (-18 °C)	6.1	ft-lb/in	330	J/m	ASTM D4812
Hardness					
Shore Hardness, (Shore D, max)	69		69		ASTM D2240
Thermal					
Vicat Softening Temperature	244	°F	118	°C	ASTM D1525
Deflection Temperature Under Load, (66 psi, Unannealed)	148	°F	64	°C	ASTM D648
Melting Temperature	259.2	°F	126.2	°C	ASTM D3418
Crystallization Temperature	236.0	°F	113.4	°C	ASTM D3418