

Technical Data Sheet

Alathon H4837



High Density Polyethylene

Product Description

Alathon H4837 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 4-, 5- and 6- quart ice cream containers that are produced in fast cycling multi-cavity stack molds.

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)	40	g/10 min	40	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	18.4	in	46.7	cm	LYB Method
Mechanical					
Flexural Modulus					
(1% Secant)	143000	psi	985	MPa	ASTM D790
(2% Secant)	120000	psi	827	MPa	ASTM D790
Flexural Young's Modulus	154000	psi	1060	MPa	ASTM D790
Tensile Modulus, (1% Secant)	96200	psi	663	MPa	ASTM D638
Tensile Young's Modulus	120000	psi	827	MPa	ASTM D638
Tensile Stress at Break, (23 °C)	3160	psi	22	MPa	ASTM D638
Tensile Elongation at Break, (23 °C)	5.4	%	5.4	%	ASTM D638
Impact					
Notched Izod Impact Strength, (23 °C)	0.43	ft-lb/in	23	J/m	ASTM D256
Unnotched Impact Strength, (-18 °C)	6.8	ft-lb/in	360	J/m	ASTM D4812
Hardness					
Shore Hardness, (Shore D, max)	62		62		ASTM D2240
Thermal					
Vicat Softening Temperature	250	°F	121	°C	ASTM D1525
Deflection Temperature Under Load, (66 psi, Unannealed)	147	°F	64	°C	ASTM D648
Melting Temperature	259.7	°F	126.5	°C	ASTM D3418
Crystallization Temperature	236.5	°F	113.6	°C	ASTM D3418