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Technical Data Sheet

Alathon H5112

High Density Polyethylene

Product Description

Alathon H5112 is a medium molecular weight distribution ethylene-octene copolymer designed for injection molding. Typical applications include housewares, containers, and industrial storage bins.

Application	Caps & Closures; Containers; Housewares; Sports, Leisure & Toys
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)	12	g/10 min	12	g/10 min	ASTM D1238
Density, (23 °C)	0.951	g/cm³	0.951	g/cm³	ASTM D1505
Bulk Density	37-39	lb/ft³	593-625	kg/m³	ASTM D1895
Spiral Flow	13.8	in	35.1	cm	LYB Method
Mechanical					
Flexural Modulus					
(1% Secant)	158000	psi	1090	MPa	ASTM D790
(2% Secant)	132000	psi	910	MPa	ASTM D790
Flexural Young's Modulus	170000	psi	1170	MPa	ASTM D790
Tensile Modulus, (1% Secant)	106000	psi	730	MPa	ASTM D638
Tensile Young's Modulus	128000	psi	883	MPa	ASTM D638
Tensile Stress at Break, (23 °C)	3830	psi	26.4	MPa	ASTM D638
Tensile Elongation at Yield, (23 °C)	11	%	11	%	ASTM D638
Impact					
Notched Izod Impact Strength, (23 °C)	0.56	ft-lb/in	30	J/m	ASTM D256
Unnotched Impact Strength, (-18 °C)	No Break		No Break		ASTM D4812
Hardness					
Shore Hardness, (Shore D, max)	71		71		ASTM D2240
Thermal					
Vicat Softening Temperature	255	°F	124	°C	ASTM D1525
Low Temperature Brittleness, F_{50}	<-105	°F	<-76	°C	ASTM D746
Deflection Temperature Under Load, (66 psi, Unannealed)	157	°F	70	°C	ASTM D648
Melting Temperature	262.8	°F	128.2	°C	ASTM D3418
Crystallization Temperature	237.6	°F	114.2	°C	ASTM D3418