Technical Data Sheet

Alathon M5350

High Density Polyethylene

Product Description

Alathon M5350 is a copolymer with a narrow molecular weight distribution. This resin provides high impact strength, excellent color, low odor and good processing stability. Typical applications include open head pails, large shipping containers and 55-gallon drum lids.

Application	Containers; Pails
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)	4.5	g/10 min	4.5	g/10 min	ASTM D1238
Density, (23 °C)	0.953	g/cm³	0.953	g/cm³	ASTM D1505
Bulk Density	33-37	lb/ft³	529-593	kg/m³	ASTM D1895
Spiral Flow	8.1	in	20.6	cm	LYB Method
Mechanical					
Flexural Modulus					
(1% Secant)	187000	psi	1290	MPa	ASTM D790
(2% Secant)	154000	psi	1060	MPa	ASTM D790
Flexural Young's Modulus	199000	psi	1370	MPa	ASTM D790
Tensile Modulus, (1% Secant)	117000	psi	807	MPa	ASTM D638
Tensile Young's Modulus	148000	psi	1020	MPa	ASTM D638
Tensile Stress at Break, (23 °C)	>4200	psi	>28	MPa	ASTM D638
Tensile Stress at Yield, (23 °C)	4060	psi	28	MPa	ASTM D638
Tensile Elongation at Break, (23 °C)	>1980	%	>1980	%	ASTM D638
Tensile Elongation at Yield, (23 °C)	9	%	9	%	ASTM D638
Impact					
Notched Izod Impact Strength, (23 °C)	0.82	ft-lb/in	44	J/m	ASTM D256
Unnotched Impact Strength, (-18 °C)	No Break		No Break		ASTM D4812
Hardness					
Shore Hardness, (Shore D, max)	70		70		ASTM D2240
Thermal					
Vicat Softening Temperature	259	°F	126	°C	ASTM D1525
Low Temperature Brittleness, F_{50}	<-105	°F	<-76	°C	ASTM D746
Deflection Temperature Under Load, (66 psi, Unannealed)	164	°F	73.1	°C	ASTM D648
Melting Temperature	267.3	°F	130.7	°C	ASTM D3418
Crystallization Temperature	241.5	°F	116.4	°C	ASTM D3418