Technical Data Sheet

Alathon M6080UV

High Density Polyethylene

Product Description

Alathon M6080UV is a narrow molecular weight distribution homopolymer that exhibits enhanced flow characteristics and good balance of stiffness and impact resistance. Typical applications include cases, tote bins, crates and trays. M6080UV contains a UV stabilizer for outdoor applications.

Regulatory Status

For regulatory compliance information, see *Alathon* M6080UV Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

Status	Commercial: Active
Availability	North America
Application	Crates; Pallets/Trays/Tote Bins
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)	7.9	g/10 min	7.9	g/10 min	ASTM D1238
Density, (23 °C)	0.960	g/cm³	0.960	g/cm³	ASTM D1505
Bulk Density	37-39	lb/ft³	593-625	kg/m³	ASTM D1895
Spiral Flow	8.6	in	21.8	cm	LYB Method
Mechanical					
Flexural Modulus					
(1% Secant)	190000	psi	1310	MPa	ASTM D790
(2% Secant)	155000	psi	1070	MPa	ASTM D790
Flexural Young's Modulus	205000	psi	1410	MPa	ASTM D790
Tensile Modulus, (1% Secant)	123000	psi	848	MPa	ASTM D638
Tensile Young's Modulus	146000	psi	1010	MPa	ASTM D638
Tensile Stress at Break, (23 °C)	2300	psi	15.9	MPa	ASTM D638
Tensile Stress at Yield, (23 °C)	4250	psi	29.3	MPa	ASTM D638
Tensile Elongation at Break, (23 °C)	380	%	380	%	ASTM D638
Tensile Elongation at Yield, (23 °C)	11	%	11	%	ASTM D638
Impact					
Notched Izod Impact Strength, (23 °C)	1.4	ft-lb/in	75	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	264	°F	129	°C	ASTM D1525
Low Temperature Brittleness, F_{50}	<-105	°F	<-76	°C	ASTM D746

Deflection Temperature Under Load, (66 psi, Unannealed)	176	°F	80	°C	ASTM D648
Melting Temperature	270.9	°F	132.7	°C	ASTM D3418
Crystallization Temperature	240.6	°F	115.9	°C	ASTM D3418

Notes

Conditions of Tensile Stress and Elongation values are: 50 mm/min, Type IV specimen.

Conditions of Flexural Modulus values are: 0.5 inches/min or 12.5 mm/min.

Conditions of Tensile Modulus values are: 50 mm/min, Type I Specimen.

Spiral Flow measures the number of inches of flow produced when molten resin is injected into a long, spiral channel (0.0625" insert), at a constant injection pressure of 1000 psi with a melt temperature of 440 °F.

Deflection Temperature Under Load and Low Temperature Brittleness data are for control and development work and are not intended for use in design or predicting performance at elevated or sub-ambient temperatures.

These are typical property values not to be construed as specification limits.