Petrothene

GA594189

Linear Low Density Polyethylene
Injection Molding Grade
Melt Index 140 Density 0.933

Applications

Petrothene GA594189 is a pelletized LLDPE copolymer resin for injection molding thin-walled items requiring high flow and short cycle times. GA594189 exhibits excellent flow, warp resistance and surface appearance.

Regulatory Status

GA594189 meets the requirements of the Food and Drug Administration regulation, 21 CFR 177.1520. This regulation allows the use of this olefin polymer in "...articles or components of articles intended for use in contact with food." Specific limitations or conditions of use may apply. Contact your Equistar Product Safety representative for more information.

Processing Techniques

Specific recommendations for processing GA594189 can only be made when the processing conditions, equipment and end use are known.

Suggested Start-up Conditions

Extruder Zone	**Rear**	**Center**	**Front**	**Nozzle**
Cylinder Temperature °F (°C)	350 (177)	375 (190)	400 (204)	400 (204)

Typical Properties

Property	**Nominal Value**	**Units**	**Test Method**
Melt Index	140	g/10 min	ASTM D2238
Density	0.933	g/cc	ASTM D1505
Spiral Flow[1]	26.4 (67.2)	in (cm)	Equistar
Tensile Strength @ Break[2]	2,000 (14)	psi (MPa)	ASTM D638
Tensile Strength @ Yield[2]	2,400 (17)	psi (MPa)	ASTM D638
Elongation @ Yield[2]	10	%	ASTM D638
1% Secant Modulus[3]	91,000 (630)	psi (MPa)	ASTM D790
2% Secant Modulus[3]	79,000 (540)	psi (MPa)	ASTM D790
Vicat Softening Point	188 (86)	°F (°C)	ASTM D1525
Hardness, Shore D	61		ASTM D2240
Heat Deflection Temperature, 66 psi	124 (51)	°F (°C)	ASTM D648
Low Temperature Brittleness, F_{50}[4]	-68 (-56)	°F (°C)	ASTM D746

[1] Measures the number on inches of flow produced when molten resin is injected into a long, spiral channel (0.625" insert), at a constant injection pressure of 1000 psi with a melt temperature of 440°F.
[2] Crosshead speed – 2 in/ min
[3] Crosshead speed - ½ in/ min
[4] Test method does not necessarily indicate the lowest temperature at which the material may be used.

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