

Petrothene®

GA564189

Linear Low Density Polyethylene

Injection Molding Grade

Melt Index 21 Density 0.924

Applications

PETROTHENE GA564189 exhibits good stiffness and low temperature toughness. Typical applications include trash cans, industrial containers, housewares and toys.

Regulatory Status

GA564189 meets the requirements of the Food and Drug Administration 21 CFR 177.1520. This regulation allows the use of this olefin polymer in "...articles or components or articles intended for use in contact with food." Specific limitations or conditions of use may apply. Contact your Equistar sales representative for more information.

Processing Techniques

Specific recommendations for processing GA564189 can only be made when the processing conditions, equipment and end use are known. For further suggestions, please contact your Equistar sales representative.

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	21	g/10 min	ASTM D 1238
Density	0.924	g/cc	ASTM D 1505
Spiral Flow ¹	12.9 (32.8)	in (cm)	Equistar
Tensile Strength @ Break	1,200 (8)	psi (MPa)	ASTM D 638
Tensile Strength @ Yield ²	2,000 (14)	psi (MPa)	ASTM D 638
Elongation @ Yield ²	12	%	ASTM D 638
1% Secant Modulus ³	55,000 (380)	psi (MPa)	ASTM D 790
2% Secant Modulus ³	46,000 (320)	psi (MPa)	ASTM D 790
Vicat Softening Point	205 (96)	°F (°C)	ASTM D 1525
Hardness, Shore D	53		ASTM D 2240
Heat Deflection Temperature, 66 psi ⁴	117 (47)	°F (°C)	ASTM D 648
Low Temperature Brittleness, F ₅₀ ⁵	< -105 (<-76)	°F (°C)	ASTM D 746

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 1,000 psi with a melt temperature of 440°F.

² Crosshead speed - 20 in/ min

³ Crosshead speed - 1/2 in/ min

⁴ Data is for control and development work and not intended for use in design or predicting endurance at elevated temperatures.

⁵ Test method has been found useful for specification purposes, but does not necessarily indicate the lowest temperature at which the material may be used.