

Alathon®

L50PE100

High Density Polyethylene
Pressure Pipe Extrusion Grade

High Load Melt Index 16.0 Density 0.949

Applications

ALATHON L50PE100 is a bimodal high molecular weight high density polyethylene copolymer resin designed to meet the high performance requirements of pressure pipe applications. When L50PE100 is compounded with an Equistar [approved black concentrate](#) this [formula](#) meets the following standards.

- Plastics Pipe Institute (PPI) PE 100 per ISO 9080
- Plastics Pipe Institute (PPI) PE 4710 per ASTM D 3350-06
- NSF Standard 14 and Standard 61 for Potable Water Pipe and Fittings.
- ASTM D 3350 Cell Classification **445576C**.
- [Chemical Resistance per ASTM D 2513-01a, Section 5.4.](#)

Processing Techniques

Specific recommendations for [processing](#) L50PE100 can only be made when the processing conditions, equipment and end use are known. For further suggestions, please contact your Equistar sales representative.

Conformance

ASTM D 3350	Nominal Value	Units	Test Method
Minimum Required Strength	10	MPa	ISO 9080
PENT ¹ at 2.4 MPa and 80 °C	>500	hours	F 1473
Hydrostatic Design Basis, 73 °F (23 °C)	1,600	psi	D 2837
Hydrostatic Design Basis, 140 °F (60 °C)	1,000	psi	D 2837

Typical Properties

Property ²	Nominal Value	Units	ASTM Test Method
Melt Index, MI-5	0.35	g/10 min	D 1238
High Load Melt Index	16.0	g/10 min	D 1238
Melt Flow, 2,160g @190°C	0.07	/10 min	D 1238
Density	0.949	g/cc	D 1505
DSC Induction Temperature	250	°C	D 3350
2 % Secant Modulus	147,000	psi	D 790
Tensile Strength @ Yield	3,500	psi	D 638
Tensile Strength @ Break	5,100	psi	D 638
Elongation @ Break	625	%	D 638
Heat Deflection Temperature @66 psi	76	°C	D 648

¹ Values were obtained from L50PE100 compounded with an approved black masterbatch exceeding the minimum requirement of 500 hours.

² Values were determined on natural resin.

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