

LyondellBasell Alathon[®] L4904 High Density Polyethylene, Pipe and Sheet Extrusion Grade

Category : Polymer , Thermoplastic , Polyethylene (PE) , HDPE , High Density Polyethylene (HDPE), Pipe Grade

Material Notes:

Alathon L4904 is a bimodal, high molecular weight, high density polyethylene resin with excellent processability characteristics that meet the high performance requirements of demanding pressure pipe applications including gas distribution, industrial piping, gas gathering, municipal water service lines and sewers. L4904 is designed specifically to provide resistance to pipe failure by rapid crack propagation and slow crack growth mechanisms. When L4904 is compounded with an Equistar approved black at the correct loading (see page 2) this formula meets the following standards. Plastics Pipe Institute (PPI) PE 4710. PE 100 per PPI TR-4. ASTM D 3350 Cell Classification 445574C and 445576C. Chemical Resistance per ASTM D 2513 NSF Standard 14 and Standard 61 for Potable Water Pipe and Fittings. This product is from the former Equistar product line.

Order this product through the following link:

http://www.lookpolymers.com/polymer_LyondellBasell-Alathon-L4904-High-Density-Polyethylene-Pipe-and-Sheet-Extrusion-Grade.php

Physical Properties	Metric	English	Comments
Density	0.949 g/cc	0.0343 lb/in ³	ASTM D1505
Melt Flow	0.040 g/10 min	0.040 g/10 min	ASTM D1238
	7.0 g/10 min	7.0 g/10 min	High Load; ASTM D1238

Mechanical Properties	Metric	English	Comments
PENT	>= 2000 hour @Temperature 80.0 °C	>= 2000 hour @Temperature 176 °F	2.4MPa
Tensile Strength at Break	35.2 MPa	5100 psi	ASTM D638
Tensile Strength, Yield	24.1 MPa	3500 psi	ASTM D638
Elongation at Break	800 %	800 %	ASTM D638
Creep Strength	12.4 MPa @Temperature 20.0 °C, Time >=720000 sec	1800 psi @Temperature 68.0 °F, Time >=200 hour	
2% Secant Modulus	1.01 GPa	146 ksi	ASTM D790
Hydrostatic Design Basis	11.0 MPa	1600 psi	ASTM D2837
	6.89 MPa @Temperature 60.0 °C	1000 psi @Temperature 140 °F	ASTM D2837

Thermal Properties	Metric	English	Comments
Brittleness Temperature	$\leq -76.0 \text{ }^{\circ}\text{C}$	$\leq -105 \text{ }^{\circ}\text{F}$	ASTM D746
DSC Induction Temperature	$250 \text{ }^{\circ}\text{C}$	$482 \text{ }^{\circ}\text{F}$	

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