

# Alathon® L4903

High Density (HMW) Polyethylene  
LyondellBasell Industries

Message:

Alathon L4903 is a high molecular weight high density copolymer with broad bimodal molecular weight distribution. This resin exhibits excellent machine direction tear in an HMW-HD resin as well as low gel levels. Typical applications include trash can liners and products requiring incorporation of PCR.

General Information			
Features	Low speed solidification crystal point		
	High molecular weight		
	Copolymer		
	Good tear strength		
	Compliance of Food Exposure		
	Bimodal molecular weight distribution		
Uses	Films		
	Lining		
Agency Ratings	FDA 21 CFR 177.1520		
Forms	Particle		
Processing Method	Film extrusion		
Physical	Nominal Value	Unit	Test Method
Density	0.949	g/cm <sup>3</sup>	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.027	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	13	µm	
secant modulus			ASTM D882
MD : 13 µm	993	MPa	ASTM D882
TD : 13 µm	1020	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Yield, 13 µm	37.2	MPa	ASTM D882
TD: Yield, 13 µm	28.3	MPa	ASTM D882
MD: Broken, 13 µm	80.0	MPa	ASTM D882
TD: Broken, 13 µm	52.4	MPa	ASTM D882
Tensile Elongation			ASTM D882
MD: Broken, 13 µm	330	%	ASTM D882
TD: Broken, 13 µm	410	%	ASTM D882
Dart Drop Impact <sup>1</sup> (13 µm)	230	g	ASTM D1709
Elmendorf Tear Strength			ASTM D1922
MD : 13 µm	10	g	ASTM D1922

TD : 13 μm	60	g	ASTM D1922
Extrusion instructions			
Film Data Obtained Under the Following Extrusion Conditions:Alpine 200 mm 3 Layer Die (40/35/25); 3 Extruders: 65 mm / 75 mm / 50 mm; Die Gap = 1.5 mm; Film Thickness = 0.5 mil; 500 lbs/ hr; Internal Bubble Cooling; Neck Height = 8 x DD; Blow Up Ratio = 4:1			
NOTE			
1.	F50		

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