

# Alathon® L5906

High Density (HMW) Polyethylene  
LyondellBasell Industries

Message:

Alathon L5906 is a high molecular weight high density polyethylene homopolymer with a broad bimodal molecular weight distribution. This resin exhibits excellent stiffness, very high tensile strength, and low gels. L5906 is selected by customers for use in draw tapes and paper replacement applications as well as other mono-and multi-layer films requiring both stiffness and toughness.

General Information			
Features	Low speed solidification crystal point		
	Rigid, good		
	High molecular weight		
	High tensile strength		
	Homopolymer		
	Good toughness		
	Compliance of Food Exposure		
	Bimodal molecular weight distribution		
Uses	Films		
	Strap		
Agency Ratings	FDA 21 CFR 177.1520		
Forms	Particle		
Processing Method	Film extrusion		
Physical	Nominal Value	Unit	Test Method
Density	0.960	g/cm <sup>3</sup>	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.075	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	20	µm	
secant modulus			ASTM D882
MD : 20 µm	1240	MPa	ASTM D882
TD : 20 µm	1300	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Yield, 20 µm	40.0	MPa	ASTM D882
TD: Yield, 20 µm	35.9	MPa	ASTM D882
MD: Break, 20 µm	88.3	MPa	ASTM D882
TD: Break, 20 µm	68.9	MPa	ASTM D882
Tensile Elongation			ASTM D882
MD: Break, 20 µm	340	%	ASTM D882
TD: Break, 20 µm	340	%	ASTM D882

Dart Drop Impact <sup>1</sup> (20 μm)	390	g	ASTM D1709
Elmendorf Tear Strength			ASTM D1922
MD : 20 μm	20	g	ASTM D1922
TD : 20 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 = 0.8 mil; 500 lbs/ hr; Internal Bubble Cooling; Neck Height = 8 x DD; Blow Up Ratio = 4:1

#### NOTE

1. f50

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#### Recommended distributors for this material

### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

