

# ExxonMobil™ LLDPE LL 1001 Series

## Linear Low Density Polyethylene Resin

### Product Description

LL 1001 are butene LLDPE blown film resins having good drawdown. Films made from LL 1001 resins exhibit good tensile and toughness properties.

### General

Availability <sup>1</sup>	<ul style="list-style-type: none"> <li>▪ Latin America</li> <li>▪ North America</li> </ul>
Additive	<ul style="list-style-type: none"> <li>▪ LL 1001X72: Antiblock: 5000 ppm; Slip: 850 ppm; Processing Aid: No; Stabilizer, Unspecified: Yes</li> <li>▪ LL 1001X26: Antiblock: No; Slip: No; Processing Aid: Yes; Thermal Stabilizer: Yes</li> <li>▪ LL 1001X31: Antiblock: No; Slip: No; Processing Aid: No; Thermal Stabilizer: Yes</li> <li>▪ LL 1001X74: Antiblock: 5000 ppm; Slip: 1700 ppm; Processing Aid: No; Thermal Stabilizer: Yes</li> <li>▪ LL 1001xKW: Antiblock: 3500 ppm; Slip: 1500 ppm; Processing Aid: No; Thermal Stabilizer: Yes</li> <li>▪ LL 1001X76: Antiblock: 7000 ppm; Slip: No; Processing Aid: No; Thermal Stabilizer: Yes</li> <li>▪ LL 1001xKI: Antiblock: 2500 ppm; Slip: 1000 ppm; Processing Aid: No; Thermal Stabilizer: Yes</li> </ul>
Applications	<ul style="list-style-type: none"> <li>▪ Agricultural Film</li> <li>▪ Bag in Box</li> <li>▪ Barrier Food Packaging</li> <li>▪ Blown Film</li> <li>▪ Bread Bags</li> <li>▪ Food packaging</li> <li>▪ Form Fill And Seal Packaging</li> <li>▪ Freezer Film</li> <li>▪ Garment Film</li> <li>▪ General Packaging</li> <li>▪ Heavy Duty Bags</li> <li>▪ Ice Bags</li> <li>▪ Industrial Liners</li> <li>▪ Industrial Packaging</li> <li>▪ Lamination Film</li> <li>▪ Liners</li> <li>▪ Multilayer Packaging Film</li> <li>▪ Packaging Films</li> <li>▪ Produce Bags</li> <li>▪ Refuse Bags</li> <li>▪ Shoppers</li> <li>▪ Stand Up Pouches</li> <li>▪ Trash Bags</li> </ul>
Revision Date	<ul style="list-style-type: none"> <li>▪ 07/01/2011</li> </ul>

Resin Properties	Typical Value (English)	Typical Value (SI)	Test Based On
Density	0.918 g/cm <sup>3</sup>	0.918 g/cm <sup>3</sup>	ASTM D1505
Melt Index (190°C/2.16 kg)	1.0 g/10 min	1.0 g/10 min	ASTM D1238
Peak Melting Temperature	250 °F	121 °C	ExxonMobil Method

Film Properties	Typical Value (English)	Typical Value (SI)	Test Based On
Tensile Strength at Yield MD	1400 psi	9.4 MPa	ASTM D882
Tensile Strength at Yield TD	1400 psi	9.5 MPa	ASTM D882
Tensile Strength at Break MD	7700 psi	50 MPa	ASTM D882
Tensile Strength at Break TD	5100 psi	35 MPa	ASTM D882
Elongation at Break MD	570 %	570 %	ASTM D882
Elongation at Break TD	850 %	850 %	ASTM D882
Secant Modulus MD - 1% Secant	28000 psi	190 MPa	ASTM D882
Secant Modulus TD - 1% Secant	32000 psi	220 MPa	ASTM D882
Dart Drop Impact	100 g	100 g	ASTM D1709A
Elmendorf Tear Strength MD	80 g	80 g	ASTM D1922
Elmendorf Tear Strength TD	400 g	400 g	ASTM D1922
Puncture Force	10 lbf	43 N	ExxonMobil Method
Puncture Energy	28 in-lb	3.1 J	ExxonMobil Method

Optical Properties	Typical Value (English)	Typical Value (SI)	Test Based On
Gloss (45°)	45	45	ASTM D2457
Haze	15 %	15 %	ASTM D1003

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#### Legal Statement

This product is not intended for use in medical applications and should not be used in any such applications.

Contact your ExxonMobil Chemical Customer Service Representative for potential food contact application compliance (e.g. FDA, EU, HPFB).

#### Processing Statement

Film (1 mil / 25.4 micron) was made from LL 1001X26 on a 2.5 inch blown film having a 6 inch die with a 60 mil die gap at a 2.5:1 blow-up ratio and melt temperature of 390-395°F (198-202°C).

#### Notes

Typical properties: these are not to be construed as specifications.

<sup>1</sup> Product may not be available in one or more countries in the identified Availability regions. Please contact your Sales Representative for complete Country Availability.

For additional technical, sales and order assistance: [www.exxonmobilchemical.com/ContactUs](http://www.exxonmobilchemical.com/ContactUs)

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