

# ExxonMobil™ LLDPE LL 1002 Series

## Linear Low Density Polyethylene Resin

### Product Description

LL 1002 resins are butene LLDPE designed for the blown film process. Films made from LL 1002 resins have very good tensile and toughness properties. LL 1002.09 is a granular material which, while it can be used for film production, is also suitable for compounding.

### 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 1002X75: Antiblock: 7500 ppm; Slip: 1350 ppm; Processing Aid: No; Thermal Stabilizer: Yes</li> <li>▪ LL 1002.09 Granular: Antiblock: No; Slip: No; Processing Aid: No; Thermal Stabilizer: Yes</li> <li>▪ LL 1002.80: Antiblock: 3500 ppm; Slip: 1500 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>▪ Blown Film</li> <li>▪ Cast Film</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>▪ Industrial Packaging</li> <li>▪ Institutional Can Liners</li> <li>▪ Liners</li> <li>▪ Mulch Film</li> <li>▪ Packaging Films</li> <li>▪ Produce Bags On A Roll</li> <li>▪ Shoppers</li> <li>▪ Trash Can Liners</li> </ul>
Revision Date	<ul style="list-style-type: none"> <li>▪ 03/01/2010</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>	ExxonMobil Method
Melt Index (190°C/2.16 kg)	2.0 g/10 min	2.0 g/10 min	ASTM D1238
Peak Melting Temperature	253 °F	123 °C	ExxonMobil Method

Film Properties	Typical Value (English)	Typical Value (SI)	Test Based On
Tensile Strength at Yield MD	1200 psi	8.5 MPa	ASTM D882
Tensile Strength at Yield TD	1200 psi	8.6 MPa	ASTM D882
Tensile Strength at Break MD	5300 psi	37 MPa	ASTM D882
Tensile Strength at Break TD	3800 psi	26 MPa	ASTM D882
Elongation at Break MD	660 %	660 %	ASTM D882
Elongation at Break TD	780 %	780 %	ASTM D882
Secant Modulus MD - 1% Secant	26000 psi	180 MPa	ASTM D882
Secant Modulus TD - 1% Secant	28000 psi	200 MPa	ASTM D882
Dart Drop Impact	70 g	70 g	ASTM D1709A
Elmendorf Tear Strength MD	120 g	120 g	ASTM D1922
Elmendorf Tear Strength TD	340 g	340 g	ASTM D1922
Puncture Energy	9.7 in-lb	1.1 J	ExxonMobil Method

Optical Properties	Typical Value (English)	Typical Value (SI)	Test Based On
Gloss (45°)	22	22	ASTM D2457
Haze	29 %	29 %	ASTM D1003

### Legal Statement

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

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

### Processing Statement

Film (1 mil / 25.4 micron) was made on a 2.5 inch blown film line having a 6 inch die with a 60 mil die gap at a 2.5:1 blow-up ratio and melt temperature of 377-381°F (191-194°C).

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#### 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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