

# ExxonMobil™ LLDPE LL 3201 Series

## Linear Low Density Polyethylene Resin

### Product Description

ExxonMobil™ LL 3201 resins are ethylene 1-hexene linear low density polyethylene film resins. Films made from LL 3201 resins have outstanding tensile, stiffness and toughness properties. These superior properties, along with good drawdown capability, permit usage in many demanding packaging applications. Fluoropolymers, of fluorine-containing compounds, and TNPP are not intentionally added.

### 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 3201.17: Antiblock: 4250 ppm; Slip: Yes; Thermal Stabilizer: Yes; Alternative Processing Aid: Yes</li> <li>LL 3201.70: Antiblock: No; Slip: No; Processing Aid: No; Thermal Stabilizer: Yes</li> </ul> |
| Applications              | <ul style="list-style-type: none"> <li>Freezer Film</li> <li>Grocery Sacks</li> <li>Heavy Duty Bags</li> <li>Merchandise Bags</li> </ul>   |
| Form(s)                   | <ul style="list-style-type: none"> <li>Pellets</li> </ul>  |
| Revision Date             | <ul style="list-style-type: none"> <li>10/15/2024</li> </ul>   |

| Resin Properties           | Typical Value (English) | Typical Value (SI)      | Test Based On     |
|----------------------------|-------------------------|-------------------------|-------------------|
| Density                    | 0.925 g/cm <sup>3</sup> | 0.925 g/cm <sup>3</sup> | ASTM D1505        |
| Melt Index (190°C/2.16 kg) | 0.80 g/10 min           | 0.80 g/10 min           | ASTM D1238        |
| Peak Melting Temperature   | 257 °F                  | 125 °C                  | ExxonMobil Method |

| Thermal                     | Typical Value (English) | Typical Value (SI) | Test Based On     |
|-----------------------------|-------------------------|--------------------|-------------------|
| Vicat Softening Temperature | 226 °F                  | 108 °C             | ExxonMobil Method |

| Film Properties               | Typical Value (English) | Typical Value (SI) | Test Based On     |
|-------------------------------|-------------------------|--------------------|-------------------|
| Tensile Strength at Yield MD  | 1700 psi                | 12 MPa             | ASTM D882         |
| Tensile Strength at Yield TD  | 1900 psi                | 13 MPa             | ASTM D882         |
| Tensile Strength at Break MD  | 8300 psi                | 60 MPa             | ASTM D882         |
| Tensile Strength at Break TD  | 6700 psi                | 46 MPa             | ASTM D882         |
| Elongation at Break MD        | 530 %                   | 530 %              | ASTM D882         |
| Elongation at Break TD        | 790 %                   | 790 %              | ASTM D882         |
| Secant Modulus MD - 1% Secant | 38000 psi               | 260 MPa            | ASTM D882         |
| Secant Modulus TD - 1% Secant | 46000 psi               | 320 MPa            | ASTM D882         |
| Dart Drop Impact              | 130 g                   | 130 g              | ASTM D1709A       |
| Elmendorf Tear Strength MD    | 220 g                   | 220 g              | ASTM D1922        |
| Elmendorf Tear Strength TD    | 670 g                   | 670 g              | ASTM D1922        |
| Puncture Force                | 11 lbf                  | 47 N               | ExxonMobil Method |
| Puncture Energy               | 33 in-lb                | 3.7 J              | ExxonMobil Method |

| Optical Properties | Typical Value (English) | Typical Value (SI) | Test Based On |
|--------------------|-------------------------|--------------------|---------------|
| Gloss (45°)        | 58                      | 58                 | ASTM D2457    |
| Haze               | 14 %                    | 14 %               | 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.

Fluoropolymers, or fluorine-containing compounds, and tris(nonylphenol) phosphite (TNPP) CAS# 26523-78-4 are not intentionally used by ExxonMobil in this product. Although this product is not routinely tested for their presence, based on product composition knowledge these substances are not expected to be present. However, the fact that these substances are not intentionally used by ExxonMobil in this product does not exclude that trace levels of these substances may be present as a result of the specific characteristics of the raw materials and/or of the manufacturing process.

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#### Processing Statement

Film (1.0 mil/25.4 micron) made on a 2.5 inch (63.5 mm) blown film line with a 2.5:1 blow-up ratio, a melt temperature of 395-415°F (202-213°C), a 60 mil (1.52 mm) die gap at a rate of 10 lbs/hr/in die circumference (1.79 kg/hr/cm).

#### 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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