

# ExxonMobil™ LLDPE LL 1002YB Cast

## Linear Low Density Polyethylene Resin

### Product Description

LL 1002YB is an LLDPE resin designed for cast films. It offers high gloss and excellent drawdown in both blown and cast film applications. LL 1002YB may also be used as a blend partner with LDPE resins to improve film properties and processability.

### General

|                           |                                                                                                              |                                                                                                                    |                                                                 |
|---------------------------|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| Availability <sup>1</sup> | <ul style="list-style-type: none"> <li>Africa &amp; Middle East</li> <li>Asia Pacific</li> </ul>             | <ul style="list-style-type: none"> <li>Europe</li> <li>Latin America</li> </ul>                                    | <ul style="list-style-type: none"> <li>North America</li> </ul> |
| Additive                  | <ul style="list-style-type: none"> <li>Antiblock: No</li> <li>Slip: No</li> </ul>                            | <ul style="list-style-type: none"> <li>Processing Aid: No</li> <li>Thermal Stabilizer: Yes</li> </ul>              |                                                                 |
| Applications              | <ul style="list-style-type: none"> <li>Cast Film</li> <li>Cast Stretch Film</li> <li>Garment Film</li> </ul> | <ul style="list-style-type: none"> <li>General Packaging</li> <li>Hygiene film</li> <li>Packaging Films</li> </ul> | <ul style="list-style-type: none"> <li>Personal Care</li> </ul> |
| Revision Date             | 06/01/2013                                                                                                   |                                                                                                                    |                                                                 |

| 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   | 250 °F                  | 121 °C                  | ExxonMobil Method |

| Film Properties               | Typical Value (English) | Typical Value (SI) | Test Based On     |
|-------------------------------|-------------------------|--------------------|-------------------|
| Tensile Strength at Yield MD  | 1100 psi                | 7.4 MPa            | ASTM D882         |
| Tensile Strength at Yield TD  | 940 psi                 | 6.5 MPa            | ASTM D882         |
| Tensile Strength at Break MD  | 9000 psi                | 60 MPa             | ASTM D882         |
| Tensile Strength at Break TD  | 3600 psi                | 25 MPa             | ASTM D882         |
| Elongation at Break MD        | 420 %                   | 420 %              | ASTM D882         |
| Elongation at Break TD        | 830 %                   | 830 %              | ASTM D882         |
| Secant Modulus MD - 1% Secant | 17000 psi               | 110 MPa            | ASTM D882         |
| Secant Modulus TD - 1% Secant | 19000 psi               | 130 MPa            | ASTM D882         |
| Dart Drop Impact              | < 50 g                  | < 50 g             | ASTM D1709A       |
| Elmendorf Tear Strength MD    | 20 g                    | 20 g               | ASTM D1922        |
| Elmendorf Tear Strength TD    | 430 g                   | 430 g              | ASTM D1922        |
| Puncture Force                | 10 lbf                  | 43 N               | ExxonMobil Method |
| Puncture Energy               | 21 in-lb                | 2.3 J              | ExxonMobil Method |

| Optical Properties | Typical Value (English) | Typical Value (SI) | Test Based On |
|--------------------|-------------------------|--------------------|---------------|
| Gloss (45°)        | 98                      | 98                 | ASTM D2457    |
| Haze               | 1.7 %                   | 1.7 %              | 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 (0.8 mil / 20.3 micron) made from LL 1002YB on a 3.5 inch (88.9 mm) cast film line with a 5 inch (14 cm) melt curtain length, a 534°F (279°C) melt temperature, 80°F (26.7°C) chill roll temperature and 750 fpm (229 mpm) line speed.

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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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