

## ExxonMobil™ LLDPE LL 3003 Series

### Linear Low Density Polyethylene Resin

#### **Product Description**

LL 3003 resins are hexene copolymer LLDPE cast film resins. Films made from LL 3003 resins have outstanding tensile properties, as well as stiffness and toughness. These superior properties, along with the excellent drawability of these resins, make them versatile packaging film resins.

| General                       |  |           |                                       |                                     |                      |
|-------------------------------|--|-----------|---------------------------------------|-------------------------------------|----------------------|
| Availability <sup>1</sup>     | <ul> <li>Latin America</li> </ul>  |           | <ul> <li>North America</li> </ul>     |                                     |                      |
| Additive                      | <ul> <li>LL 3003.32: Antiblock: No; Slip: No; Processing Aid: No; Thermal Stabilizer: Yes</li> <li>LL 3003.39: Antiblock: No; Slip: No; Processing Aid: No; Thermal Stabilizer: Yes</li> </ul> |           |                                       |                                     |                      |
| Applications                  | <ul> <li>Cast Film</li> </ul>  |           | <ul> <li>Cast Stretch Film</li> </ul> | <ul> <li>Packaging Films</li> </ul> |                      |
| Revision Date                 | • 03/01/2010   |           |                                       |                                     |                      |
| Resin Properties              | Typical Value  | (English) | Typical Value                         | (SI)                                | Test Based On        |
| Density                       | 0.918  | g/cm³     | 0.918                                 | g/cm³                               | ExxonMobil<br>Method |
| Melt Index (190°C/2.16 kg)    | 3.2  | g/10 min  | 3.2                                   | g/10 min                            | ASTM D1238           |
| Peak Melting Temperature      | 254  | °F        | 124                                   | °C                                  | ExxonMobil<br>Method |
| Film Properties               | Typical Value  | (English) | Typical Value                         | (SI)                                | Test Based On        |
| Tensile Strength at Yield MD  | 1000   | psi       | 7.0                                   | MPa                                 | ASTM D882            |
| Tensile Strength at Yield TD  | 980  | psi       | 6.7                                   | MPa                                 | ASTM D882            |
| Tensile Strength at Break MD  | 8500   | psi       | 60                                    | MPa                                 | ASTM D882            |
| Tensile Strength at Break TD  | 5300   | psi       | 36                                    | MPa                                 | ASTM D882            |
| Elongation at Break MD        | 560  | %         | 560                                   | %                                   | ASTM D882            |
| Elongation at Break TD        | 830  | %         | 830                                   | %                                   | ASTM D882            |
| Secant Modulus MD - 1% Secant | 17000  | psi       | 120                                   | MPa                                 | ASTM D882            |
| Secant Modulus TD - 1% Secant | 18000  | psi       | 120                                   | MPa                                 | ASTM D882            |
| Dart Drop Impact              | 90   | g         | 90                                    | g                                   | ASTM D1709A          |
| Elmendorf Tear Strength MD    | 250  | g         | 250                                   | g                                   | ASTM D1922           |
| Elmendorf Tear Strength TD    | 570  | 9         | 570                                   | g                                   | ASTM D1922           |
| Puncture Force                | 7  | lbf       | 32                                    | N                                   | ExxonMobil<br>Method |
| Puncture Energy               | 26   | in·lb     | 2.9                                   | J                                   | ExxonMobil<br>Method |
| Optical Properties            | Typical Value  | (English) | Typical Value                         | (SI)                                | Test Based On        |
| Gloss (45°)                   | 91   |           | 91                                    |                                     | 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 micron) obtained on a Black Clawson 3.5 inch cast line at a 5.5 inch melt curtain length, 520-580°F melt temperature, 80°F chill roll temperature and 750 fpm line speed.

#### Notes

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

<sup>&</sup>lt;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.



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#### For additional technical, sales and order assistance: www.exxonmobilchemical.com/ContactUs

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