

## Product Datasheet



# ExxonMobil™ LDPE LD 103 Series

## Low Density Polyethylene Resin

### Product Description

ExxonMobil™ LD 103 resins are homopolymer industrial film resins with excellent toughness. LD 103 resins have a low melt index, which provides good impact strength and melt strength over a range of gauges.

### 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>LD 103.PM: Antiblock: No; Slip: No; Thermal Stabilizer: Yes</li> <li>LD 103.LS: Antiblock: 3000 ppm; Slip: No; Thermal Stabilizer: Yes</li> </ul>                                                                      |
| Applications              | <ul style="list-style-type: none"> <li>Agricultural Film</li> <li>Blend Partner</li> <li>Co-Extrusion Films</li> <li>Form Fill And Seal Packaging</li> <li>Freezer Film</li> <li>Liners</li> <li>Medium Duty Shrink Film</li> <li>Rubber Bale Wrap</li> </ul> |
| Form(s)                   | <ul style="list-style-type: none"> <li>Pellets</li> </ul>                                                                                                                                                                                                     |
| Revision Date             | <ul style="list-style-type: none"> <li>06/17/2020</li> </ul>                                                                                                                                                                                                  |

| Resin Properties           | Typical Value (English) | Typical Value (SI)      | Test Based On     |
|----------------------------|-------------------------|-------------------------|-------------------|
| Density                    | 0.919 g/cm <sup>3</sup> | 0.919 g/cm <sup>3</sup> | ASTM D1505        |
| Melt Index (190°C/2.16 kg) | 1.1 g/10 min            | 1.1 g/10 min            | ASTM D1238        |
| Peak Melting Temperature   | 226 °F                  | 108 °C                  | ExxonMobil Method |

| Thermal                     | Typical Value (English) | Typical Value (SI) | Test Based On     |
|-----------------------------|-------------------------|--------------------|-------------------|
| Vicat Softening Temperature | 196 °F                  | 91.0 °C            | ExxonMobil Method |

| Film Properties               | Typical Value (English) | Typical Value (SI) | Test Based On     |
|-------------------------------|-------------------------|--------------------|-------------------|
| Tensile Strength at Yield MD  | 1500 psi                | 10 MPa             | ASTM D882         |
| Tensile Strength at Yield TD  | 1500 psi                | 10 MPa             | ASTM D882         |
| Tensile Strength at Break MD  | 4500 psi                | 31 MPa             | ASTM D882         |
| Tensile Strength at Break TD  | 3500 psi                | 24 MPa             | ASTM D882         |
| Elongation at Break MD        | 250 %                   | 250 %              | ASTM D882         |
| Elongation at Break TD        | 610 %                   | 610 %              | ASTM D882         |
| Secant Modulus MD - 1% Secant | 29000 psi               | 200 MPa            | ASTM D882         |
| Secant Modulus TD - 1% Secant | 37000 psi               | 260 MPa            | ASTM D882         |
| Dart Drop Impact              | 120 g                   | 120 g              | ASTM D1709A       |
| Elmendorf Tear Strength MD    | 270 g                   | 270 g              | ASTM D1922        |
| Elmendorf Tear Strength TD    | 90 g                    | 90 g               | ASTM D1922        |
| Puncture Force                | 14 lbf                  | 60 N               | ExxonMobil Method |
| Puncture Energy               | 19 in-lb                | 2.1 J              | ExxonMobil Method |

| Optical Properties | Typical Value (English) | Typical Value (SI) | Test Based On |
|--------------------|-------------------------|--------------------|---------------|
| Gloss (45°)        | 54                      | 54                 | ASTM D2457    |
| Haze               | 9.2 %                   | 9.2 %              | 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 (1.5 mil / 38.1 micron) made from LD 103.09 resin on a 2.5 inch (63.5 mm) blown film line with a 2.5:1 blow-up ratio, a melt temperature of 340-360°F (171-182°C), a 30 mil (0.76 mm) die gap at a rate of 8 lbs/hr/in die circumference (1.43 kg/hr/cm).

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**ExxonMobil™ LDPE LD 103 Series**  
Low Density Polyethylene Resin**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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