

## Technical Data Sheet

**Microthene MP574189**

Linear Low Density Polyethylene  
LyondellBasell Industries  
Engineering Plastics

**Product Description**

Microthene MP574189 exhibits excellent flow and impact with good stiffness. Typical applications include lids, closures, containers, housewares and medical items. MP574189 is 16 mesh powder and is also available in pellet form Petrothene GA574189.

MP574189 meets the requirements of the Food and Drug Administration regulation, 21 CFR 177.1520. This regulation allows the use of this olefin polymer in "...articles or components of articles intended for use in contact with food." Specific limitations or conditions of use may apply.

Without exception, all potential activities for applications in the pharmaceutical, medical device, laboratory and diagnostics area have to be discussed with the relevant Technical (P & AD) and Business contacts first.

**General**

|                   |                                          |                                              |                                   |
|-------------------|------------------------------------------|----------------------------------------------|-----------------------------------|
| Material Status   | • Commercial: Active                     |                                              |                                   |
| Availability      | • North America                          |                                              |                                   |
| Features          | • Food Contact Acceptable<br>• Good Flow | • Good Impact Resistance<br>• Good Stiffness |                                   |
| Uses              | • Closures<br>• Containers               | • Household Goods<br>• Lids                  | • Medical/Healthcare Applications |
| Forms             | • Powder                                 |                                              |                                   |
| Processing Method | • Injection Molding                      |                                              |                                   |

| Physical                                                           | Nominal Value (English) | Nominal Value (SI)      | Test Method     |
|--------------------------------------------------------------------|-------------------------|-------------------------|-----------------|
| Density                                                            | 0.926 g/cm <sup>3</sup> | 0.926 g/cm <sup>3</sup> | ASTM D1505      |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)                          | 50 g/10 min             | 50 g/10 min             | ASTM D1238      |
| Spiral Flow <sup>1, 2</sup>                                        | 17.9 in                 | 45.5 cm                 | Internal Method |
| Mechanical                                                         | Nominal Value (English) | Nominal Value (SI)      | Test Method     |
| Tensile Strength                                                   |                         |                         | ASTM D638       |
| Yield <sup>3</sup>                                                 | 2200 psi                | 15.2 MPa                |                 |
| Break                                                              | 1300 psi                | 8.96 MPa                |                 |
| Tensile Elongation <sup>3</sup> (Yield)                            | 11 %                    | 11 %                    | ASTM D638       |
| Flexural Modulus <sup>4</sup>                                      |                         |                         | ASTM D790       |
| 1% Secant                                                          | 70000 psi               | 483 MPa                 |                 |
| 2% Secant                                                          | 61000 psi               | 421 MPa                 |                 |
| Hardness                                                           | Nominal Value (English) | Nominal Value (SI)      | Test Method     |
| Durometer Hardness (Shore D)                                       | 60                      | 60                      | ASTM D2240      |
| Thermal                                                            | Nominal Value (English) | Nominal Value (SI)      | Test Method     |
| Deflection Temperature Under Load<br>66 psi (0.45 MPa), Unannealed | 117 °F                  | 47.2 °C                 | ASTM D648       |
| Brittleness Temperature                                            | -98.0 °F                | -72.2 °C                | ASTM D746       |
| Vicat Softening Temperature                                        | 184 °F                  | 84.4 °C                 | ASTM D1525      |

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| Injection          | Nominal Value (English) | Nominal Value (SI) |
|--------------------|-------------------------|--------------------|
| Rear Temperature   | 350 °F                  | 177 °C             |
| Middle Temperature | 375 °F                  | 191 °C             |
| Front Temperature  | 400 °F                  | 204 °C             |
| Nozzle Temperature | 400 °F                  | 204 °C             |

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### Notes

<sup>1</sup> Melt Temperature: 440°F (227°C), Injection Pressure: 1.00E+3 psi (68.9 bar)

<sup>2</sup> 0.625 in

<sup>3</sup> 20 in/min (510 mm/min)

<sup>4</sup> 0.50 in/min (13 mm/min)

### Notes

These are typical property values not to be construed as specification limits.

### Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

### Product Storage and Handling

- Product should be stored in dry conditions at temperatures below 50°C and protected from UV-light
- Improper storage may bring damage to the packaging and can negatively affects on the quality of this product
- Keep material completely dry for good processing

### Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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