

# Microthene® MP574189

Linear Low Density Polyethylene

LyondellBasell Industries

## Message:

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 Information                       |                                 |                   |                 |
|---|---------------------------------|-------------------|-----------------|
| Features                                  | Food Contact Acceptable         |                   |                 |
|   | Good Flow                       |                   |                 |
|   | Good Impact Resistance          |                   |                 |
|   | Good Stiffness                  |                   |                 |
| Uses                                      | Closures                        |                   |                 |
|   | Containers                      |                   |                 |
|   | Household Goods                 |                   |                 |
|   | Lids                            |                   |                 |
|   | Medical/Healthcare Applications |                   |                 |
| Agency Ratings                            | FDA 21 CFR 177.1520             |                   |                 |
| Forms                                     | Powder                          |                   |                 |
| Processing Method                         | Injection Molding               |                   |                 |
| Physical                                  | Nominal Value                   | Unit              | Test Method     |
| Density                                   | 0.926                           | g/cm <sup>3</sup> | ASTM D1505      |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 50                              | g/10 min          | ASTM D1238      |
| Spiral Flow                               | 45.5                            | cm                | Internal Method |
| Hardness                                  | Nominal Value                   | Unit              | Test Method     |
| Durometer Hardness (Shore D)              | 60                              |                   | ASTM D2240      |
| Mechanical                                | Nominal Value                   | Unit              | Test Method     |
| Tensile Strength                          |                                 |                   | ASTM D638       |
| Yield <sup>1</sup>                        | 15.2                            | MPa               |                 |
| Break                                     | 8.96                            | MPa               |                 |
| Tensile Elongation <sup>2</sup> (Yield)   | 11                              | %                 | ASTM D638       |
| Flexural Modulus <sup>3</sup>             |                                 |                   | ASTM D790       |
| 1% Secant                                 | 483                             | MPa               |                 |
| 2% Secant                                 | 421                             | MPa               |                 |
| Thermal                                   | Nominal Value                   | Unit              | Test Method     |

| Deflection Temperature Under Load (0.45 MPa, Unannealed) | 47.2          | °C   | ASTM D648  |
|--|---------------|------|------------|
| Brittleness Temperature                                  | -72.2         | °C   | ASTM D746  |
| Vicat Softening Temperature                              | 84.4          | °C   | ASTM D1525 |
| Injection  | Nominal Value | Unit |            |
| Rear Temperature   | 177           | °C   |            |
| Middle Temperature                                       | 191           | °C   |            |
| Front Temperature  | 204           | °C   |            |
| Nozzle Temperature                                       | 204           | °C   |            |
| NOTE   |               |      |            |
| 1.   | 510 mm/min    |      |            |
| 2.   | 510 mm/min    |      |            |
| 3.   | 13 mm/min     |      |            |

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### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

