

# LNP™ LUBRICOMP™ ML004LS compound

Polypropylene  
SABIC Innovative Plastics

Message:

LNP LUBRICOMP ML004LS is a compound based on Polypropylene resin containing 20% PTFE. Added features of this material include: Wear Resistant, Heat Stabilized, Low Extractible.

Also known as: LNP\* LUBRICOMP\* Compound ML-4040 HS LE

Product reorder name: ML004LS

| General Information       |                      |                   |             |
|---------------------------|----------------------|-------------------|-------------|
| Additive                  | Heat Stabilizer      |                   |             |
|                           | PTFE Lubricant (20%) |                   |             |
| Features                  | Good Wear Resistance |                   |             |
|                           | Heat Stabilized      |                   |             |
|                           | Low Extractables     |                   |             |
|                           | Lubricated           |                   |             |
| Processing Method         | Injection Molding    |                   |             |
| Physical                  | Nominal Value        | Unit              | Test Method |
| Specific Gravity          | 1.03                 | g/cm <sup>3</sup> | ASTM D792   |
| Molding Shrinkage         |                      |                   | ASTM D955   |
| Flow : 24 hr              | 1.0 to 3.0           | %                 |             |
| Across Flow : 24 hr       | 3.0                  | %                 |             |
| Water Absorption          |                      |                   |             |
| 24 hr, 50% RH             | 0.020                | %                 | ASTM D570   |
| Equilibrium, 23°C, 50% RH | 0.020                | %                 | ISO 62      |
| Mechanical                | Nominal Value        | Unit              | Test Method |
| Tensile Modulus           |                      |                   |             |
| -- <sup>1</sup>           | 1920                 | MPa               | ASTM D638   |
| --                        | 1670                 | MPa               | ISO 527-2/1 |
| Tensile Strength          |                      |                   |             |
| Yield <sup>2</sup>        | 33.4                 | MPa               | ASTM D638   |
| Yield                     | 32.0                 | MPa               | ISO 527-2/5 |
| Break <sup>3</sup>        | 16.7                 | MPa               | ASTM D638   |
| Break                     | 22.0                 | MPa               | ISO 527-2/5 |
| Tensile Elongation        |                      |                   |             |
| Yield <sup>4</sup>        | 6.0                  | %                 | ASTM D638   |
| Yield                     | 5.7                  | %                 | ISO 527-2/5 |
| Break <sup>5</sup>        | 38                   | %                 | ASTM D638   |
| Break                     | 28                   | %                 | ISO 527-2/5 |

|                                                  |                    |                                                 |                     |
|--------------------------------------------------|--------------------|-------------------------------------------------|---------------------|
| Flexural Modulus                                 |                    |                                                 |                     |
| 50.0 mm Span <sup>6</sup>                        | 1720               | MPa                                             | ASTM D790           |
| -- <sup>7</sup>                                  | 1480               | MPa                                             | ISO 178             |
| Flexural Stress                                  | 37.0               | MPa                                             | ISO 178             |
| Coefficient of Friction                          |                    |                                                 | ASTM D3702 Modified |
| vs. Itself - Dynamic                             | 0.42               |                                                 |                     |
| vs. Itself - Static                              | 0.28               |                                                 |                     |
| Wear Factor                                      |                    |                                                 | ASTM D3702 Modified |
| Ring                                             | 0.100              | 10 <sup>-10</sup> in <sup>5</sup> -min/ft-lb-hr |                     |
| Washer                                           | 7.00               | 10 <sup>-10</sup> in <sup>5</sup> -min/ft-lb-hr |                     |
| Impact                                           | Nominal Value      | Unit                                            | Test Method         |
| Notched Izod Impact                              |                    |                                                 |                     |
| 23°C                                             | 25                 | J/m                                             | ASTM D256           |
| 23°C <sup>8</sup>                                | 3.6                | kJ/m <sup>2</sup>                               | ISO 180/1A          |
| Unnotched Izod Impact                            |                    |                                                 |                     |
| 23°C                                             | 570                | J/m                                             | ASTM D4812          |
| 23°C <sup>9</sup>                                | 35                 | kJ/m <sup>2</sup>                               | ISO 180/1U          |
| Instrumented Dart Impact                         |                    |                                                 |                     |
| 23°C, Total Energy                               | 3.80               | J                                               | ASTM D3763          |
| --                                               | 2.10               | J                                               | ISO 6603-2          |
| Thermal                                          | Nominal Value      | Unit                                            | Test Method         |
| Deflection Temperature Under Load                |                    |                                                 |                     |
| 0.45 MPa, Unannealed, 3.20 mm                    | 116                | °C                                              | ASTM D648           |
| 0.45 MPa, Unannealed, 64.0 mm Span <sup>10</sup> | 93.0               | °C                                              | ISO 75-2/Bf         |
| 1.8 MPa, Unannealed, 3.20 mm                     | 60.0               | °C                                              | ASTM D648           |
| 1.8 MPa, Unannealed, 64.0 mm Span <sup>11</sup>  | 56.0               | °C                                              | ISO 75-2/Af         |
| CLTE                                             |                    |                                                 | ASTM D696           |
| Flow : -30 to 30°C                               | 1.5E-4             | cm/cm/°C                                        |                     |
| Transverse : -30 to 30°C                         | 1.4E-4             | cm/cm/°C                                        |                     |
| Injection                                        | Nominal Value      | Unit                                            |                     |
| Drying Temperature                               | 82.2               | °C                                              |                     |
| Drying Time                                      | 4.0                | hr                                              |                     |
| Rear Temperature                                 | 193 to 204         | °C                                              |                     |
| Middle Temperature                               | 216 to 227         | °C                                              |                     |
| Front Temperature                                | 238 to 249         | °C                                              |                     |
| Processing (Melt) Temp                           | 227 to 249         | °C                                              |                     |
| Mold Temperature                                 | 32.2 to 48.9       | °C                                              |                     |
| Back Pressure                                    | 0.172 to 0.344     | MPa                                             |                     |
| Screw Speed                                      | 30 to 60           | rpm                                             |                     |
| NOTE                                             |                    |                                                 |                     |
| 1.                                               | 50 mm/min          |                                                 |                     |
| 2.                                               | Type I, 5.0 mm/min |                                                 |                     |

|     |                    |
|-----|--------------------|
| 3.  | Type I, 5.0 mm/min |
| 4.  | Type I, 5.0 mm/min |
| 5.  | Type I, 5.0 mm/min |
| 6.  | 1.3 mm/min         |
| 7.  | 2.0 mm/min         |
| 8.  | 80*10*4            |
| 9.  | 80*10*4            |
| 10. | 80*10*4 mm         |
| 11. | 80*10*4 mm         |

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#### Recommended distributors for this material

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