

# LNP™ LUBRICOMP™ OCP36A compound

Branched Polyphenylene Sulfide

SABIC Innovative Plastics

## Message:

LNP LUBRICOMP OCL-4536 is a compound based on PPS - Branched resin containing PTFE, Carbon Fiber, Silicone. Added features of this material include: Internally Lubricated, Electrically Conductive.

Also known as: LNP\* LUBRICOMP\* Compound OCL-4536

Product reorder name: OCP36A

| General Information               |                                  |                   |             |
|-----------------------------------|----------------------------------|-------------------|-------------|
| Filler / Reinforcement            | Carbon fiber reinforced material |                   |             |
| Additive                          | PTFE lubricant                   |                   |             |
| Features                          | Conductivity                     |                   |             |
|                                   | Lubrication                      |                   |             |
|                                   | Branched polymer structure       |                   |             |
| Processing Method                 | Injection molding                |                   |             |
| Physical                          | Nominal Value                    | Unit              | Test Method |
| Specific Gravity                  |                                  |                   |             |
| --                                | 1.49                             | g/cm <sup>3</sup> | ASTM D792   |
| --                                | 1.53                             | g/cm <sup>3</sup> | ISO 1183    |
| Molding Shrinkage                 |                                  |                   |             |
| Flow: 24 hours                    | 0.20                             | %                 | ASTM D955   |
| Transverse flow: 24 hours         | 0.70                             | %                 | ASTM D955   |
| Vertical flow direction: 24 hours | 0.66                             | %                 | ISO 294-4   |
| Flow direction: 24 hours          | 0.15                             | %                 | ISO 294-4   |
| Mechanical                        | Nominal Value                    | Unit              | Test Method |
| Tensile Modulus                   |                                  |                   |             |
| -- <sup>1</sup>                   | 18600                            | MPa               | ASTM D638   |
| --                                | 19900                            | MPa               | ISO 527-2/1 |
| Tensile Strength                  |                                  |                   |             |
| Yield                             | 128                              | MPa               | ASTM D638   |
| Yield                             | 113                              | MPa               | ISO 527-2   |
| Fracture                          | 119                              | MPa               | ASTM D638   |
| Fracture                          | 113                              | MPa               | ISO 527-2   |
| Tensile Elongation                |                                  |                   |             |
| Yield                             | 0.90                             | %                 | ASTM D638   |
| Yield                             | 0.77                             | %                 | ISO 527-2   |
| Fracture                          | 1.6                              | %                 | ASTM D638   |
| Fracture                          | 0.78                             | %                 | ISO 527-2   |
| Flexural Modulus                  |                                  |                   |             |

|                                                |               |                                                 |                        |
|------------------------------------------------|---------------|-------------------------------------------------|------------------------|
| --                                             | 20100         | MPa                                             | ASTM D790              |
| --                                             | 19000         | MPa                                             | ISO 178                |
| Flexural Strength                              |               |                                                 |                        |
| --                                             | 230           | MPa                                             | ASTM D790              |
| --                                             | 176           | MPa                                             | ISO 178                |
| Coefficient of Friction                        |               |                                                 |                        |
| With self-dynamics                             | 0.36          |                                                 | ASTM D3702 Modified    |
| With Self-Static                               | 0.30          |                                                 | ASTM D3702 Modified    |
| Wear Factor - Washer                           | 15.0          | 10 <sup>-10</sup> in <sup>5</sup> -min/ft-lb-hr | ASTM D3702 Modified    |
| Impact                                         | Nominal Value | Unit                                            | Test Method            |
| Notched Izod Impact                            |               |                                                 |                        |
| 23°C                                           | 37            | J/m                                             | ASTM D256              |
| 23°C <sup>2</sup>                              | 3.2           | kJ/m <sup>2</sup>                               | ISO 180/1A             |
| Unnotched Izod Impact                          |               |                                                 |                        |
| 23°C                                           | 320           | J/m                                             | ASTM D4812             |
| 23°C <sup>3</sup>                              | 14            | kJ/m <sup>2</sup>                               | ISO 180/1U             |
| Instrumented Dart Impact                       |               |                                                 |                        |
| 23°C, Energy at Peak Load                      | 6.30          | J                                               | ASTM D3763             |
| --                                             | 1.50          | J                                               | ISO 6603-2             |
| Thermal                                        | Nominal Value | Unit                                            | Test Method            |
| Deflection Temperature Under Load              |               |                                                 |                        |
| 0.45 MPa, unannealed, 3.20mm                   | 274           | °C                                              | ASTM D648              |
| 0.45 MPa, unannealed, 64.0mm span <sup>4</sup> | 272           | °C                                              | ISO 75-2/Bf            |
| 1.8 MPa, unannealed, 3.20mm                    | 259           | °C                                              | ASTM D648              |
| 1.8 MPa, unannealed, 64.0mm span <sup>5</sup>  | 248           | °C                                              | ISO 75-2/Af            |
| Linear thermal expansion coefficient           |               |                                                 |                        |
| Flow: -40 to 40°C                              | 3.6E-5        | cm/cm/°C                                        | ASTM E831, ISO 11359-2 |
| Lateral: -40 to 40°C                           | 7.2E-6        | cm/cm/°C                                        | ASTM E831              |
| Lateral: -40 to 40°C                           | 7.0E-6        | cm/cm/°C                                        | ISO 11359-2            |
| Injection                                      | Nominal Value | Unit                                            |                        |
| Drying Temperature                             | 121 - 149     | °C                                              |                        |
| Drying Time                                    | 4.0           | hr                                              |                        |
| Rear Temperature                               | 304 - 316     | °C                                              |                        |
| Middle Temperature                             | 321 - 332     | °C                                              |                        |
| Front Temperature                              | 332 - 343     | °C                                              |                        |
| Processing (Melt) Temp                         | 316 - 321     | °C                                              |                        |
| Mold Temperature                               | 138 - 166     | °C                                              |                        |
| Back Pressure                                  | 0.172 - 0.344 | MPa                                             |                        |
| Screw Speed                                    | 30 - 60       | rpm                                             |                        |
| NOTE                                           |               |                                                 |                        |
| 1.                                             | 50 mm/min     |                                                 |                        |
| 2.                                             | 80*10*4       |                                                 |                        |

|    |            |
|----|------------|
| 3. | 80*10*4    |
| 4. | 80*10*4 mm |
| 5. | 80*10*4 mm |

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