

# LIMOLEX-1000

LITHIUM COMPLEX WITH MOLYBDENUM DISULFIDE (MOS<sub>2</sub>)

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## Product Description

**LIMOLEX-1000** is multipurpose grease also called conventional grease. Multipurpose greases are made of lithium complex with molybdenum disulfide.

Particularly it is stable and resistant to mechanical constraints. These greases are produced for heavy- Duty service for extreme environments. The rust inhibiting characteristics are maximum to afford effective rust protection and long life of the grease. These lubricating solids work with chemical extreme pressure.

These multi-purpose greases operate effectively in plain and anti-friction bearings. They have excellent cohesive characteristics and they are highly resistant to mechanical shearing. They correspond to the requirements of high temperatures.

The **LIMOLEX-1000** has excellent friction reduction characteristics and easier start-up and reduced energy leading to longer bearing life.

## Applications

- Cylindrical roller bearings.
- Open gears.
- Screen bearing.
- Spherical roller bearings.
- Gear-teeth couplings.
- Spherical thrust roller bearings.
- Finishers, hot-mix asphalt stations.
- Electrical retarders.

## Benefits

- Excellent water resistance – coating film stays on the surface even in the presence of water.
- Very good EP and anti-wear properties.
- Excellent mechanical stability – grease keeps its consistency in service for long term protection.
- Very good adherence to surfaces, resistant to water wash-out.
- Large range of additives: Anti-oxidant, anti-corrosion, anti-rust.
- It gives protection against steel and copper corrosion.
- Enhanced extreme-pressure properties & resistant to shock loads.
- Excellent load-carrying performance enhanced by the presence of MoS<sub>2</sub>.
- High dropping point -Resistant to high temperatures.
- Lead & Nitrite free- For safe handling.
- It can be used on all types of Plain, Anti-friction Ball and Roller Bearings, Bushings, Rack & Pinion, Gears, Linkages, Slides, Universal joints, Kingpins, Guides, Chains, Centralized lubrication systems, Electric motors, Pumps, EOT Cranes, and other greasing applications.

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**PETRELPLUS INC.**

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## Typical Properties

| LIMOLEX-1000 with Mos2   |                      |                      |
|--|----------------------|----------------------|
| NLGI   | 1                    | 2                    |
| Appearance   | Smooth & Homogeneous | Smooth & Homogeneous |
| Color  | Dark Grey            | Dark Grey            |
| Density @ 20°C / 68°F  | 0.881                | 0.883                |
| Thickener Type   | Lithium Complex      | Lithium Complex      |
| Base oil Type  | Mineral              | Mineral              |
| Base oil Flash point °C  | 235° c               | 235° c               |
| Base oil Viscosity @ 40°C / 104°F, (mm <sup>2</sup> /s)                    | 1000                 | 1000                 |
| Consistency, ASTM D217   | 1                    | 2                    |
| Worked Penetration 60 strokes @ 25°C/77°F, ASTM D217                       | 310 – 340            | 265 – 295            |
| Worked Penetration 100000 strokes @ 25°C/77°F change from 60 strokes       | 20                   | 22                   |
| Drop Point, °C, ASTM D2265   | 195                  | 200                  |
| Water Wash out @ 79°C  | 5.4                  | 3.2                  |
| Water resistance, 90°C, 3hrs   | 1                    | 1                    |
| Copper Corrosion 24hrs 100°C   | 1b                   | 1b                   |
| Corrosion Protection (SKF EMCOR)   | 0/0                  | 0/0                  |
| Four ball wear Test (1hrs, 40kg, 1200rpm, 75°C / 167°F) scar Diameter (mm) | 0.55                 | 0.55                 |
| Four ball weld load Test (kg)  | 620                  | 620                  |
| Four ball Load wear index (kg)   | +100                 | +100                 |
| Timken EP test, OK load, ASTM D 2509 (Kg)                                  | 23                   | 23                   |
| Roll stability, 2hrs, 25°C / 77°F, penetration change (% change)           | 10                   | 5                    |
| Rust Test, ASTM D 1743   | Pass                 | Pass                 |
| Molybdenum Disulfide (MoS2)  | Yes                  | Yes                  |
| Pumpability  | Poor                 | Poor                 |

**Available Packs: 1, 5,18 and 180Kg.**

**Shelf Life – 36 Months from the Manufacturing month.**

Due to continual product research and development, the information contained herein is subject to change without notification. Typical Properties may vary slightly. The Material Safety Data Sheet (MSDS) are available upon request through our sales office. All related specifications are meets or exceeds.

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product** LIMOLEX-1000  
**Supplier** PETRELPLUS INC.  
 One World Center, Tower One, 9<sup>th</sup> Floor, Senapati Bapat Marg, Lower Parel, Mumbai-400013, Maharashtra.  
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**2. COMPOSITION**

Composition of Base oil, Lithium complex Soap, Molybdenum Disulfide and performance-based additives.

**3. HAZARDS IDENTIFICATION**

**FIRE** -Flammable at high temperature.  
**HEALTH**  
 Eye contact -May cause mild irritation to the eyes upon direct contact.  
 Skin contact -Prolonged contact may defat the skin or can cause dermatitis.  
 Inhalation -hazards.  
 Ingestion -Harmful if swallowed.

**4. FIRST-AID MEASURES**

Inhalation -Remove person to fresh air. Seek medical help if discomfort persists.  
 Ingestion -Do not induce vomiting. Seek medical support.  
 Skin Contact -Immediately flush skin with plenty of water for at least 15 minutes.  
 Eye Contact -Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally.

**5. FIRE-FIGHTING METHODS**

Extinguishing media -Use dry chemical powder or carbon di – oxide or foam.  
 Special protective equipment -Positive pressure self-contained breathing apparatus.

**6. ACCIDENTAL RELEASE MEASURE**

Personal protection -Adequate ventilation, gloves, goggles, overalls and boots.  
 Environmental precautions -Avoid entry into water courses.  
 Clean up method -Absorb on inert material.

**7. STORAGE AND HANDLING**

Handling -Impervious gloves & eye protection ensure good ventilation. Keep away from source of ignition.  
 Storage -Store in a cool & dry place.

**8. EXPOSURE CONTROL / PERSONAL PROTECTION**

Respiratory protection -Not required under normal conditions.  
 Skin/hand protection -Impervious gloves, overalls, and boots.  
 Eye protection -Use Goggles

**9. TYPICAL PROPERTIES**

| <b>NLGI</b>    | <b>1</b>         | <b>2</b>        |
|----------------|------------------|-----------------|
| Thickener      | -Lithium Complex | Lithium Complex |
| Color          | - Dark Grey      | Dark Grey       |
| Drop Point, °C | - 197            | 200             |
| MoS2 content   | - Present        | Present         |



**10. STABILITY AND REACTIVITY**

|                                  |                                |
|----------------------------------|--------------------------------|
| Stability                        | -Stable                        |
| Conditions to avoid              | -Excessive temperatures        |
| Materials to avoid               | -Strong oxidizers              |
| Hazardous decomposition products | -Oxides of carbon and nitrogen |

**11. TOXICOLOGICAL INFORMATION**

|                  |                                     |
|------------------|-------------------------------------|
| Skin contact     | -Possible irritation                |
| Eye contact      | -Possible irritation                |
| Inhalation       | -Not applicable                     |
| Ingestion        | -Irritation. May cause lung damage. |
| Long term effect | -Not known                          |

**12. ECOLOGICAL INFORMATION**

|                           |                   |
|---------------------------|-------------------|
| Mobility                  | - Mobile          |
| Degradation               | - Low             |
| Accumulation              | -Not expected     |
| Short- & Long-Term effect | - Water pollutant |

**13. DISPOSAL CONSIDERATIONS**

Dispose off according to local and national regulations.

**14. TRANSPORT INFORMATION**

|     |                  |
|-----|------------------|
| CPL | - Not applicable |
| IMO | -Not applicable  |

**15. REGULATORY INFORMATION**

|           |                  |
|-----------|------------------|
| Symbol(s) | -Not applicable  |
| Phrase(s) | - Not applicable |
| Phrase(s) | - Not applicable |

**16. OTHER INFORMATION: PRODUCT SAFETY**

For safety reasons, it is IMPERATIVE that customer: -Ensure that all those within their control who use the products are supplied with all relevant information contained within the Material Safety Data Sheet and Technical Bulletin concerning the applications for which the product is designed and any instructions or warning.

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