



# PROTEC LITHIUM COMPLEX GREASE MINERAL

#### PRODUCT DESCRIPTION:

Protec lithium complex is a Lithium thickened lubricating grease formulated with mineral base oil and improved with extreme pressure (EP) additives to lubricate and protect even in heavy loaded circumstances. Mechanically very stable and easily pumpable due to its smooth consistency.

### APPLICATION:

- · Protec Lithium EP-000 and EP-00 are particularly suitable for the lubrication of enclosed gears and bearings in poorly sealed gear cases on most underground mining machinery with the exception of electric motor gearings.
- Protec Lithium EP-0 and EP-1 provide good low temperature pumpability and are suitable for centralised lubrication systems and other applications where low temperature performance is required.
- · Protec Lithium EP-2 is recommended for multipurpose applications in antifriction and plain bearings, bushings and pins under normal operating conditions.
- Protec Lithium EP-3 is is a stiffer NLGI grade 3 grease recommended for applications where maximum protection against penetration of water or solid contaminants is required.

#### FEATURES & BENEFITS:

- · Reduced wear under heavy or shock loading
- · Protection against rust and corrosion
- · Resistance to water washout
- · Extended bearing life potential
- · Good pumpability in centralised systems
- · Effective leakage control
- · Protection against rust and corrosion
- NLGI Specifications 2 & 3

# NLGI GRADES:

- NLGL2
- NLGI 3

| MEETS OR EXCEEDS THE REQUIREMENTS OF: | NLGI 000  | NLGI 00  | NLGI 0  | NLGI 1  | NLGI 2  | NLGI 3  |
|---------------------------------------|-----------|----------|---------|---------|---------|---------|
| DIN 51825                             | -         | -        | -       | KP1K-20 | KP2K-20 | KP3K-20 |
| DIN 51826                             | GP000G-20 | GP00G-20 | GP0G-20 | -       | -       | -       |

### TYPICAL PROPERTIES:

| TEST                                     | ASTM<br>METHOD | PROTEC LITHIUM COMPLEX HT |            |            |            |            |            |  |  |
|--|----------------|---------------------------|------------|------------|------------|------------|------------|--|--|
|  |                | NLGI 000                  | NLGI 00    | NLGI 0     | NLGI 1     | NLGI 2     | NLGI 3     |  |  |
| Thickener Type                           |                | Lithium                   |            |            |            |            |            |  |  |
| Color                                    |                | Light Brown               |            |            |            |            |            |  |  |
| Texture                                  |                | Smooth                    |            |            |            |            |            |  |  |
| Worked Penetration @ 25°C, 60<br>Strokes | D-217          | 460                       | 415        | 370        | 325        | 280        | 235        |  |  |
| Dropping Point, °C                       | D-2265         | >160                      | >160       | >160       | 180        | 190        | 190        |  |  |
| Timken EP Test, OK Load, Ibs             | D-2509         | 40                        | 40         | 40         | 40         | 40         | 40         |  |  |
| 4-Ball Wear, Scar, mm                    | D-2266         | 0.4                       | 0.5        | 0.4        | 0.4        | 0.4        | 0.4        |  |  |
| 4-Ball Weld Load, Kg                     | D-2596         | 250                       | 250        | 250        | 250        | 250        | 250        |  |  |
| Base Oil Viscosity @ 40°C, cSt           | D-445          | 320                       | 160        | 160        | 160        | 160        | 160        |  |  |
| Operating Temperature Range, °C          |                | -30 to 110                | -30 to 130 |  |  |

## **HEALTH & SAFETY, ENVIRONMENT:**

Prolonged and repeated contact with oil may cause skin disorders. Avoid contact. Wash immediately with soap and water. Do not discharge used oil in to drains or the environment. Dispose to an authorized used oil collection point. For further Information on Safety Guidelines please refer to MSDS available on our website phoenixlubricants.com