

## **TECHNICAL DATA SHEET**

# GearMate® 1000 MULTISERVICE OPEN GEAR LUBRICANT

Whitmore's GearMate® 1000 is specially formulated for use on open gears and other severe applications on draglines, mining shovels, ball mills and kilns.

Whitmore's GearMate® 1000 contains a high molecular weight polymer extender that resists drying, oxidation, and thermal decomposition. This is extremely helpful in areas of high dust contamination or when typical weather conditions can cause peeling and flaking from sticks, gears, and circle rails. Whitmore's blend of solid and oil-soluble anti-wear additives provides superior load carrying ability and high performance wear resistance in an environmentally safe package.

Whitmore's GearMate® 1000 has a thickener structure that inherently resists emulsification with water and has excellent mechanical and thermal stability. The low temperature capabilities allow the lubricant film to maintain its adhesive characteristics and durable protection under the most demanding conditions.

Meets the requirements of Caterpillar specification SD 4713. "Super Heavy" is suitable for CAT Shovel Hoist Drum Gears (specification SD 4713 revision June 2011).

#### **BENEFITS:**

- TCLP-SAFE passes the EPA Toxicity Characteristic Leaching Procedure. This means that the product is free of heavy metals and ozone-depleting solvents.
- WILL NOT EMULSIFY IN WATER ideal for applications and components exposed to rain, ice, and snow.
- EXTREME LOAD-CARRYING ABILITY protects during shock loading against scuffing and seizure.
- REDUCED INVENTORY in many climates a single grade can be used year-round.

#### **APPLICATIONS:**

Whitmore's GearMate® 1000 is recommended for a variety of applications on mining draglines and shovels including open gears, sticks, circle rails and rollers, and bushings and large, heavily loaded bearings.

 $\rm Gear Mate^{@}$  1000 is also highly recommended for use on open gears of kilns and ball mills.

Approved by KOMATSU.

| ASTM #            |  | TYPICAL CHARACTERISTICS  |                          |                          |                         |                         |  |
|-------------------|--|--------------------------|--------------------------|--------------------------|-------------------------|-------------------------|--|
|                   |  | Arctic                   | Light                    | Heavy                    | Extra Heavy             | Super Heavy             |  |
|                   | NLGI Grade   | 00-000                   | 0-00                     | 0                        | 1                       | 0-1                     |  |
| D-445             | Kinematic Viscosity (Base Oil with Polymer) cSt @ 40°C cSt @ 100°C                       | 700<br>                  | 1,900<br>                | 4,123<br>165             | 3,700<br>120            | 6,500<br>254            |  |
| Gardner<br>Method | Density, lb/gal @ 60°F (15.5°C) Specific Gravity, g/cc @ 60°F (15.5°C)                   | 7.50<br>0.9010           | 8.38<br>1.0060           | 8.33<br>1.0002           | 8.55<br>1.0300          | 8.55<br>1.0300          |  |
| D-92              | Flash Point, Cleveland Open Cup Base Oil, °F (°C) Finished Product with Solvent, °F (°C) | 400 (204)<br>250 (121)   | 400 (204)<br>250 (121)   | 400 (204)<br>No Solvent  | 400 (204)<br>No Solvent | 400 (204)<br>No Solvent |  |
| D-2596            | Four Ball EP<br>Weld Point, kg   | 800                      | 1000                     | 1000                     | 1000                    | 1000                    |  |
| D-2266            | Four Ball Wear<br>Scar Width, mm   | 0.7                      | 0.7                      | 0.7                      | 0.7                     | 0.7                     |  |
| D-1743            | Rust Test  | Pass                     | Pass                     | Pass                     | Pass                    | Pass                    |  |
|                   | Thickener Type   | Lithium                  | Lithium                  | Lithium                  | Lithium                 | Lithium                 |  |
|                   | Usable Temperature Range,<br>°F (°C)   | -45 (-42)<br>to 104 (40) | -35 (-37)<br>to 104 (40) | 10 (-12)<br>to 250 (121) | 30 (-1)<br>to 250 (121) | 30 (-1)<br>to 250 (121) |  |

The above are average values. Minor variations which do not affect product performance are to be expected in normal manufacturing.

### **PACKAGING**

| Shuttle Tanks | Drums | Kegs | Pails | Aerosol Cans |  |  |  |  |  |
|---------------|-------|------|-------|--------------|--|--|--|--|--|

930 Whitmore Drive • Rockwall, Texas 75087 • USA • (972) 771-1000 • 800-699-6318
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