



GEARMATE® 1000 ICT

EXTREME-SERVICE OPEN GEAR LUBRICANT

GearMate® 1000 ICT is specially formulated for use on open gears and other severe open applications on draglines and mining shovels. It is also highly recommended for the open gears of kilns and ball mills, including the most severely loaded, also in the gearboxes of traction motors found on older locomotives. GearMate 1000 ICT meets the demand for an open gear lubricant that deposits a dark, non-transparent coating on metal. The dense black coating lets the operator know that the lubricant is in place at the right quantity.

Whitmore's blend of solid and oil-soluble antiwear additives provide superior load carrying ability and high-performance wear resistance in an environmentally safe package. GearMate 1000 ICT has a thickener structure that inherently resists emulsification with water and has excellent mechanical and thermal stability. A specially selected polymer allows the lubricant film to maintain its adhesive characteristics under varying temperature 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). The Heavy grade has been approved by the Passenger Rail Agency of South Africa for use in traction motor gearboxes that use a semi-fluid grease.

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APPLICATIONS:

- Recommended for mining draglines and shovels applications including:
 - Open gears
 - Sticks
 - Circle rails and rollers
 - Bushings
 - Large heavily loaded bearings
- Highly suitable and effective for open gears of kilns, ball mills and similar rotating equipment (especially where high load and inadequate protection have resulted in pitting and scuffing of gears)

BENEFITS:

- **TCLP-SAFE** - passes the EPA Toxicity Characteristic Leaching Procedure, which means it is free of heavy metals and ozone-depleting solvents
- **DOES 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

| ASTM # | TYPICAL CHARACTERISTICS | TYPICAL CHARACTERISTICS | | | | |
|-----------------------|---|-------------------------|-----------------|-----------|------------|-------------|
| | | Arctic | All-Season | Light | Heavy | Super Heavy |
| | NLGI Grade | 000 | 00 | 0-00 | 0 | 0-1 |
| D-445 | Kinematic Viscosity (Base Oil with Polymer) | | | | | |
| | cSt @ 40°C | 1,900 | 1,900 | 1,900 | 4,123 | 6,500 |
| | cSt @ 100°C | -- | -- | -- | 165 | 254 |
| Gardner Method | Density, lb/gal @ 60°F (15.5°C) | 8.50 | 8.33 | 8.38 | 8.33 | 8.55 |
| | Specific Gravity, g/cc @ 60°F (15.5°C) | 1.0185 | 1.0000 | 1.0060 | 1.0002 | 1.0300 |
| D-92 | Flash Point, Cleveland Open Cup | | | | | |
| | Base Oil, °F (°C) | 400 (204) | 400 (204) | 400 (204) | 400 (204) | 400 (204) |
| | Finished Product w/Solvent, °F (°C) | 250 (121) | 250 (121) | 250 (121) | No Solvent | No Solvent |
| D-2596 | Four Ball EP | | | | | |
| | Weld Point, kg | 800* | 800* | 800* | 800 | 800 |
| D-2266 | Four Ball Wear | | | | | |
| | Scar Width, mm | 0.7 | 0.7 | 0.7 | 0.7 | 0.6 |
| D-1743 | Rust Test | Pass | Pass | Pass | Pass | Pass |
| | Thickener Type | Lithium | Lithium | Lithium | Lithium | Lithium |
| | Oil Type | Mineral | Synthetic Blend | Mineral | Mineral | Mineral |
| | Usable Low Temperature, °F (°C) | -40 (-40) | -20 (-29) | -10 (-23) | 10 (-12) | 30 (-1) |

* Four Ball EP tested before solvent added.

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

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