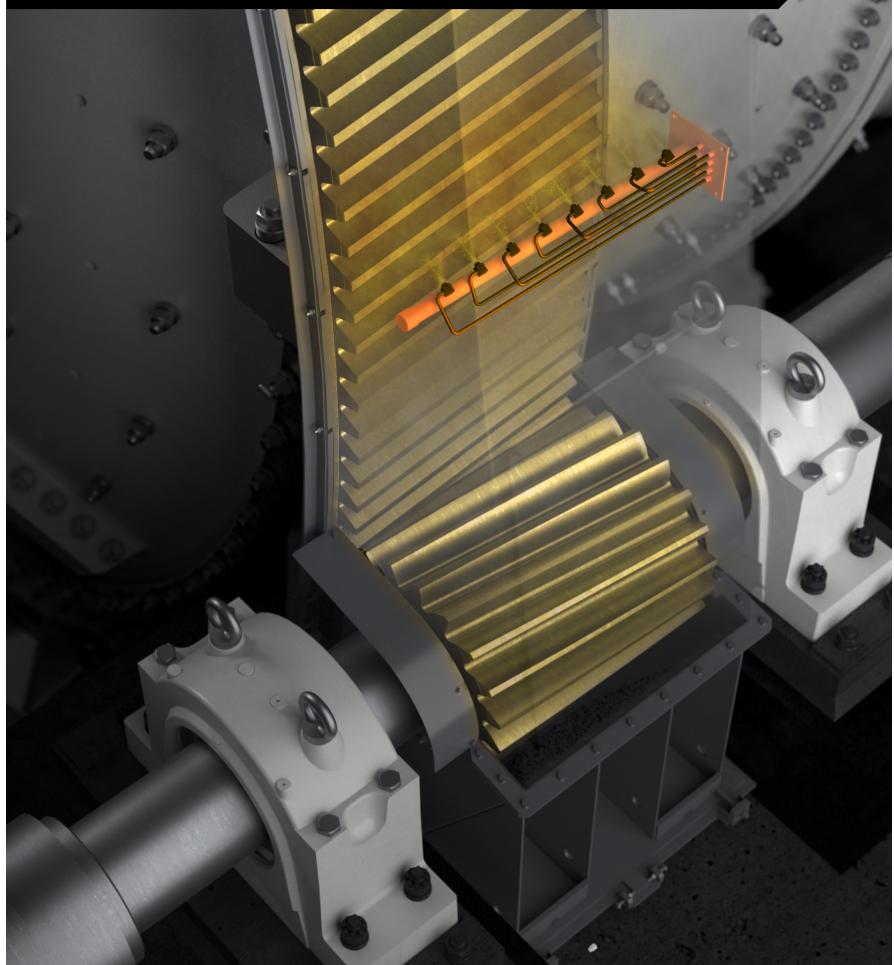


# Metso gear lubricant



Proper gear set lubrication is essential to the healthy operation of your grinding mill. While contamination and misalignment can damage grinding mill components over time, improper lubrication can cause failure quickly with a single disastrous event.

Metso's open gear lubricant was developed in partnership with an industry-leading lubricant manufacturer to provide breakthrough operational efficiency and performance for minerals processing grinding mills. By enhancing the base formula with cutting-edge additives, our lubricant delivers a viscosity optimized for grinding mills to achieve superior pumpability that addresses a critical operational challenge: the efficient migration of lubricant from drum to spray nozzle.

With more than 100 years of experience in machinery manufacturing and lubrication system design, we understand the complexities involved in maintaining optimal gear lubrication. This expertise is reflected in our lubricant, retaining all known benefits while elevating its operational effectiveness.

### Key advantages

- Optimized viscosity for reliable pumpability
- Improved inspection conditions: Enhanced transparency and UV additives enable easy gear tooth inspection
- Reduced noise and vibration: Minimizes wear and tear, prolonging your equipment lifespan
- Lower environmental impact: Formulated without heavy metals, chlorine, solvents, bitumen or solid particles such as graphite, helping to reduce waste disposal costs
- Enhanced performance: High load-

carrying capacity and superior adhesion reduce lubricant consumption by up to 50%, extending maintenance intervals and lowering operational costs

- Cold-flow properties: Facilitates easy removal of waste lubricant, preventing spray nozzle blockages
- Wide temperature range: Suitable for usage up to 120°C, maintaining stable performance under varying conditions

### Technical excellence

This advanced lubricant is based on a unique combination of synthetic hydrocarbons and mineral oils, providing excellent wear protection (approximately 10,000 mm<sup>2</sup>/s) and extended gear life. It meets the stringent requirements of ANSI/AGMA 9005-E02 annex D-2, ensuring high standards of reliability and safety.

### Applicable to both gear and pinion systems

Metso's grinding mill open gear lubricant is designed for both gear and pinion lubrication. Its optimized viscosity and superior pumpability ensure efficient delivery to both gear and pinion teeth, providing complete coverage and protection.

### Availability

Our lubricant is offered in 180-kg drums, designed for easy handling and compatible with grease pumping equipment.

### Translucent and UV properties for easy inspection

The lubricant's translucent formation

# Product data sheet

| General description  |   |
|--|---|
| Color  | Brown   |
| Texture  | Homogeneous, very viscous                           |
| Composition  |   |
| Oil type   | Mineral, synthetic hydrocarbon oil with UV additive |
| Operating temperature range  |   |
| Minimum service temperature (°C)   | 0   |
| Maximum service temperature (°C)   | 120   |
| Automatic spray system application range (°C)  | 10 - 120  |
| Chemico-physical data  |   |
| Density at 20°C (g/cm³)  | Approximately 0.92                                  |
| Flash point (DIN EN ISO 2592), Cleveland open cup apparatus (°C)                     | > 230   |
| Viscosity  |   |
| Kinematic viscosity (DIN EN ISO 3104/DIN 51562-1/ATSM D445/ATSM D7042) 100°C (mm²/s) | 300   |
| Kinematic viscosity (DIN EN ISO 3104/DIN 51562-1/ATSM D445/ATSM D7042) 40°C (mm²/s)  | 10500   |
| Viscosity index, DIN ISO 2909  | 140   |
| Mechanodynamic tests   |   |
| Four ball, welding force (DIN 51350 T04) (N)   | ≥ 8000  |
| FZG scuffing test (DIN ISO 14635-1, A/8.3/90), scuffing load test                    | > 12  |
| FZG scuffing test, DIN ISO 14635-1, A/8.3/90, change in weight (mg/kWh)              | < 0.2   |
| Minimum pour point, DIN ISO 3016 (°C)  | < 10  |

\* Minor variations in typical product test data may occur during normal manufacturing processes. Technical lubricant properties can be influenced by mechanical, dynamic, chemical and thermal stresses, as well as time and pressure. These variations may impact component performance. This product is continuously improved and Metso reserves the right to update or modify all technical data at any time without prior notice.

\*\* Minimum shelf life: 36 month if the product is stored in its original closed container in a dry, frost-free place.

\*\*\* Safety note: Please observe safety data sheet when handling this product.

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enhances the ability to visually inspect gear teeth without the need to remove lubricant. This feature facilitates quick contamination and wear detection, improving maintenance efficiency routines. Additionally, the lubricant contains UV additives to make it easier to inspect with a UV lamp (366 nm), allowing for precise lubrication coverage detection and potential issues without interrupting operations.

## Benefits

- Reduced maintenance
- Lower disposal costs
- High wear and tooth flank protection
- Easy application
- For use in normal to elevated temperatures