

## 2007 Gear Cam Medium and Heavy

Gear Cam is a cut-back high viscosity, extreme pressure, non-asphaltic type open gear lubricant, formulated to lubricate heavily loaded open gears and bushings such as those found in ball mills, pebble mills, grinding mills, bowl mills, cement kilns and dryers. Gear Cam can be applied using a sump type system, where an oiler wheel drags the lubricant and deposits it on the pinion gear. Gear Cam is also pumpable using Lincoln and Farval systems and automatic lubrication systems using drip tubes, spray nozzles, or airless spray systems.

Once Gear Cam is applied to the surface of the gears, it forms a strong, hydrodynamic lubrication film that keeps the gear teeth and the contacting metal surfaces of bearings, bushings and rollers separated during severely loaded conditions.

Ideally, Gear Cam should be sprayed intermittently onto the gears allowing the product to form a pliable, semi-dry film on the gears, with a robust high-viscosity film that clings tenaciously to gears and resists "squeeze out", "sling out" and "fling off". For large, heavily loaded ball mill gears a lubrication frequency of 15 to 20 minutes is normal.

Gear Cam meets the specifications of Falk, Metso Minerals (Svedala), FL Smidth, and FFE Minerals.

Gear Cam is compounded from a select blend of petroleum distillates, petroleum base oils and resins in combination with polymeric synthetic base fluids along with a synergistic blend of anti-wear, extreme pressure, antioxidants, rust and corrosion inhibitor additives. This combination provides Gear Cam with the following features and benefits:

- Exceptional anti-wear and extreme pressure properties to provide protection against pitting, spalling, scuffing and metal deformation under severely loaded conditions.
- Formation of an almost indestructible adhesive film that provides a "cushioning" effect during boundary lubrication conditions and very slow speeds.
- Will not harden or build-up in gear tooth roots.
- Ability to drain freely from the gear guards.
- Excellent resistance to rain, snow, moisture and water wash-out.
- Exceptional resistance to film destruction by contaminating oils or greases.
- Resistance to the adhesion of dust and dirt.
- Minimization of cold contact metal welding.
- Formation of a brown coating that is visible on the gears but is transparent enough to allow for gear inspection using a strobe light.
- TCLP Safe – passes the U.S. Environmental Protection Agency's Toxic Characteristic Leaching Procedure. The spent product is not considered to be a characteristic hazardous waste.

## TYPICAL PROPERTIES

<b>Grade</b>	<b>Medium</b>	<b>Heavy</b>
Base Fluid Viscosity (ASTM D445) @40°C, cSt @100°C, cSt	>100,000 >1,000	>100,000 >1,000
Viscosity of Completed Product (ASTM D445) @40°C, cSt	3100-4500	5500-9000
Flash Point Open Cup (ASTM D92) °C (°F)	135° (275°)	176.6° (350°)
Flash Point Closed Cup (ASTM D93) °C (°F)	120° (248°)	132° (270°)
Four Ball E.P. (ASTM D2783) Weld Point, kgs LWI	>800 151.8	>800 158.7
Four Ball Wear (ASTM D4172) Scar diameter, mm	0.62	0.48
Copper Strip Corrosion (ASTM D4048)	1B	1B
FZG Load Stage Failure DIN 51354	+13	+13
Rust Tests (ASTM D1743)	Pass	Pass
<b>Low Temperature Pumpability</b> Lincoln Ventmeter < 400 psi, °C (°F)	-17.7° (0°)	-12.2° (10°)