

# **CERTOP <sup>TM</sup> ISO 220, 320**

# **Advanced Performance Gear and Bearing Oil**



Heavy duty gear and bearing oil specifically formulated for heavy industrial equipment.

Provides superior protection against leaking seals, dry starts, water contamination, oxidation and foaming.

## LASTS UP TO FOUR TIMES LONGER THAN CONVENTIONAL GEAR OILS

#### **Provides Superior Equipment Protection for:**

- Industrial Manufacturing
- Food Processing
- Steel Mills & Foundries
- Paper Mills, Printing, & Packaging Concrete & Asphalt Paving
  - Federal, State & Local Agencies
- Construction, Mining, Agriculture
- Excavation & Demolition
- Utility Construction





- **Prevents Rust and Corrosion**
- **Displaces Water for Easy Drainage**
- **Controls Foaming**
- **Lowers Operating Temperature and Resists Oxidation to Prolong Oil Life**
- Wide temperature range operates from -7°C to 135°C.





### Meets or Exceeds the Following **Performance Requirements:**

- All API GL-3, GL-4 (most GL-1 and GL-2 applications)
- DIN 51517 Part 3
- David Brown S1.53.101
- Cincinnati Milacron P-59
- US Steel #224
- AGMA 9005, 215.02 and 250.04
- AGMA 4EP to 8EP





# CERTOP INDUSTRIAL contains a total additive package that sets it apart from other gear oils

#### **Additives**

#### **User Benefits**

Premium Grade Base Oil	Superior grade, highly-refined base oil resists oxidation and high-temperature	
Fremium Grade Dase On	breakdown to maintain better lubricity.	
Adhesive and Cohesive	Keep oil on gears during high-speed operations and during idle periods.	
Polymers, Tackiness Agents	Helps prevent mechanical wear, stress fractures and dry starts	
Rust and Corrosion Inhibitors	Blocks out corrosive elements such as acids, water, condensate and steam by	
	forming a protective barrier on equipment surfaces to prevent chemical wear.	
Extreme Pressure (EP) Agents	Heat seeking additive which increases the ability of the lubricant to prevent	
	the extreme wear that can occur under loads.	
Oxidation Inhibitors	Extends service life of the lubricant by retarding the oxidation or breakdown	
	process.	
Shock Load Reducers	Cushions impact to minimize the stress, vibration and chatter that can occur	
	under heavy loads and during start-stop operations.	
Anti-Wear Agents	Forms a lubricant film on metal surfaces in the presence of heavy loads and	
	high temperatures. Prevents cold welding.	
Friction Reducers	Plates out on metal surfaces to prevent friction and wear under heavy loads.	
Anti-Foam Agents	Withstand agitation and heat without forming foam conatminants. Reduce pressure levels on seals and vents.	

#### PHYSICAL PROPERTIES

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Properties	ISO 220	ISO 320	
Color	yellow	yellow	
API Gravity:	29.3	27.85	
Flash Point (COC):	450	450	
Pour Point, °F:	15	15	
Viscosity Index:	102	107	
Kinematic Viscosity, CST @ 40°C:	220.85	291.45	
Kinematic Viscosity, CST @ 100°C:	20.94	25.58	
Rust Protection:	Pass	Pass	
Corrosion Protection:	1A	1A	
4-Ball Wear Scar Dia., mm	0.32	0.32	
4-Ball Weld Load, kg	250	250	
Timkin OK Load, lbs.	65	65	

#### **IDEAL FOR USE IN:**

Oil filled bearings, gear boxes including enclosed gears of spur type, hypoid, spiral bevel, worm, herringbone, helical, planetary and unusual combinations of gear types. Can be used as a cylinder oil, except for steam cylinders. Can be added as make up oil to other Industrial grade mineral gear oils. For Bronze Gears use CERTOP Industrial 460 & 680 only.

#### DO NOT USE FOR:

Do not use CERTOP 220, 320 for copper, bronze worm gears (use CERTOP Industrial 460 or 680).

