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## Product Data Sheet (PDS)



# INGEN INDUSTRIAL GEAR OIL

ISO

68/100/150/220/  
320/460/680

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# INGEN INDUSTRIAL GEAR OIL

## ISO 68/100/150/220/320/460/680



Ingen Industrial Gear Oils are hi-performance, mild EP, industrial gear lubricants formulated with a sulfur-phosphorus additive system, which also imparts rust and oxidation inhibition, corrosion and oxidation inhibitor and a metal passivator. Designed primarily for industrial gear lubrication services where loads and shock loadings are high.

### APPLICATIONS:

- Enclosed industrial gear drives.
- Open gear drives (heavy grades).
- Spur, bevel, helical, worm and industrial hypoid gear cases.
- Industrial type reduction gearboxes on mining equipment, cement mills, ball and rolling mills, crushers, conveyors, kilns, winches, machine tools and marine equipment.
- Chain drives, sprockets, slide guides and flexible couplings.
- Plain and rolling element bearings.
- For bath, splash, circulation or spray lubrication, as applicable to the grade.

### PERFORMANCE STANDARD

**INGEN INDUSTRIAL GEAR OILS** meets and exceeds the following Industry Specifications:

- ANSI/AGMA 9005-EO2 [EP] (Grades 68 to 320)
- U.S. Steel 224 (Grades 68 to 320)
- David Brown, Table E, approved (Grades 68 to 680)

### BENEFITS:

- High thermal stability EP system maintains clean gear and bearing surfaces, minimizing deposits which interfere with effective lubrication. High oxidation stability limits in-service viscosity increases, which lead to energy losses.

Extremely effective EP system forms a protective film in areas of metal-to-metal contact, minimizing wear rates and maintaining efficient transfer of power. Good water separation and effective rust inhibitors protect surfaces against rust and corrosion. High thermal stability additive system reduces the formation of high temperature compounds which can be corrosive to bearing materials. The effective corrosion inhibitor provides additional protection for metal components.

- Effective oxidation inhibitors and copper passivator minimize oil oxidation, limiting viscosity increase and extending oil drain intervals.

**TECHNICAL DATA**

ISO Grade	68	100	150	220	320	460	680
AGMA 250.04 & 251.02	2EP	3EP	4EP	5EP	6EP	7EP	8EP
David Brown Grade	2E	3E	4E	5E	6E	7E	8E
Flash Point, °C	200	215	215	215	215	215	285
FZG Load Stage	12	12	12	12	12	12	12
Pour Point, °C	-18	-18	-18	-18	-18	-15	-12
Timken OK Load, kg	31.8	31.8	31.8	34.0	34.0	34.0	34.0
Viscosity, cSt at 40°C	68.0	100	150	220	320	439	650
Viscosity, cSt at 100°C	8.5	11.0	14.5	18.6	23.7	29.8	36.5
Viscosity Index	101	96	99	98	97	96	91

**Health and Safety:**

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application, following the recommendations provided in the Material Safety Data Sheet (MSDS). MSDSs are available upon request. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.

Due to continual product research and development, the information contained herein is subject to change without notification. Typical Properties may vary slightly.