

INDUSTRIAL GEAR OIL

Premium Mineral Technology

GEAR CLP3

PRODUCT DESCRIPTION:

RAK GEAR CLP3 Series are extra high performance gear oils having outstanding extreme pressure characteristics and load-carrying properties, intended for use in all types of enclosed gear drives with circulation or splash lubrication systems. RAK GEAR CLP3 Series is designed to stay ahead of the changing needs of gearbox technology. Gearbox technology design trends are towards smaller units with similar power throughput. This increase in power density places increased demands on gear oils. RAK GEAR CLP3 Series oils are formulated to meet the stress by providing extra protection for gears, bearings and seals.

Applications:

Recommended for industrial spur, helical and bevel enclosed gears with circulation or splash lubrication, operating at bulk oil temperatures up to 100°C. They are particularly suitable for gear sets working under heavy or shock loads RAK GEAR CLP3 oils also find broad application in marine gearing applications. They may also be used in non-gear applications include highly loaded and slow speed plain and rolling contact bearings.

Meets and Exceeds Performance Levels:

- AGMA EP 9005-E02
- DIN 51517-3 (CLP)
- MAG Cincinnati, Cincinnati Machine P-63 (ISO 68), P-76 (ISO 100), P-77 (ISO 150), P-74 (ISO 220), P-59 (ISO 320), P-35 (ISO 460), P-78 (ISO 1000)
- U.S. Steel 224 Specification (ISO 220, 320, 460, 680)
- FLENDER

Features:

- High thermal stability EP system helps maintain clean gear and bearing surfaces
- Effective EP system forms a protective film in areas of metal-to-metal contact, minimizing wear rates and maintaining efficient transfer of power
- Effective oxidation inhibitors and copper passivator minimize oil oxidation, limiting viscosity increase and promoting long drain intervals

RAK GEAR CLP3							
ISO Viscosity Grade	68	100	150	220	320	460	680
Viscosity, ASTM D 445							
mm ² /s @ 40°C	68	100	150	220	320	460	680
mm ² /s @ 100°C	8.8	11.2	14.7	19.0	24.1	30.6	39.2
Viscosity Index, ASTM D 2270	101	97	97	97	97	96	90
Pour Point, °C, ASTM D 97	-27°C	-24°C	-24°C	-18°C	-15°C	-15°C	-9°C
Flash Point, °C, ASTM D 92	230	230	230	240	240	240	285
Density @15.6 °C, ASTM D 4052, kg/l	0.88	0.88	0.89	0.89	0.90	0.90	0.91
FZG Micropitting, FVA 54, Fail Stage / Rating		10 / High	10 / High	10 / High	10 / High	10 / High	10 / High
FE 8 wear test, DIN 51819-3, D7,5/80-80. Roller wear, mg	2	2	2	2	2	2	2
Timken OK Load, ASTM D 2782, lb	65	65	65	65	65	65	65
Weld Load, kg	200	200	250	250	250	250	250
Load Wear Index, kgf	47	47	47	48	48	48	48
FZG Scuffing, Fail Stage							
Rust protection, ASTM D 665, Sea Water	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Copper Strip Corrosion, ASTM D 130, 3 hrs @ 100°C	1B	1B	1B	1B	1B	1B	1B
Demulsibility, ASTM D 1401, Time to 3ml emulsion, minutes @ 82°C	30	30	30	30	30	30	30
Foam Test, ASTM D 892, Tendency/Stability, ml/ml Sequence 1	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Sequence 2	30/0	30/0	30/0	30/0	30/0	30/0	30/0

Typical Properties: