TECHNICAL DATA SHEET

SYNTH MPR GEARMAX (Synthetic Micro-Pitting Resistance Gear Oil)

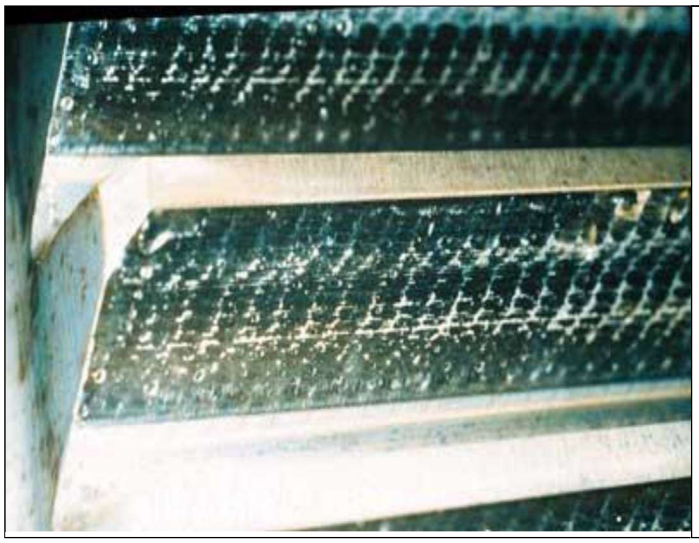
(High Performance Synthetic Gear oil protection against micro pitting)

DESCRIPTION:

SYNTH MPR GEARMAX fully synthetic high performance micropitting resistance gear oil offers the potential for improved lubrication of industrial gear / circulating developed for maximum protection of gears and bearings rolling mill equipments operating under normal to extremely heavy duty and heavy loaded gearboxes. Specially formulated with latest technology anti-micropitting additives in high quality PAO (PolyAlphaOlefin) synthetic base oil stocks and a special "clean gear" additive technology such as synthetic (PAO) ester additive, special Mox-Active (Organo Molybdenum Complex) a German technology an improvement additive creates a passive film on friction surfaces before friction occurs, provides excellent protection against gear teeth from micro pitting optimum wear and an extremely low coefficient of friction even under extreme pressures, vibrations & heavy shock loads. It also contains extra anti-foam (silicon free defoamer) and excellent load carrying capacity, extreme pressure (EP), anti-foam additives, anti-oxidant, anti-rust & water demulsibility, oxidation stability, corrosion protection and increase long drain intervals to provide optimum equipment protection and oil life even under extreme conditions compare to normal EP gear oil to provide excellent protection against conventional wear modes such as scuffing but also provides a high level of resistance against micropitting fatigue. Furthermore, it provides quick moisture separation and optimal filterability.

Micro pitting

Micro pitting occurs under elastohydrodynamic lubrication (EHL) and will appear on the working surfaces of the gear. It is recognized as damaging to gear tooth accuracy, and in some cases, a primary failure mode. Micropitting begins as surface contact at high points on gear tooth surfaces, such as crests of undulations, peaks of cutter scallops, ridges of grinding lay and edges of grinding scratches where maximum peak-to-valley roughness of tooth surface may be about two to four mm. It may occur at edges of teeth and boundaries of surface defects, such as scratches and dents. It may also occur adjacent to damage from other failure modes such as micropitting or scuffing, and anywhere lubricant film is disrupted.



Performance standard meets:

SYNTH MPR GEARMAX standard meets & exceeds the performance requirements of

- **FE8 wear test according to DIN 51819-3 (Method D-7.5-80/80**
- **FZG scuffing test according to DIN ISO 14635-1 (Method A/8.3/90)**
- **FZG scuffing test according to DIN ISO 14635-1 (Method A/16.6/90)**
- **FZG micropitting test according to DIN 3990-16 (Method GT-C/8,3/90)**

APPLICATION

- **SYNTH MPR GEARMAX** is suitable for Industrial enclosed gear and bearings drives of rolling mill equipments operating under normal to extreme conditions of all sizes and capacities, especially for high and low temperature environments, pressure, shock loads etc.
- **SYNTH MPR GEARMAX Application industry:** Metal processing industry (Steel & Iron Sponge), Sugar, Mining & Power Generation Industry Plastic, paper and ceramics industry & other processing units for heavy duty industrial gear drives requiring additional protection such as worm gears, Bevel Helical gears, Planetary gears, Helical gears, Power generation such as mills and heavy loaded gear drives conveyer belts, shaft winder gear drives, Mill crushers etc for long life gear oils range.
- It can also be used as slideway oils subject to a metalworking fluid compatibility check.

FEATURES	ADVANDAGES, & BENEFITS
Protection against Micropitting as well as Scuffing wear	Excellent protection of gears and bearings at extreme conditions. Performance standard meets various OEM requirements
High Viscosity Index	Optimum viscosity / film thickness at operating temperatures. Better equipment protection at low & high temperatures, Wider operating temperature range
Excellent Oxidation & Thermal Stability & Cleaner Operation	Longer Oil Drain Interval, lower oil consumption, Better equipment performance, "Clean Gear" technology minimizes risk of formation of harmful sludge on gear drives
Gear & Bearing function under High load carrying characteristics	Better protection of equipment under heavy / shock loads, Limits power loss from friction and makes gears function smoothly, uniformly & silently with low noise
Very good Rust, Corrosion & Foaming Protection	Better protection of bearings, lower maintenance cost, Excellent extreme pressure capability ensures minimized wear helping prolonged equipment life, Anti-foaming ensures effective lubrication
Compatibility Testing	Compatible with metallic, as well as elastomeric seal materials & paints used in industrial gear systems.

PROPERTIES OF SYNTH MPR GEARMAX

ISO GRADE	68	100	150	220	320	460	680
Base Oil Type	PAO (PolyAlphaOlefin) Synthetic Oil						
Viscosity @ 40°C Cst	68	10	150	220	320	460	680
Viscosity @ 100°C Cst	10.4	13.9	18.7	26.1	34.6	43.3	60.2
Viscosity Index	138	142	142	152	152	152	156
Pour Point °C	-42	-39	-36	-36	-30	-30	-27
Flash Point °C	240	240	240	240	250	250	250
Density @ 15°C	1.065	1.079	1.078	1.077	1.077	1.076	1.076
4 Ball EP Weld Load Test in kgs	>250	>250	>250	>250	>250	>250	>250
4 Ball Wear Test, wear min, ASTM D 4172/B	0.4	0.4	0.35	0.35	0.35	0.35	0.35
FZG Gear Scuffing test fail load Stage A/8.3/90 & A/16.6/90	>11	>12	>13	>13	>13	>13	>13
FAG FE8 Bearing Wear Test DIN 51819 - 3 a) Weight Loss, Rollers, mg b) Weight Loss, Cage, mg	 <8 <30	 <8 <30	 <5 <30	 <5 <30	 <5 <30	 <5 <30	 <5 <30
FZG Micropitting, FVA 54, Fail Stage @ 90°C	>10	>10	>10	>10	>10	>10	>10
Foam Tendency, SEQ-I	10/0	10/0	10/0	10/0	10/0	10/0	10/0
Copper Strip Corrosion@ 100 °C for 24 hrs.	1b	1b	1b	1b	1b	1b	1b
Rust Protection Sea Water	Pass	Pass	Pass	Pass	Pass	Pass	Pass

POWERMAXX LUBE INDIA
Website: www.powermaxxlube.com Email: info.powermaxx918@gmail.com,info@powermaxxlube.com
Contact Number: 996748763, 7506973307