



Advanced Lubricants Technology

PRODUCT INFORMATION

PERENNIAL HYTRAK EP (PREMIUM HEAVY DUTY EP INDUSTRIAL GEAR OIL)

DESCRIPTION

PERENNIAL HYTRAK EP Heavy Duty Industrial Gear Oil is a lead-free sulphur-phosphorus EP type gear and bearing lubricant as defined by the American Gear Manufacturers Association (AGMA), intended for use in all types of enclosed gear drives with circulation or splash lubrication systems. **PERENNIAL HYTRAK** is formulated with a premium quality EP additives package that imparts outstanding functional characteristics in various industrial application with the philosophy of staying ahead of the changing needs of gearbox technology, especially for the prevention of microscopic wear called micropitting. **PERENNIAL HYTRAK** provides up to 15 times the wear protection as measured by the industry standard FAG FE 8 test. also maintaining compatibility with common gearbox seal materials therefore preventing oil leaks and keeping contamination out.

PERENNIAL HYTRAK EP Series oils are 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. **PERENNIAL HYTRAK EP** 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.

BENEFITS

- Excellent thermal stability protects against premature ageing and high temperature oxidation, extends service life and oil change interval- reduced need and costs for oil change outs
- Minimizes sludge and deposits for trouble-free operations and longer filter life
- Good viscosity temperature behavior minimizes excessive thinning of oil film and ensures an adequate load bearing lubricant film at all temperature.
- Very high and stable film strength for exceptional wear resistance under high speed and shock load conditions, even at high temperatures.
- Improved oiliness additive reduces friction and lowers tooth flanks operating temperatures- Reduces overall friction and can increase efficiency in sliding mechanisms such as gearing, with potential for reduced power consumption and lower steady-state operating temperatures.
- Protects equipment and extends life; minimizes unexpected downtime and extends service periods
- Rust and corrosion protection, non-corrosive to steel, copper or bronze.
- Does not attack bushing and sealing materials / Resistant to foaming.
- Excellent demulsibility ensures quick separation of water thus reducing risk of water reaching gears and bearings.

PERENNIAL HYTRAK S exceeds the performance requirements of :

- Cincinnati, Machine P-34,P-35, ABB Turbo, HZTL 90572,90617, P-59, P-74, P-78, P-80, Flender BA
- Siemens AG
- Mueller Weingarten DT55
- AGMA 250.04(EP) / AGMA 251.02 / AGMA 9005-094
- US Steel 224
- DB S1.53-101(E)
- DIN 51517 Part 3, CLP classification



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PERENNIAL HYTRAK EP is recommended for use in Industrial gear sets with heavy tooth loads, including worm and spur, helical, bevel industrial hypoid units, and gears subjected to shock loading. It is also suitable for use in rolling contact (anti-friction), sleeve and journal bearings, all industrial applications with a circulating lubricating system requiring an EP circulating lubricant. **PERENNIAL HYTRAK EP** has a normal operating temperature range of - 10°C to 120°C and satisfactory for intermittent service up to 140°C.

- Industrial gearing for conveyers, agitators, dryers, extruders, fans, mixers, presses, pulpers, pumps (including oil well pumps), screens, extruders and other heavy duty applications
- Marine gearing including main propulsion, centrifuges, deck machinery such as winches, windlasses, cranes, turning gears, pumps, elevators and rudder carriers
- Non-gear applications include shaft couplings, screws and heavily loaded plain and rolling contact bearings operating at slow speeds.

TYPICAL DATA

Grade, ISO VG	:46	68	100	150	220	320	460	680	1000
Density, g/ml @ 15 ° C,									
ASTM D-4052	:0.860	0.876	0.880	0.888	0.890	0.895	0.900	0.910	0.950
Flash Point, COC, °C, ASTM D-92	:215	225	230	235	235	240	240	245	260
Pour Point, ASTM D-97, °C	:-24	-24	-24	-21	-18	-15	-15	-13	-12
Colour, ASTM	:L2.5	L2.5	L3.0	L3.5	L3.5	L4.0	L4.5	L4.5	L4.5
Viscosity, ASTM D-445									
Viscosity, cSt @ 40 ° C	:46	68	95	140	215	310	440	670	950
Viscosity, cSt @ 100°C	:6.8	8.8	10.5	14.1	18.5	23.5	27.9	40.0	53.9
Viscosity Index, ASTM D-2270	:100	100	98	98	95	95	95	95	107
Copper Strip Corrosion	:1b	1b	1b	1b	1b	1b	1b	1b	1b
3Hrs@121°C , ASTM D-130									
Demulsibility, ASTM D1401									
82°C, 40 ml oil, 40 ml dist water	:30	30	30	30	30	30	30	30	30
Foam Stability, @ 10 min,									
ML, ASTM D-892									
Sequence I, 24°C	:0	0	0	0	0	0	0	0	0
Sequence II, 93.5°C	:0	0	0	0	0	0	0	0	0
Sequence III, 24°C	:0	0	0	0	0	0	0	0	0
Seal Compatibility Test									
DIN 53521, SRE-NBR1									
7 days, 100°C	:					-3%			
FZG Gear Test DIN 51354									
A/8.3/90	:			-----	>12+	-----			
A/16.6/90	:			-----	>12+	-----			
FZG Micropitting, FVA 54									
Fail Stage/Rating	:			-----	High10	-----			
Timken OK Load, ASTM D-2782,									
Ibs	:65	65	65	65	65	65	65	65	65
4-Ball EP Test, ASTM D-2783									
Weld Load, kg	:200	200	250	250	250	250	250	250	250
Load Wear Index, kgf	:47	47	47	47	48	48	48	48	50
Rust Test, ASTM D-665	:Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

The above details is typical and does not constitute a contract in terms of properties