



Industrial EP Gear Oils

Starfire EP Gear Oils are heavy-duty extreme-pressure industrial gear lubricants blended from highly refined bases stocks and extreme pressure (EP) additives, plus rust, oxidation, and foam inhibitors. These oils are intended for use in industrial gearboxes and oilfield pumping units where ISO EP or AGMA gear oils are recommended.

Starfire EP Gear Oils are suitable for use where GL-4 gear oils are recommended, but are not intended for use in automotive and heavy duty differentials using offset spiral bevel (Ring & Pinion Hypoid) gear sets. Use GL-5 gear oils for those applications. EP and GL-4 gear oils are commonly used in industrial gear boxes and are excellent heat transfer fluids. These gear oils are non-foaming and compatible with all brass and bronze bearings and have excellent demulsibility properties.

Performance Rating

- AGMA: 9005-E02 (5EP), Clean S-200 Oxidation
- DIN: 51 517 Part 3
- David Brown: S1.53.101 (5e)
- FZG: Pass 12, Pass 13
- Cincinnati Machine: Landis P-74 (C-220)
- U.S. Steel: 224
- API: GL-3, GL-4 Extreme Pressure Gear Oils

Benefits

- Provides a thick hydrodynamic film between gears
- Excellent film strength at high operating temperatures
- Full EP treatment for extreme pressure protection
- Heat transfer properties keeps gearsets cool
- Outstanding resistance to foaming
- Prevents corrosion of copper and brass

TYPICAL PROPERTIES

	Method	ISO 68	ISO 100	ISO 150	ISO 220	ISO 320	ISO 460	ISO 680
Specific Gravity @15.6C	D-1298	0.8676	0.8692	0.8783	0.8883	0.8961	0.9047	0.8996
Viscosity, cSt at 40°C	D-445	68.2	100.3	144.9	213.6	309.0	459.9	676.6
Viscosity, cSt at 100°C	D-445	9.3	12.0	15.3	19.4	24.5	30.1	47.8
Viscosity Index	D-2270	113	109	107	103	101	94	123
Pour Point, °C	D-97	-37	-28	-28	-15	-21	-12	-1
Pour Point, °F	D-97	-34.6	-18.4	-18.4	-13.0	-5.8	10.4	30.2
Flash Point, COC °C	D-92	235	243	243	232	232	254	254
Flash Point, COC °F	D-92	455	469	469	449	449	496	489
Timken Load-Min.	D-2586	70	70	70	70	70	70	70
Four-ball Weld Load	D-2266	250	250	250	250	250	250	250
Four-ball Wear (MM.)	D-5182	0.35	0.35	0.35	0.35	0.35	0.35	0.35
FZG (Pass load stage)	D-130	12	12	12	12	12	12	12
Copper Corrosion	D-2711	1A	1A	1A	1A	1A	1A	1A
Demulsibility								
-Free Water		85	85	85	85	85	85	85
-Water in Oil		0.6	0.6	0.6	0.6	0.6	0.6	0.6
-Emulsion		0	0	0	0	0	0	0
AGMA		2EP	3EP	4EP	5EP	6EP	7EP	8EP

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