



# GEAR OIL

## Features

Meets or exceeds the following industry performance specifications:

- US Steel 224
- AGMA 9005-D94
- GM LS2
- Cincinnati-Milacron P-35 (460), P-59 (320), P-63 (68), P-74 (220), P-76 (100), P-77 (150), P-78 (1000)
- Bijur
- Flender (220 SP)
- Hanson

## Benefits

- Broad grade offering, including a multi-grade
- Non-corrosive
- Resists sludge formation
- Field proven performance

**GEAR OIL** is intended for use as heavy-duty, Extreme Pressure (EP) oil for industrial gear sets. Each grade in the series is blended from quality, high viscosity index (VI) paraffinic base oils.

**GEAR OIL** contains a non-lead EP additive, anti-rust, anti-oxidation, corrosion inhibitors and anti-foam suppressant. These oils are non-corrosive to yellow metal gear set components. They will resist the formation of sludge at high temperatures and can be used in normal service up to a continuous 93°C (200°F). Above this temperature, the oil should be changed more frequently, or an oil cooler should be installed.

**GEAR OIL** in the appropriate grade is recommended for industrial and marine service in straight and spiral bevel, helical, herring-bone, spur and worm gear sets.

**GEAR OIL** 220 SP provides extra protection from foaming due to extreme applications of certain gears (Flender).

These oils are not suitable for vehicle and heavy equipment differentials, transmissions and planetary gear drives which require extra surface-active EP protection against shock-loads and wider operating temperature ranges. In these applications, use Irving **HDH**.



## Typical Performance Results

ISO GRADE	68	100	150	220	220SP	320	460	680	1000	LP150	1500
AGMA GRADE	2EP	3EP	4EP	5EP	5EP	6EP	7EP	8EP	8A EP	4 EP	9 EP
VISCOSITY (D-445) cSt @ 40°C cSt @ 100°C	67.3 8.5	101.0 11.5	151.9 14.8	221.8 18.9	221.8 18.9	320.2 24.8	464. 4 30.8	691. 0 36.3	1072.0 50.0	155.0 21.8	1635.0 61.4
VISCOSITY INDEX (D-2270)	96	101	96	95	95	100	96	86	91	166	91
BROOKFIELD VISC. (D-2983) cP @ -30°C						71,700					
POUR POINT (D-97) (°C)	-21	-27	-30	-24	-24	-18	-12	-9	-9	—	-7
FLASH POINT (D-92) (°C)	244	262	284	270	270	300	326	238	246	228	263
TIMKEN LOAD (D-2782) OK LOAD (kg) (lbs) FAIL LOAD (kg) (lbs)	> 27.2 (60) ALL GRADES > 29.5 (65) > 34 (75) 36.3 (80)										
4-BALL WEAR (D-2266) SCAR DIAM. (mm)	< 0.35 (ALL GRADES)										
4-BALL EP (D-2783) LOAD WEAR INDEX (kg) WELD POINT (kg) FZG LOAD STAGE	> 45 > 250 (ALL GRADES) > 12 (ALL GRADES)										
DEMULSIBILITY (D-2711) WATER-IN-OIL (%) FREE WATER (ml) EMULSION (ml)	< 0.1 > 87 TRACE			< 0.2 > 86 < 0.2				< 2 > 82 < 1			
FOAM (D-892 Seq.1)	0/0 (ALL GRADES)										
RUST PREVENTION (D-665) PROCEDURE A PROCEDURE B	PASS PASS (ALL GRADES)										

## Available Package Sizes

	20L (5.28 US Gal)	205L (54.2 US Gal) METAL	205L (54.2 US Gal)	210L (55.5 US Gal)	500L (12 US Gal)	1000L (264 US Gal)	Bulk
GEAR OIL 68	X	X		X	X	X	X
GEAR OIL 100	X	X		X	X	X	X
GEAR OIL 150	X	X		X	X	X	X
GEAR OIL 220	X	X		X	X	X	X
GEAR OIL 320	X	X		X	X	X	X
GEAR OIL 460	X	X		X	X		X
GEAR OIL 680	X	X	X				
GEAR OIL LP150	X	X		X	X	X	X
GEAR OIL 1500	X		X				
GEAR OIL 220SP				X			

Check with sales representative or website for the latest product approvals.

