

ANDEROL PRODUCT DATA SHEET

ANDEROL® 4000 SERIES

GEAR LUBRICANTS (ISO VG 220 THROUGH 1000)



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GENERAL INFORMATION

The ANDEROL® 4000 series gear lubricants are synthetic hydrocarbon based (PAO) and formulated with additives that enhance oxidation stability and provide rust, corrosion and wear protection.

The ANDEROL® 4000 series offers a higher natural viscosity index than mineral oils thus affording a higher viscosity at operating temperatures with a lower viscosity at start-up temperatures. Being wax free these PAO base fluids offer excellent low-temperature performance. The two heavier viscosity grades give excellent performance in worm drive gear units.

TYPICAL PROPERTIES:

PROPERTIES	TEST METHODS	TEST RESULTS				
		4220	4320	4460	4680	4999
ISO Viscosity Grade	ASTM D-2422	220	320	460	680	1000
SAE Grade	SAE J 300	140	140	250	250	250
AGMA Lubricant No.	AGMA 250.04	5	6	7	8	8A
Viscosity @ 40°C, cSt	ASTM D-445	218.2	319.2	470	680	1026
Viscosity @ 100°C, cSt	ASTM D-445	26.6	35.3	47	63.9	92.0
Viscosity @ 100°F, SUS	ASTM D-2161	1,134	1,666	2,465	3,575	5,400
Viscosity @ 210°F, SUS	ASTM D-2161	130.6	171.4	227	308	444
Viscosity Index	ASTM D-2270	156	156	158	165	144
Pour Point, °F (°C)	ASTM D-97	-45 (-43)	-45 (-43)	-40 (-40)	-40 (-40)	-40 (-40)
Flash Point, °F (°C)	ASTM D-92	500 (260)	465 (240)	480(248)	468 (242)	450(232)
Evaporation, 22 hrs @ 210°F (99°C), %	ASTM D-972	<1	<1	<1	<1	<1
Copper Strip Corrosion, 24 hrs @ 212°F (100°C)	ASTM D-130	1a	1a	1a	1a	1a
Four-Ball Wear, 1200 rpm, 75°C, 40 kg, 1 hour, mm	ASTM D-4172	0.35	0.35	0.35	0.35	0.35
Four-Ball EP, Weld Point, kg	ASTM D-2783	210	210	210	210	210
Specific Gravity, 60°F (15.6°C) (lbs/gallon)	ASTM D-1480 Calc.	0.87 (7.21)	0.87 (7.21)	0.87 (7.21)	0.88 (7.30)	0.88 (7.30)

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For more information please refer to the relevant Material Safety Data Sheet accompanying each product.

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APPLICATIONS

- Open and enclosed gears - Plain or Rolling Element Bearings
- Measuring and dispensing pumps and meters
- Mechanical springs and actuator mechanisms
- Anti-friction bearings
- General purpose high-viscosity lubricating oil

ADVANTAGES

- Excellent oxidation resistance for longer life performance
- Reduced energy consumption
- Reduces friction for low-wear rates
- Excellent anti-wear performance
- Wide operating temperature range of -40 to 450°F
- Lower operating temperatures
- Improves low-temperature fluidity
- Extended parts life

COMPATIBILITY

ANDEROL synthetic hydrocarbon based lubricants are similar to mineral oils in their compatibility with paints, seals, gaskets and hoses. No special precautions related to compatibility are required when changing over from a mineral oil lubricant to an ANDEROL synthetic hydrocarbon based lubricant.

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