



SYNOLAN 1000 INDUSTRIAL OILS

(Multipurpose PAO Fluids)

SYNOLAN 1000 INDUSTRIAL OILS are superior quality synthetic lubricants with exceptional high stability and durability. They provide outstanding oxidative and thermal stability, superior resistance to sludge, varnish, lacquer and carbon deposit formation, excellent water separation properties, high lubricity and film strength, a broad operating temperature range and increased useful oil life. They excel in a wide range of applications including air compressors, bearings, enclosed gear boxes, circulating oil systems, heat transfer systems and other equipment operating in severe conditions.

SYNOLAN 1000 INDUSTRIAL OILS are blended from premium quality synthetic base stocks and further enhanced with the latest additive technology. They effectively reduce, and in most cases, eliminate sludge and varnish deposits in rotary screw and vane compressors. They also minimize carbon deposits on reciprocating compressor exhaust valves, reducing the hazards of compressor fire or explosion. These products satisfy the lubrication requirements of majority of compressors in service today. They also satisfy the requirements for R&O gear lubricants.

SYNOLAN 1000 INDUSTRIAL OILS ISO 220 and higher are specially designed for high temperature enclosed gear and bearing services. They can be used at temperatures from -20°F to 450°F. These products provide excellent resistance to rust and copper corrosion and exhibit superior antifoam properties. Their exceptional low temperature fluidity provides applications not normally possible with mineral oil products of comparable viscosity grades.

The superior low temperature properties and inherent high viscosity index enable these products to perform satisfactorily in year-round services. They reduce wear at cold startup, and maintain viscosity and high film strength at high temperatures. This means that equipment gets superior wear protection at both high and low temperatures, and potential energy savings.

SYNOLAN 1000 INDUSTRIAL OILS are capable of extending the lubricant service life, typically two, three, or four times over that of mineral oil based products. In addition, they often extend the service life of filters and separators, resulting in an overall improvement of productivity, increased efficiency, reduced maintenance cost and downtime.

SYNOLAN 1000 INDUSTRIAL OILS are compatible with conventional seals, paints and coatings. They are readily miscible with mineral oil, synthetic ester or vegetable oil based fluids.

APPLICATIONS:

SYNOLAN 1000 INDUSTRIAL OILS are recommended for a wide range of equipment including rotary screw, rotary vane, reciprocating and centrifugal compressors, circulating oil systems, heat transfer systems, bearings, gear boxes, and other applications that are subject to severe service conditions or temperature extremes.

ISO 32, 46 and 68 are especially suitable for use in oil flooded rotary vane and screw type compressors. ISO 100 is suitable for both crankcase and cylinder lubrication in reciprocating compressors. The heavier ISO grades (220 thru 1000) are recommended for enclosed gearboxes, paper machine drier bearings, calender stacks, winders, large anti-friction and journal bearings. In addition, these products are suggested for use with lightly to moderately loaded gear systems, such as spur, helical, herringbone and bevel gear applications.

SYNOLAN 1000 INDUSTRIAL OILS are *not* intended for use in heavily loaded applications or any automotive or industrial gear application that require an extreme pressure (EP) gear oil. **Do not** use these products in spiral bevel, hypoid or worm gear applications.





SYNOLAN 1000 INDUSTRIAL OILS

(Multipurpose PAO Fluids—Light Grades)

TYPICAL CHARACTERISTICS

Product Code	41032	41046	41068	41100	41150
ISO Viscosity Grade	32	46	68	100	150
AGMA Grade	-	1	2	3	4
API Gravity	35.0	36.0	33.0	32.5	30.8
Specific Gravity	0.848	0.845	0.860	0.863	0.872
Density, lbs/gal	7.08	7.04	7.15	7.19	7.26
Viscosity (ASTM D-445):					
cSt @ 40°C	30.0	42.3	69.5	106	150
cSt @ 100°C	6.0	7.3	12.4	18.0	17.5
SUS @ 100°F	154	215	352	537	778
SUS @ 210°F	47.0	50.7	69.2	91.7	90
Viscosity Index	148	136	180	189	128
Pour Point (D-97), °F (°C)	-70 (-57)	-70 (-57)	-55 (-48)	-45 (-43)	-40 (-40)
Flash Point (D-92), °F (°C)	500 (260)	530 (277)	500 (260)	500 (260)	475 (246)
Fire Point (D-92), °F (°C)	535 (279)	585 (307)	530 (277)	530 (277)	535 (279)
Copper Corrosion (D-130) (3 Hours @ 212 F)	1b	1b	1b	1b	1b
Demulsibility @ 130 F (D-1401)					
Time for Separation, min	15	15	45	45	--
Oil/Water/Emulsion, ml	40/40/0	40/40/0	40/40/0	40/40/0	--
Four Ball Wear Test (D-2266) (1 Hour/75 C/1200 rpm/40 kg)					
Scar Diameter, mm	0.50	0.50	0.50	0.50	0.40
(1 Hour/54 C/1800 rpm/20 kg)					
Scar Diameter, mm	-	-	-	-	0.27

The above data is subject to usual manufacturing variation. For more information and availability, call 1-800-442-LUBE.
10/21/04





SYNOLAN 1000 INDUSTRIAL OILS

(Multipurpose PAO Fluids—Heavy Grades)

TYPICAL CHARACTERISTICS

Product Code	41220	41320	41460	41680	41900
ISO Viscosity Grade	220	320	460	680	1000
AGMA Grade	5	6	7	8	8A
API Gravity	30.2	29.6	29.2	28.4	27.5
Specific Gravity (ASTM D-1298)	0.875	0.878	0.875	0.885	0.890
Density, lbs/gal	7.29	7.31	7.34	7.368	7.41
Viscosity (ASTM D-445):					
cSt @ 40°C	234	320	480	654	937
cSt @ 100°C	23.7	29.1	38.4	55.3	68
SUS @ 100°F	1246	1681	2560	3451	5065
SUS @ 210°F	117	143	187	267	338
Viscosity Index (ASTM D-2270)	127	124	124	146	144
Pour Point (D-97), °F (°C)	-35 (-37)	-30 (-34)	-20 (-29)	-30 (-34)	-20 (-29)
Flash Point (D-92), °F (°C)	475 (246)	470 (243)	465 (241)	520 (271)	520 (271)
Copper Corrosion (D-130) (3 Hours @ 250 °F)					
	1B	1B	1B	1B	1B
Demulsibility @ 180 °F (D-1401)					
Time for Separation, min	30	30	30	30	-
Oil/Water/Emulsion, ml	40/40/0	40/40/0	40/40/0	40/40/0	-
Rust test	Pass	Pass	Pass	Pass	Pass
Four Ball Wear Test (D-2266)					
(1 Hour/75 C/1200 rpm/40 kg)					
Scar Diameter, mm	0.40	0.40	0.40	0.40	0.40
(1 Hour/54 C/1800 rpm/20 kg)					
Scar Diameter, mm	0.27	0.27	0.27	0.27	0.27
Rotary Bomb Oxidation Test (ASTM D-2272) minutes					
	1400+	1400+	1400+	-	-

The above data is subject to usual manufacturing variation. For more information and availability, call 1-800-442-LUBE.
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