



SYNFILM[®] GT

MULTIPURPOSE SYNTHETIC INDUSTRIAL OIL WITH SYNERLEC[®]

Synfilm[®] GT is a multipurpose synthetic industrial oil formulated for long service life, high film strength, and energy-efficient operation. In the appropriate viscosity grade, it is recommended for gas and steam turbines, air misting systems, centrifugal compressors, pumps, vacuum pumps, blowers, bearings, gears, and certain worm gear applications.

Synfilm GT is typically used to upgrade from conventional, low-film-strength R&O and lightly formulated circulating oils that rely primarily on viscosity for protection. In certain applications, Synfilm GT also replaces premium EP and synthetic gear oils in demanding gear and bearing service. Synfilm GT should be considered when oil reservoir temperatures exceed 175°F, improved low-temperature fluidity is desired, or when a required viscosity grade is not available in Synfilm.

What sets Synfilm GT apart from competing mineral and synthetic oils is its combination of premium synthetic base oils and our proprietary Synerlec[®] additive technology. Proven in demanding industrial environments, Synerlec helps equipment run smoother, cooler, quieter, and more efficiently – delivering longer service life, greater reliability, and maximized uptime with reduced maintenance.



PROPRIETARY ADDITIVE TECHNOLOGY – SYNERLEC[®]

Synerlec[®] additive technology forms a tough, slippery film that bonds ionically to metal surfaces, increasing oil film thickness beyond what viscosity alone can provide. This reinforced film greatly reduces the likelihood of breach, preventing metal-to-metal contact even under severe operating conditions where ordinary lubricants would fail. Because Synerlec allows a lubricant to carry significantly higher loads than other mineral and synthetic oils, it delivers extra protection for bearings exposed to misalignment, shaft flex, high temperatures, imbalance, or water contamination – factors that typically thin oil films. In addition, Synerlec can smooth metal surfaces already damaged by wear by gently micro-mending surface asperities.

PERFORMANCE & OTHER ADVANTAGES

HIGH FILM STRENGTH – Protects bearings far beyond the capability of conventional compressor, gear and pump oils.

EXCELLENT DEMULSIBILITY – Rapidly and completely separates from water, allowing free water to be drained from the bottom of the reservoir.

ENHANCED EFFICIENCY – Delivers an extremely low coefficient of friction, reducing parasitic loss and saving energy.

VIBRATION REDUCTION – Provides superior bearing lubrication due to its tough oil film and ability to micro-polish contacting bearing elements.

LONG SERVICE LIFE – Provides outstanding oxidation stability that greatly extends oil change intervals while keeping equipment clean.

CORROSION PROTECTION – Forms an ionic bond on metal surfaces that acts as a preservative during shutdown and provides instant lubrication at startup.

SYNTHETIC SOLVENCY – Cleans dirty equipment and keeps it clean

SEAL COMPATIBILITY – Compatible with most common seal materials.

continued



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PERFORMANCE & OTHER ADVANTAGES *continued*

OIL COMPATIBILITY – Can be mixed with mineral oils and most synthetic oils, excluding silicone- or glycol-based synthetics.

ENVIRONMENTALLY RESPONSIBLE – Meets EPA, RCRA and OSHA requirements. Extends oil drain intervals, eliminates premature oil changes, decreases the amount of oil purchased and disposed of, and conserves energy.

TYPICAL APPLICATIONS & INDUSTRIES

- Air tools
- Bearings
- Blowers
- Gas and steam turbines
- Gears
- Misting systems
- Vacuum pumps
- General manufacturing
- Mining and processing
- Oil and gas (midstream, petrochemical plants and refineries)
- Power generation
- Pulp and paper

TECHNICAL DATA FOR ISO GRADES

ISO Grade	22	32	46	68	100	150	220	320	460	680
Color*	Purple	Purple or Water White	Purple or Water White	Purple or Water White	Purple or Water White	Purple or Water White	Purple or Water White	Purple or Water White	Purple or Water White	Purple or Water White
Relative Density @ 60°F/60°F, ASTM D1298	0.840	0.844	0.849	0.856	0.861	0.866	0.871	0.875	0.885	0.884
Viscosity @ 100°C cSt, ASTM D445	4.55	5.9	7.55	9.9	13	17.2	22.7	29.3	38	50
Viscosity @ 40°C cSt, ASTM D445	22	32	46	68	100	150	220	320	460	680
Viscosity Index ASTM D2270	123	130	130	128	127	125	126	125	126	127
Flash Point °C (°F), ASTM D92	240 (464)	235 (455)	235 (455)	252 (486)	246 (475)	241 (466)	229 (444)	229 (444)	235 (455)	235 (455)
Pour Point °C (°F), ASTM D97	-63 (-81)	-60 (-76)	-57 (-71)	-60 (-76)	-60 (-76)	-54 (-65)	-45 (-49)	-45 (-49)	-42 (-44)	-36 (-33)
Rust Test 4 hrs @ 60°C, DI H₂O, ASTM D665A	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Rust Test 4 hrs @ 60°C, Sea H₂O, ASTM D665B	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Copper Corrosion 3 hrs @ 100°C, ASTM D130	1A	1A	1A	1A	1A	1A	1A	1A	1A	1A
Copper Corrosion 24 hrs @ 100°C, ASTM D130	1A	1A	1A	1A	1A	1A	1A	1A	1A	1A
Emulsion Characteristics @ 54°C, oil/water/emulsion-minutes, ASTM D1401	42/38/0-5	39/39/2-5	40/38/2-10	40/38/2-10						
Emulsion Characteristics @ 82°C, oil/water/emulsion-minutes, ASTM D1401					39/40/1-10	41/38/1-10	43/37/0-5	42/37/1-15	42/38/0-5	43/37/0-10
Foaming Characteristics 3 sequences @24°C, 93.5°C, 24°C: tendency/stability (ml)-time to break (sec), ASTM D892	0/0-0, 0/0-0, 0/0-0	0/0-0, 0/0-0, 0/0-0	0/0-0, 0/0-0, 0/0-0	0/0-0, 0/0-0, 0/0-0	0/0-0, 0/0-0, 0/0-0	0/0-0, 0/0-0, 0/0-0	0/0-0, 0/0-0, 0/0-0	0/0-0, 0/0-0, 0/0-0	0/0-0, 0/0-0, 0/0-0	0/0-0, 0/0-0, 0/0-0

*All grades available in undyed (water white) and dyed (purple), except 22, which is available only dyed.