

BEYOND SYNTHETIC™

Synfilm GT is Royal Purple's most versatile lubricant. In the appropriate viscosity grade, it is recommended for use in gas and steam turbines, centrifugal compressors, pumps, vacuum pumps, blowers, bearings, gears, worm gears, etc. Synfilm GT should be considered instead of Synfilm when oil reservoir temperatures exceed 200°F, improved low temperature fluidity is desired or when a viscosity grade is not available in Synfilm.

Synfilm GT is a long life, high film strength, energy efficient, synthetic lubricant that significantly increases bearing life and equipment reliability. Synfilm GT gains its performance advantages over competing mineral and synthetic oils through its superior blend of synthetic base oils plus Royal Purple's proprietary Synerlec additive technology. This unique additive technology is proven to make equipment run smoother, cooler, quieter, longer and more efficiently.

Synfilm GT typically is used to upgrade from conventional, low film strength, R&O and lightly formulated circulating oils that rely primarily on their viscosity to protect equipment against wear. Synfilm GT also excels in replacing premium EP and Synthetic gear oils in demanding gear and bearing service.

Synfilm GT 32, 46, 68, 100, 150, 220, 320 and 460 are NSF certified for H2 service.

SYNERLEC[®] ADDITIVE TECHNOLOGY MAKES THE DIFFERENCE!

Synthetic oils enable Royal Purple to make superior lubricants, but it is Royal Purple's advanced Synerlec additive technology that gives Royal Purple's lubricants their amazing performance advantages. Synerlec additive technology truly is beyond synthetic.

Synerlec additive technology forms a tough, slippery, synthetic film on all metal surfaces. This proprietary film significantly improves lubrication: first, by increasing the oil film's thickness, and second, by increasing the oil film's toughness, both of which help to prevent metal-to-metal contact. It displaces moisture from metal surfaces and protects all metals against rust and corrosion. It also fortifies the oil against the detrimental effects of heat, which causes oil to oxidize.

PERFORMANCE ADVANTAGES

- **High Film Strength**
Synfilm GT protects bearings far beyond the ability of other turbine oils, carrying significantly greater loads.
- **Rapidly Separates from Water**
Synfilm GT rapidly and completely separates from water, which is easily drained from the bottom of the oil reservoir.
- **Saves Energy**
Synfilm GT has an extremely low coefficient of friction that is proven to save energy over conventional oils. In rotating equipment these savings frequently exceed the total cost of the oil within several months, making what was once an oil expense a profit.
- **Extremely Clean**
Synfilm GT is packaged in new poly containers and has a typical ISO 4406 Cleanliness Level of 14/13/11 (ISO 32, 46 and 68 only). This is up to 250 times cleaner than other new oils delivered in steel drums or by bulk delivery.
- **Reduces Bearing Vibrations**
The tough oil film of Synfilm GT coupled with its ability to micro-polish contacting bearing elements provides superior bearing lubrication.
- **Longer Oil Life**
Synfilm GT has outstanding oxidation stability that greatly extends oil change intervals while keeping equipment clean.
- **Excellent Corrosion Protection**
Synfilm GT's tough oil film forms an ionic bond on metal surfaces, which acts as a preservative oil during shutdown and provides instant lubrication at startup.
- **Synthetic Solvency**
Synfilm GT's natural solvency cleans up dirty equipment and keeps it clean.
- **Compatible with Seals**
Synfilm GT has excellent seal compatibility.
- **Compatible with Other Oils**
Synfilm GT can be mixed with most mineral and synthetic oils. (It is not compatible with silicone or glycol synthetics).
- **Environmentally Responsible**
Synfilm GT components are TSCA listed and meet EPA, RCRA and OSHA requirements. Synfilm GT extends oil drain intervals, eliminates premature oil changes, decreases the amount of oil purchased and disposed of and conserves energy.

TYPICAL PROPERTIES*	ASTM METHOD	ISO GRADE										
		10	22	32	46	68	100	150	220	320	460	680
Viscosity	D-445											
cSt @ 40°C		10	22	32	46	68	100	150	220	320	460	680
cSt @ 100°C		<2.0	4.5	6.0	7.7	10.1	13.1	17.3	22.4	28.8	36.5	47.9
Viscosity Index	D-2270	106	120	135	136	133	129	126	124	122	120	121
Flash Point, °F	D-92	355	350	455	455	485	475	465	445	445	455	455
Pour Point, °F	D-6892	-60	-71	-38	-38	-38	-44	-44	-44	-40	-44	-38
Copper Corrosion Test	D-130											
3 Hrs @ 100°C		1A	1A	1A	1A	1A	1A	1A	1A	1A	1A	1A
24 Hrs @ 100°C		1A	1A	1A	1A	1A	1A	1A	1A	1A	1A	1A
Rust Test	D-665											
Fresh Water		PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Salt Water		PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Foam Test, Seq II	D-892											
Initial/Final/Time(sec)		28/0/6	10/0/2	8/0/2	6/0/1	10/0/5	10/0/5	12/0/7	8/0/4	6/0/3	4/0/1	0/0/0
Demulsibility Test	D-1401											
Mins @ 130°F		10	10	5	5	5	---	---	---	---	---	---
Mins @ 180°F		---	---	---	---	---	5	10	10	15	10	10
Cincinnati Millicron "A"	D-2070											
Corrosion / Oxidation		PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
ISO Cleanliness Level	ISO 4406	**	**	14/13/11	14/13/11	14/13/11	N/A	N/A	N/A	N/A	N/A	N/A
Dry Air Oxidation	D-2893											
312 Hrs @ 100°C,												
% Viscosity Increase	0	0	0	0	0	0	0	0	0	0	0	0
Precip. No. (% Solids)	0	0	0	0	0	0	0	0	0	0	0	0
Density, lbs/g	D-4052	6.90	6.99	7.04	7.08	7.12	7.19	7.24	7.27	7.32	7.35	7.38

*Properties are typical and may vary

Note: Synfilm GT's solvency cleans wear metals and deposits left behind by previous oils. These wear metals and deposits can become soluble in the new oil, causing abnormally high values on used oil analysis until equipment is clean.