

BEYOND SYNTHETIC™

Aegis is an ashless, high performance, synthetic gas engine oil blend designed to offset rising fuel and operating costs. Aegis is primarily formulated for two-cycle gas engines, but its oxidation stability makes it an excellent four-cycle engine oil. It is tailor-made for companies seeking to increase profits through reductions in operating expenses.

Aegis is formulated with Royal Purple's proprietary Synerlec additive technology. Synerlec additive technology forms a tough oil film on all metal surfaces, which virtually eliminates metal-to-metal contact.

Aegis has a lower coefficient of friction which saves fuel, and it keeps engines clean for maximum combustion efficiency. Its high film strength properties prevent piston ring / cylinder scuffing and seizing and extends bearing life. Aegis also keeps filters from plugging and greatly extends the oil life in four-cycle engines.

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 its 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

- **Saves Fuel**
Slippery, synthetic molecules reduce fluid friction, which saves money by reducing fuel consumption — the single largest operating expense.
- **Protects Against Corrosion**
Synthetic inhibitors provide superior rust and corrosion protection during operation and shutdown.
- **Extended Equipment Life**
Synerlec additive technology's superior high film strength extends equipment life and overhaul intervals.

PERFORMANCE ADVANTAGES, CONTINUED

- **Cleaner Equipment**
Aegis keeps ports, pistons, crankcases and filters clean.
- **Low Temperature Fluidity**
The fluid, synthetic molecules in Aegis offer excellent low temperature pumpability, which reduces the need for engine oil heaters.
- **Prevents Piston Ring / Cylinder Seizing and Scuffing**
Aegis contains Royal Purple's proprietary Synerlec additive technology, a super-tough, slippery, synthetic lubricating film that makes gas engines run smoother, quieter, cooler, longer and more efficiently. Synerlec additive technology prevents piston ring / cylinder scuffing and seizing in many large engines where this is a problem.
- **Reduces Vibrations**
Aegis micro-polishes contacting metal surfaces allowing them to properly mate for smoother running engines, compressors, turbochargers, bearings, etc.
- **Greater Wetting Ability**
Aegis tenaciously coats cylinder walls, improving ring / liner seal and often allowing feed rates to be reduced, which reduces oil consumption.
- **Super Detergency**
Aegis keeps ports, rings and cylinders extremely clean for maximum combustion efficiency. It keeps filters virtually free from varnish, lacquer and sludge deposits.
- **Ashless**
Aegis is preferred for two-cycle gas engines and is acceptable for most four-cycle gas engines.
- **Environmentally Responsible**
The components of Aegis are TSCA listed and meet EPA, RCRA and OSHA requirements. It extends oil drain intervals, eliminates premature oil changes, decreases the amount of oil purchased and disposed of and conserves energy.
- **Super Solvency (on request)**
Royal Purple recommends Aegis with super solvency in all engines; however, oil and filter life may be shortened as it cleans up deposits left by previous oils. For fast clean up of dirty engines, Royal Purple recommends adding our synthetic solvent Max-Solv™ to the existing oil five days prior to changing to Aegis. Once the engine is clean, use Aegis with super solvency as the standard engine lubricant. (See reverse side for filter recommendations).
- **Superior Lubrication**
Synerlec additive technology vastly improves turbocharger performance. Turbochargers turn freely as evidenced by their greatly increased coast-down time.

TYPICAL PROPERTIES*	ASTM METHOD	SAE GRADE	
		30	40
Viscosity	D-445		
cSt @ 40°C		89.2	119.0
cSt @ 100°C		10.4	13.3
Viscosity Index	D-2270	98	107
Flash Point, °F	D-92	480	515
Pour Point, °F	D-6892	-26	-20
Corrosion Test	D-130		
3 Hrs @ 100°C		1A	1A
Rust Test	D-665		
Fresh Water		PASS	PASS
Salt Water		PASS	PASS
Foam Test, Seq II	D-892		
Initial/Final/Time(sec)		5/0/1	6/0/1
Four Ball EP Test	D-2782		
Weld Load, kgf		315	315
Sulfated Ash, %	D-892	NIL	NIL
Density, lbs/g	D-4052	7.60	7.61
Super Detergency		YES	YES
Synthetic Solvency**		ON REQUEST	ON REQUEST

*Properties are typical and may vary

**Synthetic Solvency is available to operators who wish to clean engine and cooler deposits left by previous oils. Its use may shorten the first oil and / or filter change interval, depending on the amount of engine deposits, which should be determined with oil analysis. Full flow filters are desirable if super solvency is used. By-pass filters can be used with close supervision and frequent oil analysis. Once the engine is clean either filter may be used. (Detergency keeps new deposits from forming. Only solvency can clean oil engine deposits.)

Note: The solvency of Aegis cleans wear metals and deposits left by previous oils. These wear metals and deposits can cause abnormally high values on used oil analysis until the engine is clean.

This product is undyed.

TWO-CYCLE ENGINES

MANUFACTURER

Cooper (Cooper-Bessemer)
 BMEP <85 PSI
 BMEP >85 PSI
 Clark (Dresser Rand)
 Worthington (Dresser-Rand)
 Fairbanks Morse (MEP)
 Oil Temp. <185°F
 Oil Temp. >185°F
 Ajax (Cooper Energy Service)

LUBRICANT

Aegis SAE 40
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 Aegis SAE 40
 Quadrex SAE 40
 Quadrex SAE 40
 Aegis SAE 40

Note: Royal Purple offers two premium energy saving gas engine oils. 1) Aegis "ashless" and 2) Quadrex "low ash". Aegis is preferred for 2-cycle engines and Quadrex is preferred for 4-cycle engines, although both are acceptable in either case.

FOUR-CYCLE ENGINES

MANUFACTURER

Cooper-Bessemer
 BMEP <175 PSI
 BMEP >175 PSI
 Ingersol (Dresser Rand)
 Category I, II, III
 Superior
 Natural Aspirated
 Waukesha
 All Gas Engine Models
 Oil Temp. 160-195°F
 Oil Temp. 195-230°F
 Caterpillar
 All Models

LUBRICANT

Quadrex SAE 40
 Quadrex SAE 40
 Quadrex SAE 30
 Quadrex SAE 40
 Quadrex SAE 30
 Quadrex SAE 40
 Quadrex SAE 30, 40

Note: models 3300, 3400, 3500, & 3600 — low ash oil is preferred.