

### BEYOND SYNTHETIC™

Synergy is an ultra-tough, long life, EP industrial gear oil proven to make gears run smoother, quieter, cooler and longer without overhauls. Synergy gains its performance advantage over competing mineral and synthetic oils through its superior blend of synthetic base oils plus Synslide additive technology, Royal Purple's unique, proprietary, noncorrosive, EP technology.

Synergy protects gears in severe service applications where other EP oils fail. Synergy is recommended for users looking for longer oil life and significantly improved gear box reliability and performance.

For more information, please request Royal Purple's "Gear Lubrication Manual."

#### SYNSLIDE® ADDITIVE TECHNOLOGY MAKES THE DIFFERENCE!

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

Synslide additive technology, Royal Purple's tough, EP lubricating film, provides maximum protection under boundary lubrication conditions typically caused by heavily loaded, slow speed and/or shock load conditions. This tenacious, slippery film significantly improves lubrication and reduces wear by increasing the oil film thickness and toughness, which helps to prevent metal-to-metal contact in gears and bearings.

Synslide additive technology is noncorrosive to gears and bearings, including case-hardened gears that are easily pitted by conventional sulfur-phosphorus EP oils. Synslide additive technology displaces water from metal surfaces and excels in protecting equipment in wet environments. It also fortifies the oil against the detrimental effects of heat, which causes oil to oxidize.

Note: For Worm Gears, Royal Purple recommends Synergy® Worm Gear Oil or Thermyl-Glyde® Worm Gear Oil.

### PERFORMANCE ADVANTAGES

- **High Film Strength**  
Synergy protects gears and bearings beyond the ability of conventional EP gear oils.
- **Shock Load Protection**  
Synergy protects against fatigue failure in gears subjected to sudden shock loads.
- **Rapidly Separates from Water**  
Synergy rapidly and completely separates from water, which is easily drained from the bottom of the oil reservoir.
- **Longer Oil Life**  
Synergy has outstanding oxidation stability that greatly extends oil change intervals while keeping gear boxes clean.
- **Reduces Bearing Vibrations**  
The tough oil film of Synergy coupled with its ability to micro-polish contacting bearing elements provides superior bearing lubrication.
- **Saves Energy**  
The tough oil film of Synergy and low coefficient of friction save energy in gear boxes operating under load.
- **Synthetic Solvency**  
The natural solvency of Synergy cleans up dirty gear boxes and keeps them clean.
- **Compatible with Seals**  
Synergy has excellent compatibility with most seals.
- **Compatible with Other Oils**  
Synergy is compatible with most elastomers and can be mixed with other mineral oils and most synthetic oils. (It is not compatible with silicone or glycol based synthetics).
- **Environmentally Responsible**  
Synergy components are TSCA listed and meet EPA, RCRA and OSHA requirements. Synergy 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							
		68	100	150	220	320	460	680	1000
SAE Grade	---	75W80	80W85	80W90	90	85W140	140	250	250
AGMA Grade	---	2 EP	3 EP	4 EP	5 EP	6 EP	7 EP	8 EP	8A EP
Viscosity	D-445								
cSt @ 40°C		68	100	150	220	320	460	680	1000
cSt @ 100°C		8.8	12.0	15.7	21.0	25.8	32.7	44.6	58.0
Viscosity Index	D-2270	102	102	101	110	105	104	111	112
Flash Point, °F	D-92	415	460	405	400	435	415	440	390
Pour Point, °F	D-6892	-33	-33	-30	-33	-30	-24	-24	-30
Copper Corrosion Test	D-130								
3 Hrs @ 100°C		1A	1A	1A	1A	1A	1A	1A	1A
Rust Test	D-665								
Fresh Water		PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Salt Water		PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Foam Test, Seq II	D-892								
Initial/Final/Time(sec)		4/0/2	2/0/0	4/0/2	7/0/2	10/0/4	4/0/1	1/0/1	0/0/0
Demulsibility Test	D-1401								
Mins @ 130°F		10	---	---	---	---	---	---	---
Mins @ 180°F		---	5	5	5	10	10	15	10
Cincinnati Millicron "B"	D-2070								
Corrosion / Oxidation		PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Four Ball EP Test	D-2783								
Load Wear Index		58	60	60	72	61	61	61	61
Weld Load, kgf		315	400	400	315	400	400	400	400
Density, lbs/g	D-4052	7.37	7.40	7.41	7.38	7.48	7.51	7.49	7.50

\*Properties are typical and may vary

\*Note: When changing to Synergy, its solvency cleans wear metals and deposits left behind by previous oils. These wear metals and deposits can cause abnormally high values on used oil analysis until equipment is clean.