



UNI-TEMP™

SYNTHETIC REFRIGERATION OIL

Uni-Temp™ is a long life, energy-efficient, synthetic refrigeration lubricant that provides superior performance in both rotary screw and reciprocating refrigeration compressors. Uni-Temp™ is formulated with Royal Purple's proprietary Synerlec® additive technology giving it significant performance advantages. It has excellent oxidation stability to keep compressors clean while also providing greatly extended oil drain intervals. Uni-Temp™ consistently produces large energy savings when replacing other mineral and synthetic refrigeration oils*. These savings typically pay for the total cost of the oil within a few months.

The Uni-Temp product line provides excellent service in multiple types of compressors and with a wide range of refrigerants. In ammonia compressors Uni-Temp™ typically reduces or eliminates oil carryover from the compressor into the cold side of the system. It is also wax-free and therefore does not congeal on the evaporator coils. Cooling efficiency is maximized and the need to

shut down the system to clean the coils is eliminated. Uni-Temp™ is recommended wherever cost savings through improved equipment utilization and reduced energy use and oil consumption is desired.

Synthetic base 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

HIGH FILM STRENGTH – Synerlec® additive technology dramatically reduces metal-to-metal contact, friction, and wear

INCREASED EFFICIENCY – Reduces energy consumption, lowering operational costs

MAINTAINS COOLING EFFICIENCY – Uni-Temp™ is wax-free and has no flock point; does not congeal on evaporator coils

SUPERIOR OXIDATION & THERMAL STABILITY – Resists oil degradation and varnish formation for longer oil life

IMPROVES SYSTEM UTILIZATION – Keeps evaporator coils & expansion valves clean, improving reliability & reducing downtime

EXCELLENT DEMULSIBILITY – Rapidly separates from water, allowing free water to be drained from the system

OUTSTANDING ELASTOMER COMPATIBILITY – Will not harm seals designed for use with lubricating oils

REFRIGERANT COMPATIBILITY

- Ammonia (R-717)
- Propane (R-290)
- Isobutane (R-600a)
- CFCs (R-11, R-12, R-13, R-113, R-114, R-502, etc.)
- HCFCs (R-22, R-123, R-124, R-142b, etc.)

*Average energy savings after switching to Royal Purple, which was documented via a data logger in 34 ammonia compressors, was 10.11%. Uni-Temp™ is an undyed product and Uni-Temp™ 300 meets requirements for NSF H2 service.



THE SYNTHETIC EXPERT

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TECHNICAL DATA

Property	Test Method	150	300
ISO Grade	ISO 3448	32	46/68
Viscosity @ 40°C, cSt	ASTM D445	30.7	56.7
Viscosity @ 100°C, cSt	ASTM D445	5.7	8.7
Viscosity Index	ASTM D2270	131	128
Specific Gravity, @ 60/60°F	ASTM D4052	0.851	0.857
Flash Point, °F/°C	ASTM D92	247 (476)	258 (496)
Pour Point, °F/°C	ASTM D97	-39 (-38)	-54 (-65)
Cu Corrosion, 3hr @ 100°C	ASTM D130	1B	1B
Rust Preventing, Fresh Water	ASTM D665A	PASS	PASS
Rust Preventing, Salt Water	ASTM D665B	PASS	PASS
Demulsibility, @ 180°F	ASTM D1401	41/38/1 (15)	41/38/1 (10)
Foam Test, Seq. I	ASTM D092	0/0/0	0/0/0

11/21/2022