

## ULTRACHEM R-PAO SERIES PAO REFRIGERATION LUBRICANTS

### Applications:

Ultrachem R-PAO Refrigeration Oils are fully synthetic premium performance lubricants developed for use in rotary screw compressors in refrigeration service compressing ammonia, methyl chloride or carbon dioxide. They are wax free, synthesized hydrocarbon polyalphaolefin (PAO) fluids, which have outstanding resistance to thermal/oxidative degradation. They are formulated with a carefully balanced additive package to provide long service life, excellent deposit control, protection against rust and corrosion. With their naturally high shear stable viscosity indexes and low temperature fluidity, they are able to perform in severe service conditions that are beyond the capabilities of conventional mineral oils.

Ultrachem R-PAO oils are fully miscible with conventional mineral oils, but any mixture with mineral oils may detract from the superior performance properties of the synthetic product. *They are **not** recommended for use with chlorinated hydrocarbons (CFCs), fluorinated hydrocarbons or sulphur dioxide.*

Ultrachem R-PAO Refrigeration Oils meets the requirements FDA 21 CFR 178.3570 H-1

### **Typical Industrial Applications:**

- Rotary screw refrigeration compressors operating under severe-service conditions
- Rotary compressors used in ammonia and carbon dioxide refrigeration systems
- Commercial, industrial, heat pump and marine refrigeration systems
- Recommended for both reciprocating and rotary compressor designs

### Performance Benefits:

- Improved compressor anti-wear protection for extended compressor life as well as better shaft sealing, reduced bearing fatigue and less unscheduled downtime
- Long oil life and reduced drain intervals and less routine maintenance
- Reduced lacquer and deposit formation for longer filter life and reduced shaft seal leakage
- Avoids viscosity build-up, reduced oil consumption
- Excellent low temperature fluidity, no waxy deposits and improved evaporator efficiency

11/11

#### HEALTH & SAFETY

To obtain an MSDS on this or any other Ultrachem product, please contact your representative.

#### TECHNICAL SUPPORT

To learn more about Ultrachem products and applications please contact us at [info@ultracheminc.com](mailto:info@ultracheminc.com)



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TYPICAL PROPERTIES	TEST METHOD	R-PAO 32	R-PAO 46	R-PAO 68	R-PAO 100	R-PAO 150	R-PAO 220	R-PAO 400
ISO Grade	ASTM D2422	32	46	68	100	150	220	400
Viscosity @ 40°C,cSt	ASTM D445	30	46.2	65.3	104	152	216	399
Viscosity @ 100°C,cSt	ASTM D445	5.9	7.9	10.3	14.6	19.8	24.7	39.1
Viscosity Index	ASTM D2270	148	144	146	144	150	145	146
Flash Point, °C/°F	ASTM D92	235/455	252/486	260/501	260/501	260/501	265/509	272/521
Pour Point, °C/°F	ASTM D97	-68/-90	-63/-81	-55/-67	-51/-59	-47/-52	-45/-49	-34/-29
Color	ASTM D1500	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Total Acid Number, mg KOH/g	ASTM D974	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Foam Test	ASTM D892							
Copper Strip	ASTM D130	1	1	1	1	1	1	1
Rust Test	ASTM D665 B	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Specific Gravity	ASTM D1298	0.83	0.83	0.83	0.83	0.84	0.84	0.85

11/11

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