HFC REFRIGERATION FLUIDS

(Refrigeration Fluids for Freon)

The design of modern air-conditioning and refrigeration compressors varies according to manufacturers. However, all require highly specialized lubricating oil.

HFC REFRIGERATION FLUIDS meet the special requirements and are formulated from modified ester base stocks to provide controlled miscibility, as well as solubility with all HFC based refrigerants, including R-134a. They are mineral oil compatible and can be used to effectively retrofit an existing CFC based system. The controlled miscibility and solubility properties of the lubricants have lead to improved volumetric efficiency in compressor tests, as well as providing efficient oil return from the system. In addition, tests conducted on the fluid have shown no loss of lubricant film under diluted conditions with rolling ball elements.

HFC REFRIGERATION FLUIDS have the following proven features: (1) chemical stability to resist chemical reaction with refrigerant or other material normally present in the system; (2) thermal stability to eliminate excessive hard carbon deposits at compressor hot spots such as valves or discharge ports; (3) controlled miscibility to prevent separation of flocculant material from the oil refrigerant mixture at the low temperature points in the system; (4) a low pour point to prevent oil from congealing in refrigerant lines; (5) proper viscosity, even when diluted with refrigerant, to insure high film strength at elevated operating temperatures and to provide good fluidity under the coldest operating conditions; (6) a high dielectric strength to insure good insulating properties (in hermetic units the oil refrigerant mixture serves as an insulator between the motor and the compressor body); and (7) excellent lubricity to protect compressors and system component from wear.

BENEFITS:

- EXCELLENT THERMAL, CHEMICAL & OXIDATION STABILITY FOR LONG SERVICE LIFE
- EXCELLENT RUST, CARBON AND VARNISH CONTROL
- CONTROLLED MISCIBILITY WITH HFC & HCFC REFRIGERANTS
- EXCELLENT LUBRICITY TO PROTECT COMPRESSORS

APPLICATIONS:

HFC REFRIGERATION FLUIDS are recommended for the lubrication of reciprocating and rotary compressors in hermetic refrigerant motor-compressors. These refrigeration and air-conditioning systems often contain HCFC and HFC refrigerants.

HFC REFRIGERATION FLUIDS are recommended for applications calling for these refrigerants such as R-22, R-134a, R401-A, R401-B, R402-A, R402-B, R404A, R407A, R407B, R407C, R410A, R507, R 507A and other refrigerants where polyol esters are utilized.

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TYPICAL CHARACTERISTICS

Product Grade	32	46	68	120*
Product Code	n/a	n/a	46262	46263
API Gravity (ASTM D-1298)	19.2	21.3	18.2	19.0
Specific Gravity	0.939	0.926	0.945	0.940
Density, lbs/gal	7.79	7.71	7.88	7.83
Viscosity (ASTM D-445):				
cSt @ 40°C	31.9	50.5	64	131
cSt @ 100°C	5.63	7.0	8.9	14.5
Viscosity Index (ASTM D-2270)	116	94	114	122
Flash Point (ASTM D-92) °F (°C)	480 (249)	480 (249)	511 (266)	520 (271)
Pour Point (ASTM D-97) °F (°C)	-49 (-45)	-49 (-45)	-45 (-43)	-33 (-36)
Color (ASTM D-1500)	1.0	1.0	1.0	1.5
Dielectric Strength, kV (ASTM D-877)	43	43	43	43
Water, PPM (ASTM D-1533)	80	80	80	80

* Other grades from are available.

The above data is subject to usual manufacturing variation. For more information and availability, call 1-800-442-LUBE.

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