

SHELL REFRIGERATION OIL S4 FR-V

SYNTHETIC REFRIGERATOR COMPRESSOR LUBRICANT

PREVIOUSLY SHELL CLAVUS AB

DESIGNED TO MEET CHALLENGES

Shell Refrigeration Oil S4 FR-V is a synthetic refrigeration lubricant based on alkylated benzenes. Compatible with all commonly used refrigerants with the exception of HFCs. They are particularly recommended for refrigerator compressors operating with ammonia and HCFC as refrigerant.

PERFORMANCE FEATURES

SYSTEM EFFICIENCY

- Shell Refrigeration Oil S4 FR-V has high solvency and is designed to maintain refrigerant cleanliness and efficiency.

EXTENDED MAINTENANCE INTERVALS

- Shell Refrigeration Oil S4 FR-V has excellent high temperature and oxidation stability providing long service life even where high compressor discharge temperatures are found.
- In addition it is formulated to provide excellent control of deposit and sludge formation, contributing to extended oil drain intervals, in comparison with mineral oil based refrigerator oils.

APPLICATIONS

REFRIGERATOR COMPRESSORS

- Shell Refrigeration Oil S4 FR-V is recommended for use in open, semi-open and hermetic compressors in domestic, commercial and industrial refrigeration systems. It can be used in both rotary and reciprocating compressor types.

REFRIGERANT COMPATIBILITY

- Shell Refrigeration Oil S4 FR-V is designed for use with most commonly occurring refrigerants:
- Ammonia (R717) systems where it offers excellent performance, even under high compressor discharge temperatures or down to evaporation temperatures of -33°C or lower.
- Carbon dioxide (R744) systems.
- CFC and HCFC systems (R12 and R22).
- Hydrocarbon systems such as propane (R290).

SEAL COMPATIBILITY

- Shell Refrigeration Oil S4 FR-V is compatible with all commonly used sealing materials used with mineral oils.

LUBRICANT COMPATIBILITY

- Shell Refrigeration Oil S2 FR-V is completely miscible with mineral oil, other alkylated benzene and PAO based lubricants.

SPECIFICATIONS, APPROVALS AND RECOMMENDATIONS

MEETS THE REQUIREMENTS OF:

- DIN 51503 KAA and KC.

TYPICAL PHYSICAL CHARACTERISTICS

CHARACTERISTICS	68
Kinematic Viscosity (ASTM D 445)	
@ 40°C mm ² /s	68
@ 100°C mm ² /s	6.2
Refrigerator Oil Group (DIN 51503)	AAA, KC
Density @ 15°C kg/m ³ (ISO 12185)	871
Flash Point °C (COC)	190
Pour Point °C	-39
Neutralisation number mg KOH/g (ASTM D 664) (TAN)	<0.04
Saponification number °C (DIN 51351)	0.08
Floc Point R12h (DIN 51593)	<-30
Stability with Refrigerants h (DIN 51593)	>96
Miscibility with Refrigerants	Completely miscible with hydrocarbon based refrigerants
Miscibility with R134a 2% oil C°	-54/98
Miscibility with R134a 20% oil C°	-34/94
Miscibility with R12 C°	<60/>+100