

## Refrigeration Range

### SUNICE A 68 SYN

SUNICE A 68 SYN is a highly refined, fully synthetic lubricant. It offers excellent oxidation inhibition, corrosion protection, pour point depression and defoaming properties. This fluid is widely used for applications where the lubricant is subjected to harsh chemical environments, such as the demanding conditions found in ammonia refrigeration applications.

N°	Lubricant	Technology	ISO VG
A	SUNICE A 68 SYN	PAO	68

### SUNISO GS

SUNISO GS oils are premium quality naphthenic mineral oils designed for use as refrigeration compressor lubricant, with traditional refrigerants. They are highly stable and are essentially wax free. They have long histories of satisfactory service in many types of equipment and are approved by most manufacturers for both factory fill and maintenance fill of their equipment, such as Aspera, Arceik, Bristol Compressors, Camco, Carlyle, Carrier, Copeland, Danfoss, Electrolux, Embarco, Hitachi, Matsushita (Panasonic), Samsung, Sanden, Sanyo, Tecumseh, Thermking, Toshiba, Trane, York International and Zanussi.

N°	Lubricant	Technology	ISO VG
B	SUNISO 3 GS	MN	32
C	SUNISO 4 GS	MN	55

### SUNISO SL

SUNISO SL grades are synthetic ester lubricants, formulated using select polyolester base stocks and additives providing outstanding lubricity, stability and corrosion protection. These lubricants are miscible in alternative refrigerants such as R-134a at extremely low temperatures. SUNISO SL lubricants have been designed specifically for use in refrigeration and air-conditioning systems charged with ozone friendly alternative refrigerants.

N°	Lubricant	Technology	ISO VG
D	SUNISO SL 22	POE	22
E	SUNISO SL 32	POE	32
F	SUNISO SL 46	POE	46
G	SUNISO SL 68	POE	68
H	SUNISO SL 100	POE	100
I	SUNISO SL 170	POE	170
J	SUNISO SL 220	POE	220

### SUNICE EF 68

SUNICEEF 68 is a synthetic polyolester (POE) based lubricant, specifically designed for use in refrigeration and air-conditioning compressors using CO2 (R-744) refrigerant. Thanks to its high chemical and thermal stability, and very good low temperature properties, it can be used in a wide range of operating temperatures.

N°	Lubricant	Technology	ISO VG
K	SUNICE EF 68	POE	68

### SUNICE AKB

SUNICEAKB series are alkylbenzene based full synthetic refrigeration fluids that have been developed for the use in refrigeration and air-conditioning systems. These products are friendly low acids materials of construction, as well as exhibiting properties such as low floc points and superior stability. SUNICE AKB fluids can be used in rotary and screw compressors working with ammonia as well as in refrigeration systems using HCFC's.

N°	Lubricant	Technology	ISO VG
L	SUNICE AKB 68	AB	68
M	SUNICE AKB 100	AB	100

## Refrigeration Lubricant Selector

REFRIGERANT FLUID			EVAPORATOR TEMPERATURE		COMPRESSOR TYPE		
ASHRAE Name	Type	Transition or Substitute of	From (°C)	To (°C)	Piston	Screw	Centrifugal
R12	CFC		-40	+40	B	C	
R502	CFC		-50	-20	B	C	
R22	HCFC		-25	+10	B	M	C
R22	HCFC		-30	+10	B	M	C
R22	HCFC		-40	+10	B	M	C
R22	HCFC		-50	+10	B	M	C
R123	HCFC	R11	0	+20			C
R124	HCFC	R114	0	+80	C	M	
R401a	HCFC	R12	-20	+10	B		
R402a	HCFC	R502	-50	-30	B		
R408a	HCFC	R502	-50	-30	B	M	
R409a	HCFC	R12	-20	+10	B		
R290	C <sub>3</sub> H <sub>8</sub> (propane)		-30	+20	C		
R600/600a	Butane & Iso But.		-30	+20	C		
R717	NH <sub>3</sub> (ammonia)		-30	+10	C	A	L
R717	NH <sub>3</sub> (ammonia)		-50	+10	C	A	L
R744	CO <sub>2</sub>		-55	-10	K		
R23	HFC		-100	-40	D		
R134a	HFC	R12	-20	+10	E	I	J
R134a	HFC	R12	-30	+10	D	H	
R404a	HFC	R502	-40	-30	E	I	J
R404a	HFC	R502	-50	-30	D	H	
R407c	HFC	R22	0	+10	G	I	J
R410a	HFC		-45	+10	D	H	
R410a	HFC		-25	+10	E	I	J
R410b	HFC		-25	+10	E	I	J
R417a	HFC	R22	-15	+15	G	I	J
R422a (Isceon M079)	HFC	R22	-45	-5	D	H	
R422a (Isceon M079)	HFC	R22	-25	-5	E	I	J
R422d (Isceon M029)	HFC	R22	-45	+10	D	H	
R422d (Isceon M029)	HFC	R22	-25	+10	E	I	J
R427a (FX 100)	HFC	R22	-40	+10	D	H	
R427a (FX 100)	HFC	R22	-20	+10	F	I	J
R507/507a	HFC		-40	0	D	H	
R507/507a	HFC		-20	0	F	I	J

Listed here are some of the high-performance SUNISO® Refrigeration Lubricants, each one formulated to offer outstanding equipment protection and extended oil life. These charts will help you determine which lubricant is most suitable for your system, based on the type of refrigerant fluid, evaporator temperature and compressor type.

For a complete list of SUNISO® Refrigeration Oils, visit [www.suniso-refrigerationoils.com](http://www.suniso-refrigerationoils.com)

### HOW TO USE THIS REFRIGERATION LUBRICANT SELECTOR

- Obtain/confirm the following information on the application:
  - REFRIGERANT FLUID in use (ASHRAE designation)
  - Evaporator is of dry type (oil carryover less than 15%) and EVAPORATOR TEMPERATURE in °C
  - COMPRESSOR TYPE and outlet temperature
- To identify the SUNISO® branded lubricant(s) suitable for use in the type of compressor please refer to the row that corresponds to the refrigerant fluid and the evaporator temperature.
- If mineral and synthetic lubricants are both indicated, synthetic lubricants will in general offer a higher level of performance than mineral oils with respect to equipment protection, particularly at high- and low-operating temperatures, compressor efficiency and oil life.
- For further clarification or assistance please contact your local representative.