

Refrigeration oil

# Sunice® GS/GSD series

Sunice GS or formerly known as Suniso GS has been the world's leading brand of refrigeration oil since 1927. JSO, the only authorized manufacturer of the brand in the APAC, has been producing Sunice in Japan over 50 years. Sunice GS/GSD series is the premium naphthenic refrigeration oil, which performs excellently with various refrigerants. Highly stable, long trouble-free life, and essentially wax free. It can be stably used with the natural refrigerants such as R717, R290.

### APPLICATIONS

Refrigerating  
Compressors using CFC,  
HCFC, HFO or  
Natural refrigerants.

- GS/GSD series can be used in virtually any installation, regardless of compressor or evaporation temperature with HCFC and also perform excellently with **R22, R717, R290, R1233zd(E)**.
- GSD series has enhanced antifoaming properties, so it can solve the problems with foaming phenomena at startup.

### ADVANTAGES

Give your compressors  
high performance and  
safety.

- Chemical Stability to extend service life, reducing costs.
- Cleaner Operation of the compressor with fewer deposits that may cause valve sticking.
- Excellent Low Temperature Performance with no wax deposits to plug the system.

### SPECIFICATIONS

Approvals/  
Recommendations/  
References.

Bitzer, Bristol, Carlyle, Copeland, Daewoo, Daikin, Dorin, Embraco, Fusheng, GEA Bock, GEA Grasso, GMCC, HANBELL, Hasegawa Refrigeration, Mayekawa, McQuay, Hitachi, KOBELCO, Kulthorn Kirby, LG, Mitsubishi Heavy Industries, Panasonic, Sanyo, Samsung, Toshiba Carrier, Tatung, Tecumseh, Thermo King and more.

### Typical Properties

Analysis	Unit	Method	3GS	4GS	5GS	3GSD	4GSD	5GSD
ISO Viscosity Grade			32	56	100	32	56	100
Density at 15°C	g/cm3	ASTM D4052	0.909	0.915	0.921	0.910	0.915	0.925
Viscosity (40 °C)	mm2/s	ASTM D445	29.5	54.9	94.6	29.5	54.5	96.5
Viscosity (100 °C)	mm2/s	ASTM D455	4.3	6.0	7.8	4.4	6.1	8.1
Pour point	°C	ASTM D97	-40.0	-35.0	-27.5	-40.0	-35.0	-25.0
Flash point (COC)	°C	ASTM D92	178	188	208	178	182	188

Above characteristics are mean values given as an information.



Application table

	ASHRAE	Evaporator Temp From	Compressor Type			
			Piston		Screw	Centrifugal
HCFC	R22	-25 °C	3GS	4GS	4GS 5GS	
		-35 °C	3GS	4GS	4GS	
		-50 °C	3GS		3GS	
Propane	R290	-30 °C	3GS	4GS 5GS		
NH3 (ammonia)	R717	-30 °C	3GS	4GS	4GS	
		-50 °C	3GS		3GS	
HCFO	R1233zd(E)	-20 °C			4GS 4GSD	4GS 4GSD

For equipment under warranty, please refer to equipment builder recommendations.

In changing the technology or brand of refrigeration oil, flushing the system is recommended to minimize contamination with the old technology or brand.

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