



Refrigeration oil

# Sunice® 4SA/4HT

Sunice 4SA is developed specifically for the **R717** with the aim to protect refrigeration compressors at the minimal operating cost. Highly refined naphthenic mineral oils, widely trusted and used by the global professionals.

Sunice 4HT is a paraffinic refrigeration oil developed for **R717** in response to users' requests for transparent color. Enhanced high-temperature durability is the advantage of 4HT.

## APPLICATIONS

Refrigerating Compressors using R717 (ammonia).

- 4SA is a specially formulated naphthenic refrigeration oil optimized for **R717** system.
- 4HT is a highly refined paraffinic refrigeration oil for **R717** system and has improved high-temperature durability.

## ADVANTAGES

Give your compressors high performance and safety at reasonable cost.

### 4SA

- Long Service Life
- Higher Wear Resistance
- Excellent Lubricity
- Best Cost performance

### 4HT

- Excellent Thermal Stability
- Less Carbon Deposits
- Excellent Lubricity

## SPECIFICATIONS

Approvals/ Recommendations/ References.

**4SA** GEA Grasso

## Typical Properties

Analysis	Unit	Method	4SA	4HT	For comparison	
					3GS	4GS
ISO Viscosity Grade			56	56	32	56
Density at 15°C	g/cm <sup>3</sup>	ASTM D4052	0.902	0.855	0.909	0.915
Viscosity (40 °C)	mm <sup>2</sup> /s	ASTM D445	53.9	54.3	29.5	54.9
Viscosity (100 °C)	mm <sup>2</sup> /s	ASTM D455	6.7	8.2	4.3	6.0
Pour point	°C	ASTM D97	-40.0	-35.0	-40.0	-35.0
Flash point (COC)	°C	ASTM D92	198	240	178	188

Above characteristics are mean values given as an information.



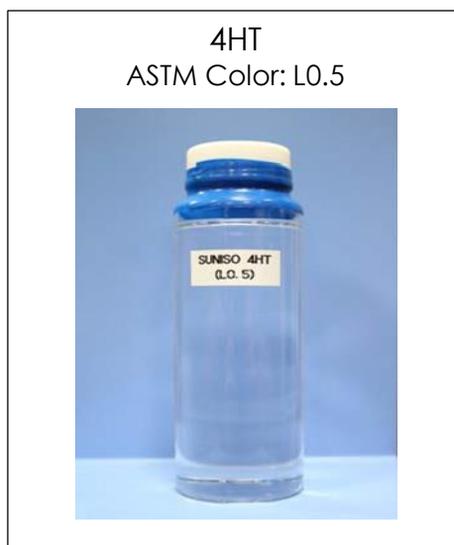


Application table

	ASHRAE	Evaporator Temp. From	Compressor Type						
			Piston			Screw			
NH3 (ammonia)	R717	-30 °C	<b>4SA</b>	<b>4HT</b>	3GS	4GS	<b>4SA</b>	<b>4HT</b>	4GS
		-40 °C	<b>4SA</b>		3GS		<b>4SA</b>		3GS
		-50 °C			3GS		<b>4SA</b>		3GS

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.



Contact:

**Japan Sun Oil Company, Ltd.**  
Trusty Kojimachi Bldg., 3-4 Kojimachi,  
Chiyoda-ku, Tokyo 102-0083 Japan  
exp@sunoco.co.jp  
www.sunoco.co.jp

**SUNOCO (THAILAND) Co., Ltd.**  
United Tower 15th Floor, 333/21  
Sukhumvit Rd, Soi 55, North Klongton,  
Wattana, Bangkok 10110 Thailand  
exports@sunoco.co.th  
www.sunoco.co.th

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