Parker Hannifin Corporation
Sporlan Division
206 Lange Drive
Washington, MO 63090
U.S.A.

SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product identifier used on the label

: **SUNISO® 3GS Refrigeration Oil**

Product Code(s) : L316 (P/N 457326), L318 (P/N 475328), L321 (P/N 475334), L324 (P/N 475340), L350 (P/N 475344), L351 (P/N 475345), L354 (P/N 475348) and L357 (P/N 475350).

Recommended use of the chemical and restrictions on use

: Professional Use Only. Severely refined, naphthenic refrigeration system lubricant.

Chemical family : Mixture. Petroleum distillates

Name, address, and telephone number of the supplier:

Parker Hannifin Corporation - Sporlan Division

206 Lange Drive
Washington, MO, U.S.A.
63090

Supplier's Telephone # : (636) 239-1111

24 Hr. Emergency Tel # : Chemtrec 1-800-424-9300 (Within Continental U.S.); Chemtrec 703-527-3887 (Outside U.S.).

Name, address, and telephone number of the manufacturer:

Refer to supplier

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

WHMIS classification: This product is not a WHMIS controlled product in Canada. It does not meet any of the criteria for a controlled product provided in Part IV of the Controlled Products Regulations (CPR).

OSHA: This material is not classified as hazardous under OSHA regulations (29CFR 1910.1200) (Hazcom 2012).

Label elements

The following label information is applicable only to the United States according to OSHA Regulations (29 CFR 1910.1200) (Hazcom 2012):

Signal Word

Not required

Hazard statement(s)

None required.

Precautionary statement(s)

None required.

The following label information is applicable only to Canada according to the Canadian Controlled Products Regulations (CPR/WHMIS):

This product is not a WHMIS controlled product in Canada. As such, this product does not require a WHMIS Supplier label.

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Other hazards

Other hazards which do not result in classification:
Burning produces obnoxious and toxic fumes. May be mildly irritating to eyes and skin. Oils can block the skin pores causing an acne-like disorder. Ingestion can cause gastrointestinal irritation, nausea, and diarrhea. May cause irritation to the nose, throat and upper respiratory tract. If product is heated or mists are formed, inhalation may cause irritation to the nose, throat and respiratory tract.
Environmental precautions: Avoid release to the environment. See ECOLOGICAL INFORMATION, Section 12.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS #	Concentration
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	**90.0 - 100.0**

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

Ingestion : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.

Inhalation : Move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing has stopped, give artificial respiration. If irritation or symptoms develop, seek medical attention.

Skin contact : For skin contact, wash with soap and water while removing contaminated clothing. If irritation persists, seek prompt medical attention. Wash contaminated clothing before reuse.

Eye contact : Immediately flush eyes with running water for at least 5 to 10 minutes. If irritation persists, seek prompt medical attention.

Most important symptoms and effects, both acute and delayed

: May be mildly irritating to eyes and skin. May cause irritation, redness and pain. Oils can block the skin pores causing an acne-like disorder. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause irritation of mouth, throat, and stomach. May cause irritation of respiratory tract. Symptoms may include coughing, choking and wheezing.

Indication of any immediate medical attention and special treatment needed

: Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

: Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.

Unsuitable extinguishing media

: Do not use water jet, as this may spread burning material.

Special hazards arising from the substance or mixture / Conditions of flammability

: Not flammable under normal conditions of use. However, may ignite if exposed to extreme heat and flame. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

Flammability classification (OSHA 29 CFR 1910.106)

: Non-flammable.

Explosion Data: Sensitivity to Mechanical Impact / Static Discharge:

: Not expected to be sensitive to mechanical impact or static discharge.

Hazardous combustion products

: Carbon oxides;Nitrogen oxides ; sulfur oxides ; Phosphorus compounds ; Polycyclic aromatic hydrocarbons. Other unidentified organic compounds .

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Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

Special fire-fighting procedures

: Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. Prevent fire extinguishing water from contaminating surface water or the ground water system. Dike for water control.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. All persons dealing with the clean-up should wear the appropriate chemically protective equipment. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces.

Methods and material for containment and cleaning up

: Remove all sources of ignition. Ventilate area of release. Stop the spill at source if it is safe to do so. Dike for water control. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Notify the appropriate authorities as required. Refer to Section 13 for disposal of contaminated material.

Special spill response procedures

: If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).
US CERCLA Reportable quantity (RQ): None.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

: Wear suitable protective equipment during handling. Use with adequate ventilation. Avoid breathing vapors, fumes or dust. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and flame. Avoid contact with incompatible materials. Keep containers closed when not in use. Wash thoroughly after handling. Empty containers retain residue (liquid and/or vapour) and can be dangerous.

Conditions for safe storage : Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat. Inspect periodically for damage or leaks. Protect against physical damage. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel.

Incompatible materials : Oxidizing agents.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

Chemical Name	ACGIH TLV		OSHA PEL	
	TWA	STEL	PEL	STEL
Distillates (petroleum), hydrotreated heavy naphthenic	5 mg/m³ (As 'Oil mist, mineral')	N/Av	5 mg/m³ (As 'Oil mist, mineral')	N/Av

Exposure controls

Ventilation and engineering measures

: Use with adequate ventilation. Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.

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Respiratory protection	:	If the TLV is exceeded, a NIOSH/MSHA-approved respirator is advised. Advice should be sought from respiratory protection specialists.
Skin protection	:	Gloves impervious to the material are recommended. Advice should be sought from glove suppliers.
Eye / face protection	:	Safety goggles or glasses as appropriate for the job.
Other protective equipment	:	Where extensive exposure to product is possible, use resistant coveralls, apron and boots to prevent contact. Ensure that eyewash stations and safety showers are close to the workstation location.
General hygiene considerations	:	Avoid breathing mist or vapours. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Amber liquid.
Odour	:	Petroleum odor.
Odour threshold	:	N/Av
pH	:	N/Av
Melting/Freezing point	:	N/Av
Initial boiling point and boiling range	:	>230°C (446°F)
Flash point	:	> 93.3°C (200°F)
Flashpoint (Method)	:	N/Av Pensky Martens Closed Cup
Evaporation rate (BuAe = 1)	:	N/Av
Flammability (solid, gas)	:	Not flammable.
Lower flammable limit (% by vol.)	:	N/Av
Upper flammable limit (% by vol.)	:	N/Av
Oxidizing properties	:	None known.
Explosive properties	:	Not explosive
Vapour pressure	:	<0.01 mmHg (0.008 kPa)
Vapour density	:	N/Av
Relative density / Specific gravity	:	<1
Solubility in water	:	insoluble
Other solubility(ies)	:	N/Av
Partition coefficient: n-octanol/water or Coefficient of water/oil distribution	:	>20
Auto-ignition temperature	:	N/Av
Decomposition temperature	:	N/Av
Viscosity	:	19-150 mm2S @ 40°C (104°F)
Volatiles (% by weight)	:	Nil
Volatile organic Compounds (VOC's)	:	N/Av
Absolute pressure of container	:	N/Ap
Flame projection length	:	N/Ap
Other physical/chemical comments	:	No additional information.

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SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not normally reactive.

Chemical stability : Stable under the recommended storage and handling conditions prescribed.

Possibility of hazardous reactions
: Hazardous polymerization will not occur.

Conditions to avoid : Avoid heat and open flame. Avoid contact with incompatible materials. Do not use in areas without adequate ventilation.

Incompatible materials : Oxidizing agents.

Hazardous decomposition products
: None known, refer to hazardous combustion products in Section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation : YES

Routes of entry skin & eye : YES

Routes of entry Ingestion : YES

Routes of exposure skin absorption
: NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation
: If product is heated or mists are formed, inhalation may cause irritation to the nose, throat and respiratory tract.

Sign and symptoms ingestion
: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause irritation of mouth, throat, and stomach.

Sign and symptoms skin : Direct skin contact may cause slight or mild, transient irritation.

Sign and symptoms eyes : May cause mild irritation, redness and watering.

Potential Chronic Health Effects
: Oils can block the skin pores causing an acne-like disorder.

Mutagenicity : Not expected to be mutagenic in humans.

Carcinogenicity : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive effects & Teratogenicity
: Not expected to cause reproductive effects.

Senitization to material : This material is not classified as hazardous under OSHA regulations (29CFR 1910.1200) (Hazcom 2012).

Specific target organ effects : The substance or mixture is not classified as specific target organ toxicant, single exposure.

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Irritancy : Mild eye irritant. Mild skin irritant.

Medical conditions aggravated by overexposure
: Pre-existing skin and respiratory disorders.

Synergistic materials : Not available.

Toxicological data : See below for toxicological data on the substance.

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Chemical name	LC_{50}(4hr) inh, rat	LD_{50} (Oral, rat)	LD_{50} (Rabbit, dermal)
Distillates (petroleum), hydrotreated heavy naphthenic	> 5 mg/L (mist)	> 5000 mg/kg	> 2000 mg/kg

Other important toxicological hazards
: None known or reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity : The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. See the following tables for individual ingredient ecotoxicity data.

Ecotoxicity data:

Ingredients	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	> 5000 mg/L (Rainbow trout)	N/Av	None.

Ingredients	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	> 1000 mg/L (Daphnia magna)	N/Av	None.

Ingredients	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	> 1000 mg/L/96hr (Green algae)	N/Av	None.

Persistence and degradability
: Inherently biodegradable.

Bioaccumulation potential : The product itself has not been tested.

Mobility in soil : The product itself has not been tested.

Other Adverse Environmental effects
: None known.

SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal : Handle waste according to recommendations in Section 7.

Methods of Disposal : Dispose in accordance with all applicable federal, state, provincial and local regulations.

RCRA : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

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SECTION 14. TRANSPORTATION INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
49CFR/DOT	None.	Not regulated.	Not regulated	none	
49CFR/DOT Additional information	None.				
TDG	None.	Not regulated.	Not regulated	none	
TDG Additional information	None.				
ICAO/IATA	None.	Not regulated.	Not regulated	none	
ICAO/IATA Additional information	None.				

Special precautions for user : Appropriate advice on safety must accompany the package.

Environmental hazards : This substance does not meet the criteria for an environmentally hazardous substance according to the IMDG Code. See ECOLOGICAL INFORMATION, Section 12.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: This information is not available.

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

Ingredients	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	Yes	N/Ap	N/Av	No	0.1%

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

Ingredients	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	No	N/Ap	No	No	No	No	No	No

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Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

International Information:

Components listed below are present on the following International Inventory list:

Ingredients	CAS #	European EINECs	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	265-155-0	Present	Present	(9)-1689	KE-12543	Present	No information available.

SECTION 16. OTHER INFORMATION

Legend :

ACGIH: American Conference of Governmental Industrial Hygienists
CA: California
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
DOT: Department of Transportation
EPA: Environmental Protection Agency
HMIS: Hazardous Materials Identification System
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
Inh: Inhalation
IUCLID: International Uniform ChemicaL Information Database
MA: Massachusetts
MN: Minnesota
mppcf: million particles per cubic foot
MSHA: Mine Safety and Health Administration
N/Ap: Not Applicable
N/Av: Not Available
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NJ: New Jersey
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PA: Pennsylvania
PEL: Permissible exposure limit
RCRA: Resource Conservation and Recovery Act
RI: Rhode Island
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

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References : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2014.
2. International Agency for Research on Cancer Monographs, searched 2014.
3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2015 (Chempendium, HSDB and RTECs).
4. Material Safety Data Sheets from manufacturer.
5. US EPA Title III List of Lists - October 2012
6. California Proposition 65 List - 26 December 2014

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Revision No. : 3

Revision Information : All (format change)

Other special considerations for handling : Provide adequate information, instruction and training for operators.

HMIS Rating : *- Chronic hazard 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

Health: 1 *Flammability:* 0 *Reactivity:* 0

NFPA Rating : 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

Health: 1 *Flammability:* 0 *Instability:* 0 *Special Hazards:* None.

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