SAFETY DATA SHEET

Version 1 Revision Date 10/03/2021

NON-HAZARDOUS SUBSTANCE - NON-DANGEROUS GOODS

SECTION 1: Identification of the substance / mixture and of the company / undertaking

Product identifier

Product name **LSA HEAT TRANSFER OIL 460**

Product code 1700-47-1000

SDS no. 1700-47-1000

Product type Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture INDUSTRIAL OIL

For specific application advice see appropriate Technical Data Sheet or consult our company representative.

Details of the supplier of the safety data sheet

Supplier

Bernadini Pty Ltd
Trading as LUBRICANT SPECIALISTS AUSTRALIA (LSA)
Unit 2, 1110 Abernethy Road
High Wycombe WA 6057
Telephone +61 8 6254 7777
Fax +61 8 9454 9158

E-mail address perth@lsaoils.com.au

Emergency telephone number +61 8 6254 7777

SECTION 2: Hazards identification

Classification of the substance or mixture

GHS classification Mixture

CLASSIFIED AS NON-HAZARDOUS SUBSTANCE, NON-DANGEROUS GOODS. ACCORDING TO AUSTRALIAN WHS REGULATIONS AND ADG CODE

Not classified.

Other hazards

Other hazards which do not result in classification

Defatting to the skin.
Used oil may contain hazardous components which have the potential to cause skin cancer.
See Toxicological Information, section 11 of this Safety Data Sheet.

Label elements

Hazard pictograms No pictogram required

Signal word No signal word.

Hazard statements Not applicable.

Precautionary statements

Prevention Not applicable.

Response Not applicable.

Storage Not applicable.

Disposal Not applicable.

Other hazards which do not result in classification Defatting to the skin.

Supplemental label elements Safety data sheet available on request.

Special packaging requirements

Containers to be fitted with child-resistant fastenings Not applicable.

Tactile warning of danger Not applicable.

SECTION 3: Composition/information on ingredients

Substance / mixture Chemically modified base oil. Proprietary performance additives

. Mixture

Product / ingredient name	%	CAS Number	Hazard Classification	Risk Phrase/Hazard Statements
Distillates (petroleum), hydrotreated light paraffinic	60~100	64742-54-7	Not classified	Not applicable
Distillates (petroleum), hydrotreated light paraffinic	>10	64742-55-8	Aspiration Toxicity Cat. 1	H304, P301+310, P331, P405
Mineral oil	75 - 100	Mixture*	Not classified	Not applicable

*The mineral oil contained in this material may be described by one or more of the following CAS Nos.: 64742-54-7, 64742-65-0, 64742-55-8, and 64742-56-9.

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8

SECTION 4: First aid measures

Description of first aid measures

Eye contact In case of contact with eyes, immediately flush eyes with plenty of water for at least 15 minutes. Keep eye wide openwhile rinsing.Remove any contact lenses. Seek medical advice.

Skin contact Wash off with soap and plenty water or use recognised skin cleanser. Take off contaminated clothing and shoes immediately. Get medical attention if irritation develops.

Inhalation If inhaled, remove to fresh air. Get medical attention if symptoms appear.

Ingestion Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur or contact a Poison Information Centre on 13 11 26 (Australia Wide).

Protection of first-aiders No action shall be taken involving any personal risk or without suitable training.It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

Indication of any immediate medical attention and special treatment needed notes to physician

Treatment should in general be symptomatic and directed to relieving any effects.
Product can be aspirated on swallowing or following regurgitation of stomach contents, and can cause severe and potentially fatal chemical pneumonitis, which will require urgent treatment. Because of the risk of aspiration, induction of vomiting and gastric lavage should be avoided. Gastric lavage should be undertaken only after endotracheal intubation. Monitor for cardiac dysrhythmias.
Note: High Pressure Applications Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. Injuries may not appear serious at first but within a few hours tissue becomes swollen, discoloured and extremely painful with extensive subcutaneous necrosis.
Surgical exploration should be undertaken without delay. Thorough and extensive debridement of the wound and underlying tissue is necessary to minimise tissue loss and prevent or limit permanent damage. Note that high pressure may force the product considerable distances along tissue planes.

SECTION 5: Fire fighting measures

Extinguishing media

Suitable extinguishing media In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray.

Unsuitable extinguishing media Do not use water jet.

Special hazards arising from the substance or mixture

Hazards from the substance or mixture In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous combustion products Combustion products may include the following:
carbon oxides (CO, CO2) (carbon monoxide, carbon dioxide)

Advice for firefighters

Special precautions for fire-fighters Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personal

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Floors may be slippery; use care to avoid falling. Put on appropriate personal protective equipment.

For emergency responders

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non- emergency personnel".

Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small Spill

Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large Spill

Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor.

Reference to other sections

See Section 1 for emergency contact information.

See Section 5 for firefighting measures.

See Section 8 for information on appropriate personal protective equipment.

See Section 12 for environmental precautions.

See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment.
Put on appropriate personal protective equipment (see Section 8). Avoid breathing vapour or mist. Avoid contact with eyes, skin and clothing. Empty containers retain product residue and can be hazardous. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container. Do not swallow. Aspiration hazard Can enter lungs and cause damage. Never siphon by mouth.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Keep away from heat and direct sunlight. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store and use only in equipment/ containers designed for use with this product. Do not store in unlabelled containers.

Not suitable

Prolonged exposure to elevated temperature.

Specific end use(s)

Recommendations

See section 1.2 and Exposure scenarios in annex, if applicable.

SECTION 8: Exposure controls / personal protection

Control parameters

Occupational exposure limits

Product / ingredient name

Ingredient	ACGIH TLV (United States)	OSHA - PEL	Occupational Exposure Limits EH40 (UK)
Mixture of severely hydrotreated and hydrocracked base oil	TWA: 5 mg/m^3 8 hours. 10 mg/m^3 STEL (as oil mist)	Not available	TWA: 5 mg/m^3 8 hours. 10 mg/m^3 STEL (as oil mist)
Distillates (petroleum), hydrotreated light paraffinic	TWA: 5 mg/m^3 8 hours. 10 mg/m^3 STEL (as oil mist)	Not available	TWA: 5 mg/m^3 8 hours. 10 mg/m^3 STEL (as oil mist)

Whilst specific OELs for certain components may be shown in this section, other components may be present in any mist, vapour or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necesity to use respiratory protective equipment. Reference should be made to apropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances wil also be required.

Derived No Effect Level

No DNELs / DMELs available.

Predicted No Effect Concentration

No PNECs available

Exposure controls

Appropriate engineering controls

Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.

All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.

Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards. The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

Environmental exposure controls

emissions from ventilation or work proces equipment should be checked to ensure. they comply with the requirements of environmental protection legislation. In some cases, fume scrubers, filters or enginering modifcations to the process equipment wil be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier /manufacturer and with a ful assessment of the working conditions.

Eye / face protection

Safety glasses with side shields.

Skin protection

Hand protection

Wear protective gloves if prolonged or repeated contact is likely. Wear chemical resistant gloves. Recommended: Nitrile gloves. The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove wil break down after repeated chemical exposures). Most gloves provide only a short ime of protection before they must be discarded and replaced. Because specifc work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the suplier/manufacturer and with a ful assessment of the working conditions.

Skin and body	Use of protective clothing is good industrial practice. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	
Physical state	Liquid.
Colour (ASTM D1500)	2.5
Odour	Not available.
Odour threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Pour point (ASTM D97), (°C)	-9
Flash point (ASTM D92, Open cup), (°C)	310
Flash point (ASTM D93, Closed cup), (°C)	-
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	Not available.
Density (ASTM D4052) @15°C, (g/cm3)	0.9
Solubility(ies)	insoluble in water.
Partition coefficient: n-octanol/water	>3
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Kinematic Viscosity (ASTM D445) @40°C, (cSt)	460
Kinematic Viscosity (ASTM D445) @100°C, (cSt)	31
Explosive properties	Not available.
Oxidising properties	Not available.

Other information No additional information.

SECTION 10: Stability and reactivity

Reactivity	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerisation will not occur.
Conditions to avoid	Avoid all possible sources of ignition (spark or flame).
Incompatible materials	Reactive or incompatible with the following materials: oxidising materials.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

Information on toxicological effects

Aspiration toxicity

Name	Result
Distillates (petroleum), hydrotreated light paraffinic	Aspiration toxicity - Category 1

Information on the likely routes of exposure Routes of entry anticipated: Dermal, Inhalation.

Potential acute health effects

Inhalation Vapour inhalation under ambient conditions is not normally a problem due to low vapour pressure.

Ingestion No known significant effects or critical hazards.

Skin contact Defatting to the skin. May cause skin dryness and irritation.

Eye contact No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation No specific data.

Ingestion No specific data.

Skin contact Adverse symptoms may include the following:
irritation
dryness
cracking

Eye contact Potential risk of transient stinging or redness if accidental eye contact occurs.

Delayed and immediate effects and also chronic effects from short and long term exposure

Inhalation Overexposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.

Ingestion Skin contact Eye contact Ingestion of large quantities may cause nausea and diarrhoea.

Skin contact Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.

Eye contact Potential risk of transient stinging or redness if accidental eye contact occurs.

Potential chronic health effects

General No known significant effects or critical hazards.

Carcinogenicity No known significant effects or critical hazards.

Mutagenicity No known significant effects or critical hazards.

Developmental effects No known significant effects or critical hazards.

Fertility effects No known significant effects or critical hazards.

SECTION 12: Ecological information

Toxicity

Environmental hazards Not classified as dangerous
Based on data available for this or related materials.

Persistence and degradability Expected to be biodegradable.

Bioaccumulative potential This product is not expected to bioaccumulate through food chains in the environment.

96hr LC50 (for fish), mg/l >1000

48hr EC50 (for crustacean), mg/l >1000

72 or 96hr ErC50 (for alage or other aquatic >1000

Mobility in soil

Soil / water partition coefficient (KOC) Not available.

Mobility Spillages may penetrate the soil causing ground water contamination.

Results of PBT and vPvB assessment

PBT Not applicable.

vPvB Not applicable.

Other adverse effects

Other ecological information Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

SECTION 13: Disposal considerations

Disposal methods

The generation of waste should be avoided or minimised wherever posible. Signifcant quanties of waste product residues should not be disposed of via the foul sewer but procesed in a suitable efluent reatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at al times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfil should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and run off and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

Land (as per ADG classification) Not regulated

This material is not classified as dangerous under ADG Code.

IMDG

This material is not classified as dangerous under IMDG regulations.

IATA (Country variations may apply)

This material is not classified as dangerous under IATA regulations.

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	Not regulated.	Not regulated.	Not regulated.
Transport hazard class(es)	Not regulated.	Not regulated.	Not regulated.
Packing group	Not applicable	Not applicable	Not applicable
Environmental hazards	No.	No.	No.
Special precautions for user	-	-	-

Special precautions for user Not available.

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product

No known specifc national and/or regional regulations aplicable to this product (including its ingredients).

Poison schedule A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Classifications Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling Chemicals.

The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

Hazard codes Non allocated

Risk phrases None allocated

Safety phrases Non allocated

Inventory listing(s) All components are listed on ACIS, or are exempt.

Regulation acording to other foreign laws

REACH Status For the REACH status of this product please consult your company contact, as identifed in Section 1.

United States inventory (TSCA 8b) All components are listed or exempted.

Australia inventory (AICS) All components are listed or exempted.

Canada inventory All components are listed or exempted.

China inventory (IECSC) At least one component is not listed.

Japan inventory (ENCS) All components are listed or exempted.

Korea inventory (KECI) All components are listed or exempted.

Philippines inventory (PICCS) All components are listed or exempted.

SECTION 16: Other information

Abbreviations and acronyms ACGIH = American Conference of Government Industrial Hygenists

ADG = Australian Dangerous Goods Code

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

AICS = Australian Inventory of Chemical Substances

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] CSA = Chemical Safety Assessment

CSR = Chemical Safety Report

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

DPD = Dangerous Preparations Directive [1999/45/EC]

DSD = Dangerous Substances Directive [67/548/EEC]

EINECS = European Inventory of Existing Commercial chemical Substances ES = Exposure Scenario

EMS = Emergency Schedules (Emergency Procedure for Ships Carrying Dangerous Goods)

ENCS = Existing and New Chemical Substances

EUH statement = CLP-specific Hazard statement

EWC = European Waste Catalogue

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IARC = International Agency for Research on Cancer

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LC50 = Lethal Concentration, 50% / Medium Lethal Concentration

LD50 = Lethal Dose, 50% / Medium Lethal Dose

Log Pow = logarithm of the octanol/water partition coefficient

MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

NOHSC = National Occupational Health & Safety Commission

OECD = Organisation for Economic Co-operation and Development

OEL = Occupational Exposure Limits

PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration

RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail RRN = REACH Registration Number

SAA/SNZ HB76 = Dangerous Goods Initial Emergency Response Guide

SADT = Self-Accelerating Decomposition Temperature

STEL = Short-Term Exposure Limit

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

STOT-SE = Specific Target Organ Toxicity - Single Exposure

SUSMP = Standard for the Uniform Scheduling opf Medicines and Poisons

SVHC = Substances of Very High Concern

SWA = Safe Work Australia

TLV = Threshold Limit Value

TSCA = Toxic Substance Control Act

TWA = Time weighted average

UN = United Nations

UVCB = Complex hydrocarbon substance

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

WHS = Work Health and Safety Regulations

History

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Date of previous issue	SDS
Prepared by	Bernadini Pty Ltd trading as Lubricant Specialists Australia (LSA)

Indicates information that has changed from previously issued version.

Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from LSA.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. LSA shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. You can contact LSA to ensure that this document is the most current available. Alteration of this document is strictly prohibited.