

# SAFETY DATA SHEET



Version 4

Revision Date 12-01-17

NON-HAZARDOUS SUBSTANCE - NON-DANGEROUS GOODS

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

### Product identifier

**Product name** LSA HYDRAULIC 46  
**Product code** 1500-02-0000  
**SDS no.** 1500-02-0000 4-GB  
**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](mailto: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**

Chronic Toxicity Category 4  
Acute Toxicity Category 3  
Skin irritant Category 3

### 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** Warning

**Hazard statements** H413: May cause long lasting effects to aquatic life.

H402: Harmful to aquatic life.

H315: Causes mild skin irritation

**Precautionary statements** P273: Avoid release to the environment.

**Response** P332+313: If skin irritation occurs: Get medical advice/attention.

**Storage** Not applicable.

**Disposal** P501: Dispose of contents and container in accordance with all local, regional, national and international regulations.

**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
Mineral oil	60 - 100	Mixture*	Not classified	Not applicable
2,6-di-tert-butylphenol	0.1 - 1	128-39-2	Aquatic chronic Cat 2	H411, H302
Long chain alkaryl amine	0.1 - 0.5	Trade Secret	Aquatic chronic Cat. 4	P501 / H413

\*The mineral oil contained in this material may be described by one or more of the following CAS Nos.: 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

<b>Eye contact</b>	In case of contact with eyes, immediately flush eyes with plenty of water for at least 15 minutes. Keep eye wide open while rinsing. Remove any contact lenses. Seek medical advice.
<b>Skin contact</b>	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.
<b>Inhalation</b>	If inhaled, remove to fresh air. Get medical attention if symptoms appear.
<b>Ingestion</b>	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).
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training.

#### 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.

### SECTION 5: Fire fighting measures

#### Extinguishing media

<b>Suitable extinguishing media</b>	In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray.
<b>Unsuitable extinguishing media</b>	Do not use water jet.

#### Special hazards arising from the substance or mixture

<b>Hazards from the substance or mixture</b>	In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous combustion products</b>	Combustion products may include the following: carbon oxides (CO, CO <sub>2</sub> ) (carbon monoxide, carbon dioxide)

#### Advice for firefighters

<b>Special precautions for fire-fighters</b>	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.
<b>Special protective equipment for fire-fighters</b>	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

<b>For non-emergency personal</b>	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 spilled material. Floors may be slippery; use care to avoid falling. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	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.

#### 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 name	Exposure limits
Distillates (petroleum), hydrotreated heavy paraffinic	ACGIH TLV (United States). TWA: 5 mg/m <sup>3</sup> 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction
Base oil - unspecified	ACGIH TLV (United States). TWA: 5 mg/m <sup>3</sup> 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction
Distillates (petroleum), solvent-dewaxed heavy paraffinic	ACGIH TLV (United States). TWA: 5 mg/m <sup>3</sup> 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction

#### 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 necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

<b>Recommended monitoring procedures</b>	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 necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
<b>Derived No Effect Level</b> <b>Predicted No Effect Concentration</b>	No DNELs / DMELs available. No PNECs available
<b>Exposure controls</b> <b>Appropriate engineering controls</b>	<p>Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.</p> <p>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.</p> <p>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.</p>
<b>Environmental exposure controls</b>	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 scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
<b>Individual protection measures</b> <b>Hygiene measures</b>	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.
<b>Respiratory protection</b>	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.
<b>Respiratory protection</b>	<p>Respiratory protective equipment is not normally required where there is adequate natural or local exhaust ventilation to control exposure.</p> <p>In case of insufficient ventilation, wear suitable respiratory equipment.</p> <p>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 full assessment of the working conditions.</p>
<b>Eye / face protection</b> <b>Skin protection</b> <b>Hand protection</b>	<p>Safety glasses with side shields.</p> <p>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 will break down after repeated chemical exposures). Most gloves provide only a short ime of protection before they must be discarded and replaced. Because specfic 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.</p>

## Hand protection

### General Information:

Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. The correct choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. Most gloves provide protection for only a limited time before they must be discarded and replaced (even the best chemically resistant gloves will break down after repeated chemical exposures).

Gloves should be chosen in consultation with the supplier / manufacturer and taking account of a full assessment of the working conditions.

Recommended: Nitrile gloves.

### Breakthrough time:

Breakthrough time data are generated by glove manufacturers under laboratory test conditions and represent how long a glove can be expected to provide effective permeation resistance. It is important when following breakthrough time recommendations that actual workplace conditions are taken into account. Always consult with your glove supplier for up-to-date technical information on breakthrough times for the recommended glove type. Our recommendations on the selection of gloves are as follows:

Continuous contact:

Gloves with a minimum breakthrough time of 240 minutes, or >480 minutes if suitable gloves can be obtained. If suitable gloves are not available to offer that level of protection, gloves with shorter breakthrough times may be acceptable as long as appropriate glove maintenance and replacement regimes are determined and adhered to.

Short-term / splash protection:

Recommended breakthrough times as above.

It is recognised that for short-term, transient exposures, gloves with shorter breakthrough times may commonly be used. Therefore, appropriate maintenance and replacement regimes must be determined and rigorously followed.

### Glove Thickness:

For general applications, we recommend gloves with a thickness typically greater than 0.35 mm.

It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.

Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

- Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.
- Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential.

## 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

<b>Appearance</b>	
Physical state	Liquid.
Colour (ASTM D1500)	<0.5
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 )	-30
Flash point (ASTM D92), ( °C )	220
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
<b>Upper/lower flammability or explosive limits</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Density (ASTM D4052) @15°C, ( g/cm3 )</b>	0.8608
<b>Solubility(ies)</b>	insoluble in water.
<b>Partition coefficient: n-octanol/water</b>	>3
<b>Auto-ignition temperature</b>	340
<b>Decomposition temperature</b>	Not available.
<b>Kinematic Viscosity (ASTM D445) @40°C, (cSt )</b>	46.45
<b>Kinematic Viscosity (ASTM D445) @100°C, (cSt )</b>	7.045
<b>Explosive properties</b>	Not available.
<b>Oxidising properties</b>	Not available.
<b>Other information</b>	No additional information.

## SECTION 10: Stability and reactivity

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

## SECTION 11: Toxicological information

### Information on toxicological effects

#### Acute toxicity estimates

Route	ATE value
Not available.	200,000

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

#### **Potential acute health effects**

<b>Inhalation</b>	Vapour inhalation under ambient conditions is not normally a problem due to low vapour pressure.
<b>Ingestion</b>	No known significant effects or critical hazards.
<b>Skin contact</b>	Defatting to the skin. May cause skin dryness and irritation.

<b>Eye contact</b>	No known significant effects or critical hazards.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	
<b>Inhalation</b>	No specific data.
<b>Ingestion</b>	No specific data.
<b>Skin contact</b>	Adverse symptoms may include the following: irritation dryness cracking
<b>Eye contact</b>	No specific data.
<b>Delayed and immediate effects and also chronic effects from short and long term exposure</b>	
<b>Inhalation</b>	Overexposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
<b>Ingestion Skin contact Eye contact</b>	Ingestion of large quantities may cause nausea and diarrhoea.
<b>Skin contact</b>	Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
<b>Eye contact</b>	Potential risk of transient stinging or redness if accidental eye contact occurs.
<b>Potential chronic health effects</b>	
<b>General</b>	USED LUBRICATING OILS Used oil may contain hazardous components which have the potential to cause skin cancer. Frequent or prolonged contact with all types and makes of used oil must therefore be avoided and a high standard of personal hygiene maintained.
<b>Carcinogenicity</b>	No known significant effects or critical hazards.
<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.

## SECTION 12: Ecological information

<b>Toxicity</b>	
<b>Environmental hazards</b>	Not classified as dangerous Based on data available for this or related materials.
<b>Environmental hazards</b>	No known significant effects or critical hazards.
<b>Persistence and degradability</b>	Expected to be biodegradable.
<b>Bioaccumulative potential</b>	This product is not expected to bioaccumulate through food chains in the environment.
<b>96hr LC50 (for fish), mg/l</b>	>1000
<b>48hr EC50 (for crustacean), mg/l</b>	>1000
<b>72 or 96hr ErC50 (for algae or other aquatic organisms)</b>	>1000
<b>Mobility in soil</b>	
<b>Soil / water partition coefficient (KOC)</b>	Not available.
<b>Mobility</b>	Spillages may penetrate the soil causing ground water contamination.
<b>Results of PBT and vPvB assessment</b>	
<b>PBT</b>	Not applicable.
<b>vPvB</b>	Not applicable.
<b>Other adverse effects</b>	
<b>Other ecological information</b>	Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

## SECTION 13: Disposal considerations

<b>Disposal methods</b>	The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment 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 all 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 landfill 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 spilled material and run off and contact with soil, waterways, drains and sewers.
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### 13.1 Waste treatment methods

#### Product

#### Methods of disposal

Where possible, arrange for product to be recycled. Dispose of via an authorised person / licensed waste disposal contractor in accordance with local regulations.

#### Hazardous waste

Yes.

#### European waste catalogue (EWC)

Waste code	Waste designation
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils

However, deviation from the intended use and/or the presence of any potential contaminants may require an alternative waste disposal code to be assigned by the end user.

#### Packaging

#### Methods of disposal

Where possible, arrange for product to be recycled. Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.

#### Special precautions

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 runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

#### Land (as per ADR classification)

Not regulated

This material is not classified as dangerous under ADR regulations.

#### IMDG

This material is not classified as dangerous under IMDG regulations.

#### IATA (Country variations may apply)

This material is either not classified as dangerous under IATA regulations or needs to follow country specific requirements.

	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/legislation specific for the substance or mixture

#### Substances of very high concern

None of the components are listed.

#### Safety, health and environmental regulations specific for the product

#### Poison schedule

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

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.

#### 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 according to other foreign laws

#### REACH Status

For the REACH status of this product please consult your company contact, as identified 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  
China inventory (IECSC)  
Japan inventory (ENCS)  
Korea inventory (KECI)  
Philippines inventory (PICCS)  
Chemical Safety Assessment

All components are listed or exempted.  
At least one component is not listed.  
All components are listed or exempted.  
All components are listed or exempted.  
All components are listed or exempted.  
This product contains substances for which Chemical Safety Assessments are still required.

## SECTION 16: Other information

### Abbreviations and acronyms

ACGIH = American Conference of Government Industrial Hygienists  
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 of 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

**History**

<b>Date of issue / Date of revision</b>	12-Jan-2017	
<b>Date of previous issue</b>	2-Dec-2015	MSDS
<b>Prepared by</b>	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.