

## Material Safety Data Sheet

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

<b>Material Name</b>	Lubrication Valkyrie HD XF
<b>Uses</b>	Concentrate for metalworking fluid
<b>Product Code</b>	LUBE-VALKYRIEHDXF-L
<b>Manufacturer/Supplier</b>	<b>Lubrication Limited</b> Lubricant Distribution Centre Unit 3, Snibston Drive Coalville Leicestershire LE67 3NQ United Kingdom
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### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Product/Ingredient Name	Identifiers	%	Classification		Type
			67/548/E EC	Regulation (EC) No. 1272/2008 [CLP]	
Distillates (petroleum), hydrotreated light naphthenic	REACH #: 01-2119467170-45 EC: 265-155-0 CAS: 64742-52-5 Index: 649-465-00-7	>=25 - <35	Not classified.	Not classified	Substance with a workplace limit
Fatty acids, vegetable-oil, Me esters, sulphurized	EC: 276-337-4 CAS: 72102-30-8	>=2.5 - <25	N; R51/53	Aqua Chronic 2, H411	Substance classified with a health or environmental hazard
2,2'-(methylimino) diethanol	EC: 203-312-7 CAS: 105-59-9 Index: 649-466-00-2	>=5 - <10	Xi; R36	Eye Irrit. 2, H319	Substance classified with a health or environmental hazard
2,2'-(cyclohexylimino) bisethanol	EC: 224-809-5 CAS: 4500-29-2	>=5 - <7	Xn; R22 Xi; R41, R38	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400	Substance classified with a health or environmental hazard
Alcohols, C12-18, ethoxylated and propoxylated	EC: 500-242-1 CAS: 69227-31-0	<25	N; R38	Skin Irrit. 2, H315	Substance classified with a health or environmental hazard
Sodium benzothiazol-2-yl sulphide	EC: 219-660-8 CAS: 2492-26-4	<0.25	C; R34 R43 N; R50/53	Skin Corr. 1B, H317 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	Substance classified with a health or environmental hazard
3-iodo-2-propynyl butylcarbamate	EC: 259-627-5 CAS: 5506-53-6	<0.1	Xn; R20/22 Xi; R41 N; R50	Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Dam. 1, H318 Aquatic Acute 1, H400	Substance classified with a health or environmental hazard

The mineral oils in the product contain < 3% DMSO extract (IP 346).

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There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

### 3. HAZARDS IDENTIFICATION

<b>EC Classification</b>	Not classified.
<b>Risk phrases</b>	This product is not classified according to EU legislation.
<b>Supplemental label elements</b>	Contains sodium benzothiazol-2-yl sulphide, 2-n-butyl-benzo[d]isothiazol-3-one. May produce an allergic reaction.
<b>Safety Hazards</b>	Defatting to the skin.
<b>Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	

### 4. FIRST AND MEASURES

<b>General Information</b>	No action shall be taken involving any personal risk or without suitable training.
<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
<b>Skin Contact</b>	Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Eye Contact</b>	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
<b>Ingestion</b>	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
<b>Advice to Physician</b>	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.

### 5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

<b>Suitable Extinguishing Media</b>	Use dry chemical, CO <sub>2</sub> , alcohol-resistant foam or water spray (fog).
<b>Unsuitable Extinguishing Media</b>	Do not use water jet.

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<b>Protective Equipment for Firefighters</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.
<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 Thermal Decomposition Products</b>	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulphur oxides

### 6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe the relevant local and international regulations.

<b>Protective Measures – For Non-Emergency Personnel</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. Put on appropriate personal protective equipment.
<b>Protective Measures – 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 Section 8 for additional information on hygiene measures.
<b>Clean Up Method – Small Spill</b>	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
<b>Clean Up Method – Large Spill</b>	Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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.
<b>Additional Advice</b>	

### 7. HANDLING AND STORAGE

<b>General Precautions</b>	Put on appropriate personal protective equipment (see Chapter 8).
<b>Handling</b>	
<b>Storage</b>	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from

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	incompatible materials (see Chapter 10) and food and drink. 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. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.
<b>Product Transfer</b>	
<b>Recommended Materials</b>	
<b>Unsuitable Materials</b>	
<b>Additional Information</b>	

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

If the American Conference of Governmental Industrial Hygienists (ACGIH) value is provided on this document, it is provided for information only.

#### Occupational Exposure Limits

Material	Source	Type	ppm	mg / m <sup>3</sup>	Notation
Distillate (petroleum), hydrotreated light naphthenic				5	

#### Biological Exposure Index (BEI) – See reference for full details

No biological limit allocated.

<b>Exposure Controls</b>	No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.
<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. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
<b>Respiratory Protection</b>	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Boiling point > 65 °C: A1; Boiling point < 65 °C: AX1; Hot material: A1P2.
<b>Hand Protection</b>	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Wear suitable gloves tested to EN374. Recommended: Nitrile gloves.
<b>Eye Protection</b>	Safety eyewear complying with an approved

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	standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with sideshields.
<b>Body Protection</b>	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.
<b>Environmental Exposure Controls</b>	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.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Clear brown liquid.
<b>Odour</b>	Characteristic
<b>pH</b>	9.2 [Conc. (% w/w): 3%]
<b>Initial Boiling Point and Boiling Range</b>	>100°C
<b>Pour Point</b>	Not available.
<b>Flash Point</b>	Open cup: Not applicable.
<b>Upper/Lower Flammability or Explosion Limits</b>	Not available.
<b>Auto-Ignition Temperature</b>	Not available.
<b>Specific Gravity</b>	0.992
<b>Density</b>	992 kg / m <sup>3</sup>
<b>Water Solubility</b>	Easily soluble in following materials: cold water and hot water
<b>N-Octanol/Water Partition Coefficient (log Pow)</b>	Not applicable.
<b>Kinematic Viscosity</b>	126 mm <sup>2</sup> / s (cSt)
<b>Vapour Density (air = 1)</b>	Not available.
<b>Evaporation Rate (nBuAc = 1)</b>	Not available.

### 10. STABILITY AND REACTIVITY

<b>Stability</b>	The product is stable.
<b>Conditions to Avoid</b>	No specific data.
<b>Materials to Avoid</b>	Strong oxidizing materials.
<b>Hazardous Decomposition Products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### 11. TOXICOLOGICAL INFORMATION

#### Acute Toxicity

Product/Ingredient Name	Result	Species	Dose	Exposure
3-ido-2-propynyl butylcarbamate	LD50 Oral	Rat	2600 mg / kg	-
Distillates (petroleum), hydrotreated light naphthenic	LD50 Oral	Rat	>5000 mg / kg	-

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2,2'-(cyclohexylimino)bisethanol	LD50 Oral	Rat	2600 mg / kg	-
2,2'-(methylimino)diethanol	LD50 Oral	Rat	1945 mg / kg	-
Sodium benzothiazol-2-yl Sulphide	LD50 Dermal	Rabbit	>5010 mg / kg	-

### Irritation/Corrosion

Product/Ingredient Name	Result	Species	Score	Exposure	Observation
2,2'-(methylimino)diethanol	Eyes – Mild Irritant	Rabbit	-	5 µl	-
	Skin – Mild Irritant	Rabbit	-	502 mg	-

### Potential Acute Health Effects

<b>Eye Contact</b>	Irritating to eyes.
<b>Inhalation</b>	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
<b>Skin Contact</b>	Defatting to the skin. May cause skin dryness and irritation.
<b>Ingestion</b>	No known significant effects or critical hazards.

### Symptoms Related to the Physical, Chemical and Toxicological Characteristics

<b>Eye Contact</b>	Adverse symptoms may include the following: Irritation Watering Redness
<b>Inhalation</b>	No specific data.
<b>Skin Contact</b>	Adverse symptoms may include the following: Irritation Dryness Cracking
<b>Ingestion</b>	No specific data.

### Potential Chronic Health Effects

<b>Conclusion/Summary</b>	Not available.
<b>General</b>	Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
<b>Carcinogenicity</b>	No known significant effects or critical hazards.
<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Teratogenicity</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.

## 12. ECOLOGICAL INFORMATION

### Toxicity

Product/Ingredient Name	Result	Species	Exposure
Sodium benzothiazol-2-yl sulphide	EC50 0.4 mg/l	Algae	72 hours
	EC50 0.3 mg/l	Algae	96 hours
	EC50 2.9 ppm	Daphnia	48 hours
	LC50 0.73 ppm	Fish	96 hours

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3-iodo-2-propynyl butylcarbamate	LC50 500 ppb	Crustaceans	48 hours
	LC50 40 ppb	Daphnia	48 hours
	LC50 67 µg/l	Fish (Juvenile)	96 hours

### Persistence and Degradability

Not available.

### Bioaccumulative Potential

Product/Ingredient Name	LogP <sub>ow</sub>	BCF	Potential
2,2'-(methylimino)diethanol	-1.08	-	Low

## 13. DISPOSAL CONSIDERATIONS

<b>Material Disposal</b>	The generation of waste should be avoided or minimized wherever possible. Waste product residues should not be disposed of via the 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 runoff and contact with soil, waterways, drains and sewers.
<b>Container Disposal</b>	The generation of waste should be avoided or minimized wherever possible. 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 runoff and contact with soil, waterways, drains and sewers.
<b>Hazardous Waste</b>	Yes.

### European Waste Catalogue (EWC)

Waste Code	Waste Designation
12 01 09*	Machining emulsions and solutions free of halogens

## 14. TRANSPORT INFORMATION

<b>Land (as per ADR classification): Not Regulated</b>	Not available.
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<b>IMDG</b>	Not available.
<b>IATA (Country variations may apply)</b>	Not available.
<b>Additional Information</b>	Not available.

Transport within user's premises:

### 15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

<b>EC Classification</b>	This product contains di-isononyl phthalate. These Phthalates shall not be used as substances or as constituents of preparations, at concentrations higher than 0.1% by mass of the plasticised material, in toys and childcare articles which can be placed in the mouth by children. Toys and childcare articles containing these phthalates in a concentration higher than 0.1 % by mass of the plasticised material shall not be placed on the market. The Commission shall re-evaluate, by 16 January 2010, the measures provided for in relation to this point in the light of new scientific information on such substances and their substitutes, and if justified, these measures shall be modified accordingly. For the purposes of this point 'childcare article' shall mean any product intended to facilitate sleep, relaxation, hygiene, the feeding of children or sucking on the part of children.
<b>EINECS</b>	Not determined.
<b>TSCA</b>	Not determined.

### 16. OTHER INFORMATION

<b>SDS Version Number</b>	1.0.1
<b>SDS Effective Date</b>	2013-12-01
<b>SDS Revisions</b>	1.0.1
<b>SDS Distribution</b>	Lubrication Limited
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