SAFETY DATA SHEET
De Aqua Lube

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

Product identifier
Product Name De Aqua Lube

Other means of identification
Synonyms none

Recommended use of the chemical and restrictions on use
Uses advised against No information available

Details of the supplier of the safety data sheet
Supplier Address
Zircon Industries Incorporated
4920 Commerce Parkway #9
Cleveland, OH 44128
216-595-0200

E-mail address
staff@liquidheat.com

Emergency telephone number
Emergency Telephone InfoTrac 1-800-535-5053

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

<table>
<thead>
<tr>
<th>Label elements</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corrosion / Irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Aspiration Hazard</td>
<td>Category 1</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Category 2</td>
</tr>
<tr>
<td>Aerosol</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

Emergency Overview
DANGER
Hazard statements

Causes Skin Damage/Irritation
Flammable Liquid and Vapor
May be fatal if swallowed
Causes skin irritation
May cause cancer
Contents under pressure. May burst if heated

Precautionary Statements – Prevention
May be fatal if swallowed and enters airway.
Causes skin irritation.
May cause cancer.
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves

Precautionary Statements - Response
IF EXPOSED or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
IF ON SKIN: Wash with plenty of soap and water
If skin irritation or rash occurs: Get medical advice/attention
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Storage
Store in well-ventilated area

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not Applicable

Unknown Acute Toxicity
0% of the substance or mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrachloroethylene</td>
<td>127-18-4</td>
<td>50-90</td>
<td>*</td>
</tr>
<tr>
<td>Mineral Oil, Petroleum Distillates, Solvent dewaxed heavy paraffinic</td>
<td>64742-65-0</td>
<td>5-15</td>
<td>*</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret.
4. FIRST AID MEASURES

First aid measures

General advice
Immediate medical attention is required.

Eye contact
Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Call a physician immediately.

Skin Contact
Wash off immediately with soap and plenty of water.

Inhalation
Move to fresh air. Call a physician if symptoms develop or persist.

Ingestion
Rinse mouth. Get medical attention if symptoms occur.

Self-protection of the first aider
Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms
No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Dry chemical, CO2 or water spray.

Unsuitable extinguishing media
Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions
Use personal protective equipment as required. Keep people away from and upwind of spill/leak.

Environmental precautions

Environmental precautions
Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment
Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up
Cover liquid spill with sand, earth or other non-combustible absorbent material.
7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling
Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

Incompatible materials
None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS#</th>
<th>OSHA TWA</th>
<th>ACGIH TWA</th>
<th>ACGIH STEL</th>
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<tbody>
<tr>
<td>Tetrachloroethylene</td>
<td>127-18-4</td>
<td>9000mg/kg</td>
<td>9000mg/kg</td>
<td>54000mg/kg</td>
</tr>
<tr>
<td>Mineral Oil Petroleum Distillates</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solvent Dewaxed Heavy Paraffinic</td>
<td>64742-65-0</td>
<td>2000mg/kg</td>
<td>No Data</td>
<td>No Data</td>
</tr>
</tbody>
</table>

Exposure Guidelines

NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Controls
Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection
Safety Glasses with Side Shields.

Skin and body protection
Wear protective gloves and protective clothing.

Respiratory protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations
When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs.
9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Odor threshold</th>
<th>Remarks/Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid</td>
<td>No information available</td>
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</tr>
<tr>
<td>Appearance</td>
<td>Odor</td>
<td></td>
</tr>
<tr>
<td>Clear</td>
<td>Strawberry</td>
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<tr>
<td>Color</td>
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<td></td>
</tr>
<tr>
<td>Amber</td>
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</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
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<td>pH</td>
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</tr>
<tr>
<td>Melting point/freezing point</td>
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<tr>
<td>Boiling point/boiling range</td>
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<tr>
<td>Flash point</td>
<td>&gt;400C</td>
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</tr>
<tr>
<td>Evaporation rate</td>
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<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
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<td></td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
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<td></td>
</tr>
<tr>
<td>Upper flammability limit:</td>
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<td></td>
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<tr>
<td>Lower flammability limit:</td>
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<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
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</tr>
<tr>
<td>Vapor density</td>
<td>Insoluble</td>
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<tr>
<td>Solubility in other solvents</td>
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<td></td>
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<tr>
<td>Partition coefficient</td>
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<td>Autoignition temperature</td>
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<tr>
<td>Decomposition temperature</td>
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<td>Kinematic viscosity</td>
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<td>Dynamic viscosity</td>
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<tr>
<td>Explosive properties</td>
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<td>Oxidizing properties</td>
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<td>Softening point</td>
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<tr>
<td>Molecular weight</td>
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</tr>
<tr>
<td>Density</td>
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<td></td>
</tr>
<tr>
<td>Bulk density</td>
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</tr>
<tr>
<td>Specific Gravity</td>
<td>1.08@25C</td>
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</tr>
</tbody>
</table>

Softening point: No information available
Molecular weight: No information available
Density: No information available
Bulk density: No information available
Specific Gravity: 1.08@25C
10. STABILITY AND REACTIVITY

Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical Stability
Material is stable under normal conditions.

Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.

Conditions to avoid
Contact with incompatible materials.

Incompatible materials
Strong oxidizing agents.

Hazardous decomposition products
No hazardous decomposition products are known.

11. TOXICOCLOGICAL INFORMATION

Information on likely routes of exposure

Product Information
Causes serious eye damage.

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS#</th>
<th>LD50 ORAL</th>
<th>LD50 DERMAL</th>
<th>LC50 INHALATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrachloroethylene</td>
<td>127-18-4</td>
<td>2600mg/kg</td>
<td>3245mg/kg</td>
<td>3786mg/kg</td>
</tr>
<tr>
<td>Mineral Oil Petroleum Distillates</td>
<td>64742-65-0</td>
<td>&gt;5000mg/kg</td>
<td>&gt;5000mg/kg</td>
<td>No Data</td>
</tr>
<tr>
<td>Solvent Dewaxed Heavy Paraffinic</td>
<td>64742-65-0</td>
<td>&gt;5000mg/kg</td>
<td>&gt;5000mg/kg</td>
<td>No Data</td>
</tr>
</tbody>
</table>

Inhalation
Is a respiratory sensitizer.

Eye contact
Causes eye damage/irritation.

Skin Contact
Causes skin damage/irritation

Ingestion
Can be fatal if swallowed.

Information on toxicological effects

Symptoms
No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization
Germ cell mutagenicity
No information or data specific to the product on this toxicological (health) effect is available.

Carcinogenicity
No information available.
Reproductive toxicity
STOT - single exposure  No information or data specific to the product on this toxicological (health) effect is available.
STOT - repeated exposure  No information or data specific to the product on this toxicological (health) effect is available.
Target Organ Effects  Central nervous system, Eyes.
Aspiration hazard  No information or data specific to the product on this toxicological (health) effect is available.

Numerical measures of toxicity - Product Information
The following values are calculated based on chapter 3.1 of the GHS document.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Very toxic to aquatic life with long lasting effects

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS#</th>
<th>SPECIES</th>
<th>LD50</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrachloroethylene</td>
<td>127-18-4</td>
<td>Fish*</td>
<td>14 mg/l</td>
<td>96 Hours</td>
</tr>
</tbody>
</table>

* Pimephales promelas

Persistence and degradability
No information available.
Bioaccumulation
No information available.
Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Tetrachloroethylene  waste number U210  RCRA 0.7 mg/l regulatory level

Disposal of wastes
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging
Do not reuse container.

14. TRANSPORT INFORMATION

DOT Proper Shipping Name:  Tetrachloroethylene

IMDG  Tetrachloroethylene - MARINE POLLUTANT

IATA:  Tetrachloroethylene

DOT, IMDG, IATA Primary Hazard Class:  6.1

DOT, IMDG, IATA Packing Group:  III

Label Required 6.1

UN Number  :  UN 1897

15. REGULATORY INFORMATION

International Inventories
AICS  Yes
DSL  Yes
NDSL  No
IECSC  Yes
EINECS  Yes
ELINCS  No
ENCS  Yes
KECL  No
PICCS | Yes
TSCA | Yes (Registered Lautenberg 21st act)
NZIoC | Yes

Legend:
AICS - Australian Inventory of Chemical Substances
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
IECSC - China Inventory of Existing Chemical Substances
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCs - Japan Existing and New Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrachloroethylene</td>
<td>0.1% DeMinimis Concentration</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories
- Acute health hazard: Yes
- Chronic Health Hazard: Yes
- Fire hazard: No
- Sudden release of pressure hazard: No
- Reactive Hazard: No

CERCLA
Tetrachloroethylene – 100lb. final RQ ; 45.4 kg final RQ

CARCINOGENICITY: Tetrachloroethylene Category 2

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

SARA 311/312 Hazardous: Yes
Classified hazard categories
- Eye Damage or Irritation, skin damage or irritation
- Aspiration hazard, Flammable, Sensitizer

California Prop 65
Tetrachloroethylene (Cancer)

16. OTHER INFORMATION

NFPA
Health hazards: 2
Flammability: 0
Instability: 0
Physical and Chemical Properties -

HMIS
Health hazards: 2*
Flammability: 0
Physical hazards: 0
Personal protection: X

Revision Date: 19-Apr-2019
Revision Note: SDS sections updated (***) GHS Revision

Disclaimer
The information provided above is intended as a guide to assist in the safe handling, use, processing, storage, transportation, disposal and release of the material listed. Nothing contained herein is to be considered as an express or implied warranty of performance or quality. The information relates only to the specific material designated and may not be applicable when such material is used in combination with any other materials or as part of any process, except as otherwise expressly described herein. The information is believed to be true and correct as of the date issued. Always make sure you are using the most current information available. The material described herein is produced for commercial and industrial use only and unless otherwise specifically designated by the manufacturer in writing has not received any specific regulatory approval such as approvals for food contact or for use in medical/surgical applications or devices. It is buyer and user’s sole and exclusive responsibility to ensure that any handling, use, processing, storage, transportation, disposal and release of the material complies with all applicable laws, rules and regulations.

End of Safety Data Sheet