



Quality, service, and customer satisfaction is our driving force.



MATERIAL SAFETY DATA SHEET

1. Chemical Product And Company Identification

| | | |
|--------------|---|--|
| Product Name | AFRIQ LUBE BATTERY ACID | |
| Product Use | Open Cell Batteries | |
| Manufacturer | Afriq Lube and Services cc P.O. Box 263708 Three Rivers 1935 | 016 424 4630 (t) 016 424 4651 (f) afriqlube@telkomsa.net (e) |

2. Hazards Identification

GHS Classification:

Health Environmental Physical

Acute Toxicity – Not listed (NL)

Eye Corrosion – Corrosive

Skin Corrosion – Corrosive

Skin Sensitization – NL

Mutagenicity/Carcinogenicity – NL

Reproductive/Developmental – NL

Target Organ Toxicity (Repeated) – NL

Aquatic Toxicity – NL NFPA – Flammable gas, hydrogen (during charging of batteries or contact with finely divided metals)

CN - NL

EU - NL

GHS Label: Battery Fluid, Acid

Symbols: C (Corrosive)

Hazard Statements: Contact may cause irritation or severe burns. This product is irritating to eyes, respiratory system, and skin.

Precautionary Statements: Keep out of reach of children. Keep containers tightly closed.

EMERGENCY OVERVIEW: Causes severe burns. Acid mist is irritating to eyes, respiratory system, and skin.

Prolonged inhalation or ingestion may result in serious damage to health.

POTENTIAL HEALTH EFFECTS:

EYES: Direct contact with liquid may cause severe burns or blindness.

SKIN: Direct contact with battery fluid may cause skin irritation or damaging burns.

INGESTION: Swallowing this product may cause severe burns to the oesophagus and digestive tract and may be harmful or fatal.

INHALATION: Respiratory tract irritation and possible long term effects.

ACUTE HEALTH HAZARDS: Repeated or prolonged contact may cause skin irritation and/or chemical burns.

CHRONIC HEALTH HAZARDS: Chronic inhalation of strong mineral acid mists containing sulphuric acid may increase the risk of lung cancer. IARC has listed strong mineral acid mists containing sulphuric acid as a Category 1 carcinogen (carcinogenic in humans).

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Pulmonary, edema and bronchitis. Skin diseases may also predispose one to acute and chronic effects of sulphuric acid.

ADDITIONAL INFORMATION: None known.



3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS (Chemical/Common Names): CAS No.: % by Wt: EC No.:

Sulphuric acid 7664-93-9 30-43 (average: 36.5) 231-639-5

Additional Information

None known.

4. FIRST AID MEASURES

EYE CONTACT: An eye wash/emergency shower should be provided wherever battery acid exposure is possible. Flush eyes with large amounts of water for at least 15 minutes. Remove contaminated clothing and seek immediate medical attention if eyes have been exposed directly to acid.

SKIN CONTACT: Flush affected area(s) with large amounts of water using deluge emergency shower, if available, shower for at least 15 minutes. Remove contaminated clothing. If symptoms persist, seek medical attention.

INGESTION: If swallowed, give large amounts of water. Do NOT induce vomiting or aspiration into the lungs may occur and can cause permanent injury or death.

INHALATION: If inhaled, remove person to fresh air. If breathing difficulties develop, obtain medical treatment.

5. FIRE-FIGHTING MEASURES

SUITABLE/UNSUITABLE EXTINGUISHING MEDIA:

Dry chemical, carbon dioxide, foam. Trained fire fighters may use water spray under certain conditions.

SPECIAL FIRE FIGHTING PROCEDURES & PROTECTIVE EQUIPMENT:

Sulphuric acid will not burn, but is capable of igniting finely divided combustible materials on contact. Use dry chemical agents to smother combustible materials. Avoid breathing mists and vapours. Use full protective equipment (acid-resistant bunker gear) and self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Battery fluid can evolve flammable hydrogen gas when exposed to metals (such as during charging of lead acid batteries) and may increase the fire risk near sparks, excessive heat or open flames. See Section 10 for list of fire by-products.

SPECIFIC HAZARDS IN CASE OF FIRE:

Battery Electrolyte (Sulphuric Acid) is Corrosive.

Additional Information

Fire fighting water runoff and dilution water may be toxic and corrosive and may cause adverse environmental impacts.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

Electrolyte material contains sulphuric acids and is corrosive. Wear appropriate protective clothing. If toxic vapours are produced at unknown concentrations, wear a NIOSH-approved respirator or SCBA.

ENVIRONMENTAL PRECAUTIONS:

Prevent spilled material from entering sewers and waterways.

SPILL CONTAINMENT & CLEANUP METHODS/MATERIALS:

Stop flow of leaking liquid. Small spills: Use clay, sand, or diatomaceous earth. Neutralize any spilled electrolyte with neutralizing agents, such as soda ash, sodium carbonate/bicarbonate, or lime. Sweep or shovel spilled material and absorbent and place in approved container. Dispose of any non-recyclable materials in accordance with local, state, provincial or federal regulations.

Additional information: None known.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING AND STORAGE:

- Keep containers tightly closed when not in use.
- Do not handle near heat, sparks, or open flames.



- Protect containers from physical damage to avoid leaks and spills.
- Wear appropriate PPE.

OTHER PRECAUTIONS (e.g.; Incompatibilities):

Keep away from combustible materials, organic chemicals, reducing substances, metals, strong oxidizers and water.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS/SYSTEM DESIGN INFORMATION:

Use in areas with adequate ventilation.

VENTILATION:

General dilution ventilation is acceptable. Use local exhaust ventilation if occupational exposure limits are exceeded.

RESPIRATORY PROTECTION:

Not required for normal conditions of use. See also special fire fighting procedures (Section 5).

EYE PROTECTION:

Wear protective glasses with side shields or goggles. Use a full face shield when pouring acid or when splashing may occur.

SKIN PROTECTION:

Wear acid resistant gloves as a standard procedure to prevent skin contact.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Acid resistant apron and face shield recommended when adding water or electrolyte to batteries.

EXPOSURE GUIDELINES & LIMITS:

OSHA Permissible Exposure Limit (PEL/TWA) sulphuric acid 1.0 mg/m³

ACGIH 2007 Threshold Limit Value (TLV) sulphuric acid 0.2 mg/m³

Quebec Permissible Exposure Value (PEV) sulphuric acid 1.0 mg/m³ TWA 3.0 mg/m³ STEV

Ontario Occupational Exposure Level (OEL) sulphuric acid 1.0 mg/m³ TWAEV 3.0 mg/m³ STEV

Netherlands Maximal acceptable Concentrate (MAC) Sulphuric acid 1.0 mg/m³ Sulphuric acid 1.0 mg/m³

Germany Maximal (MAK) Sulphuric acid 1.0 mg/m³ TWA 2.0 mg/m³ STEL

TWA: 8-Hour Time-Weighted Average; STE: Short-Term Exposure; mg/m³: milligrams per cubic meter of air; NE: Not Established; STEV: Short-Term Exposure Value; TWAEV: Time-Weighted Average Exposure Value; STEL: Short-Term Exposure Limit

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear, colourless liquid

ODOR: Odourless

ODOR THRESHOLD: NA

PHYSICAL STATE: sulphuric Acid: Liquid

pH: <1

BOILING POINT: 235-240° F (113-116o C)

MELTING POINT: NA

FREEZING POINT: NA

VAPOR PRESSURE: 13 mmHg

VAPOR DENSITY (AIR = 1): NA

SPECIFIC GRAVITY (H₂O = 1): 1.2–1.3

EVAPORATION RATE (n-BuAc=1): < 1

SOLUBILITY IN WATER: 100%

FLASH POINT: NA

AUTO-IGNITION TEMPERATURE: 932° F (as hydrogen gas)

LOWER EXPLOSIVE LIMIT (LEL): 4% (as hydrogen gas)

UPPER EXPLOSIVE LIMIT (UEL): 74% (as hydrogen gas)

PARTITION COEFFICIENT: NA

VISCOSITY (poise @ 25° C): Not Available

DECOMPOSITION TEMPERATURE: Not Available

FLAMMABILITY/HMIS HAZARD CLASSIFICATIONS (US/CN/EU): As sulphuric acid

HEALTH: 3 **FLAMMABILITY:** 0 **REACTIVITY:** 2



10. STABILITY AND REACTIVITY

STABILITY: This product is stable under normal conditions at ambient temperature.

INCOMPATIBILITY (MATERIAL TO AVOID): Strong bases, finely divided combustible materials, reducing agents, finely divided metals, and strong oxidizers.

HAZARDOUS DECOMPOSITION BYPRODUCTS:

Thermal decomposition will produce sulphur dioxide, sulphur trioxide, sulphuric acid mist, and hydrogen.

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: Finely divided metals. Concentrated acid may react with water.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY (Test Results Basis and Comments):

LD50, Rat: 2140 mg/kg

LC50, Guinea pig: 510 mg/m³

SUBCHRONIC/CHRONIC TOXICITY (Test Results and Comments):

IARC listed strong mineral acid mists containing sulphuric acid as a Category 1 carcinogen (Carcinogenic to humans).

12. ECOLOGICAL INFORMATION

PERSISTENCE & DEGRADABILITY:

Sulphuric acid is reactive and not very persistent in the ecosystem.

BIO-ACCUMULATIVE POTENTIAL (Including Mobility):

Very high mobility and solubility indicate very low risk of bioaccumulation.

AQUATIC TOXICITY (Test Results & Comments):

(US, CN, EU Version for International Trade)

24-hour LC50, fresh water fish (*Brachydanio rerio*): 82 mg/l

96-hour LOEC, fresh water fish (*Cyprinus carpio*): 22 mg/l (lowest observable effect concentration)

Additional Information

- No known effects on stratospheric ozone depletion.
- Volatile organic compounds: 0% (by Volume)
- Water Endangering Class (WGK): NA

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL

METHOD:

Neutralize acid and follow local, State/Provincial, and Federal/National regulations applicable to as-used, end-of-life characteristics to be determined by end-user.

HAZARDOUS WASTE

CLASS/CODE: US – Spilled sulphuric acid is a characteristic hazardous waste, U.S. EPA hazardous waste code D002.

CN – Not applicable to finished product as manufactured for distribution into commerce.

EWC – Not applicable to finished product as manufactured for distribution into commerce.

Additional Information

Battery Electrolyte (Sulphuric Acid) is Corrosive. Dispose as allowed by local jurisdiction for the end-of-life characteristics.

14. TRANSPORT INFORMATION

GROUND – US-DOT/CAN-TDG/EU-ADR/APEC-ADR:

Proper Shipping Name Battery Fluid, Acid

Hazard Class 8 ID Number UN2796

Packing Group II Labels Corrosive

AIRCRAFT – ICAO-IATA:

Proper Shipping Name Battery Fluid, Acid

Hazard Class 8 ID Number UN2796

Packing Group II Labels Corrosive



Reference IATA packing instructions Y809 and 809.

VESSEL – IMO-IMDG:

Proper Shipping Name Battery Fluid, Acid

Hazard Class 8 ID Number UN2796

Packing Group II Labels Corrosive

Reference IMDG packing instructions P001.

Additional Information

Transport requires proper packaging and paperwork, including the Nature and Quantity of goods, per applicable origin/destination/customs points as-shipped.

15. REGULATORY INFORMATION

INVENTORY STATUS:

All components are listed on the TSCA; EINECS/ELINCS; and DSL, unless noted otherwise below.

U.S. FEDERAL REGULATIONS:

TSCA Section 8b – Inventory Status: All chemicals comprising this product are either exempt or listed on the TSCA Inventory.

TSCA Section 12b – Export Notification: If the finished product contains chemicals subject to TSCA Section 12b export notification, they are listed below:

Chemical CAS #

None NA

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT)

Chemicals present in the product which could require reporting under the statute:

(US, CN, EU Version for International Trade)

Chemical CAS #

Sulphuric acid 7664-93-9

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

The finished product contains chemicals subject to the reporting requirements of Section 313 of SARA Title III.

Chemical CAS # % wt

Sulphuric acid 7664-93-9 36.5

CERCLA SECTION 311/312 HAZARD CATEGORIES: Note that the finished product is exempt from these regulations, but lead and sulphuric acid above the thresholds are reportable on Tier II reports.

Fire Hazard No

Pressure Hazard No

Reactivity Hazard No

Immediate Hazard Yes (EPA lists sulphuric acid as an Extremely Hazardous Substance)

Delayed Hazard No

Sulphuric acid is regulated as an Extremely Hazardous Substance

STATE REGULATIONS (US):

California Proposition 65

The following chemicals identified to exist in the finished product as distributed into commerce are known to the State of California to cause cancer, birth defects, or other reproductive harm:

Chemical CAS # % Wt Strong inorganic acid mists including sulphuric acid NA 36.5

California Consumer Product Volatile Organic Compound Emissions

This Product is not regulated as a Consumer Product for purposes of CARB/OTC VOC Regulations, as-sold for the intended purpose and into the industrial/Commercial supply chain.

INTERNATIONAL REGULATIONS (Non-US):

Canadian Domestic Substance List (DSL)

All ingredients remaining in the finished product as distributed into commerce are included on the Domestic Substances List.

WHMIS Classifications

Class E: Corrosive materials present at greater than 1%. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the Controlled Products Regulations. **NPRI and Ontario Regulation 127/01**



This product contains the following chemicals subject to the reporting requirements of Canada NPRI +/-or Ont. Reg. 127/01:

Chemical CAS # % Wt

None NA

European Inventory of Existing Commercial Chemical Substances (EINECS)

All ingredients remaining in the finished product as distributed into commerce are exempt from, or included on, the European Inventory of Existing Commercial Chemical Substances.

European Communities (EC) Hazard Classification according to directives 67/548/EEC and 1999/45/EC.

R-Phrases S-Phrases

35 1/2, 26, 30, 45

Additional Information

This product may be subject to additional regulations and laws not identified above, such as for uses other than described or as-designed/as-intended by the manufacturer, or for distribution into specific domestic destinations.

16. OTHER INFORMATION

Note: Afriq Lube products do not contain PCBs.

Health studies have shown that many hydrocarbons pose potential human health risks which may vary from person to person. Information provided on this MSDS reflects intended use. This product should not be used for any other applications. In any case, the following advice should be considered:

| | |
|--------------------------|--|
| FIRST AID | Wash skin with soap and water. Flush eyes with water. If overcome by fumes or vapour, remove to fresh air. If ingested do not induce vomiting. If any symptoms persist seek medical attention. Read and understand the MSDS before using this product. |
| INJECTION INJURY WARNING | If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury. |
| SAFETY | Under normal conditions of intended use, this product does not pose a risk to health. Excessive exposure may result in eye, skin or irritation. Always observe good hygiene measures. |

Disclaimer

Information given here in is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control; all risks of use of the product are therefore assumed by the user and we expressly disclaim all warranties of every kind of nature, including warranties of merchantability and fitness for a particular purpose in respect to the use or suitability of the product. Nothing intended as a recommendation for uses which infringe valid patents or as extending license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.

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|-------------|---|
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