

MATERIAL SAFETY DATA SHEET

SECTION I - PRODUCT IDENTIFICATION

Product name: ALS ELECTRONIC LUBE DISPENSER
Chemical formula: Complex mixture
Product family: Electrolyte solution, organic acid
Product use: Solid-state lubricant dispenser

Supplier name & address:
Comlube Technology Inc.
110 Scotia Court #34
Whitby, Ontario, L1N 8Y7
Telephone #: (905) 438-8418

SECTION II - HAZARDOUS INGREDIENTS

<u>Ingredients</u>	<u>CAS #</u>	<u>%</u>	<u>LC₅₀, ppm (Rat, inh.)</u>	<u>LD₅₀, mg/kg (Rat, oral)</u>
Dimethyl sulphoxide (DMSO)	67-68-5	10-30	> 1600 mg/m ³ /4 hours	14,500
Sodium azide	26628-22-8	10-30	N/Av	27
Potassium iodide	7681-11-0	5-10	N/Av	N/Av
Potassium thocyanate	333-20-0	5-10	N/Av	854
Ethylene glycol	107-21-1	1-5	N/Av	4700
Potassium bicarbonate	584-08-7	1-5	N/Av	N/Av

SECTION III - PHYSICAL DATA

Physical state, odour and appearance: Clear, colourless, water liquid with faint indistinct sulphur or garlic smell.
Odour threshold: Not available
Coefficient of water/oil distribution: Not available
Boiling point: 104°C
pH: 9
Evaporation rate (n-BuAc=1.0): Same as water
Volatiles, % by weight: Not available

Specific gravity: 1.14
Vapour pressure (mm Hg): 15 mm Hg at 20°C
Freezing point: Not available
Vapour density (Air=1.0): Approximately 1.0
Solubility in water (w/w): Soluble
Volatiles, % by volume: 80%

SECTION IV - FIRE AND EXPLOSION DATA

Conditions of flammability: Not flammable under normal conditions.
If yes, under which conditions: Above 60°C, nitrogen slowly develops. Above 150°C, rapid decomposition takes place.
Means of extinction: Water fog, carbon dioxide, dry chemical or foam, as suitable for surrounding fire.
Sensitivity to mechanical impact/static discharge: Not sensitive to static discharge or impact under normal handling conditions
Flash point (Method): None
Upper flammable limits (% by volume): Not applicable
Lower flammable limits (% by volume): Not applicable
Auto-ignition temperature: Not known
Hazardous combustion products: See "Hazardous decomposition products", below.

SECTION V - REACTIVITY DATA

Stability: Stable. Hazardous polymerization will not occur.
Incompatible materials: Keep leaking electrolyte from contact with oxidizers or strong alkalis. Explosive decomposition with hypochlorites.
Conditions of reactivity: Above 60°C, nitrogen slowly develops. Above 150°C, rapid decomposition occurs, giving rise to toxic fumes.
Hazardous decomposition products: Oxidative decomposition above 150°C gives off sulphur dioxide, nitrogen oxide, formaldehyde, methyl mercaptan, hydrogen cyanide, hydrogen iodide, carbon, potassium and sodium oxides.

SECTION VI - TOXICOLOGICAL PROPERTIES

LD₅₀ of material: See Section 2
Routes of entry: Contact with electrolyte is only likely if container is severely damaged.
Skin contact: Electrolyte is a mild skin irritant. Absorption through skin by continuous contact causes azide poisoning, which leads progressively to headache, dizziness, nausea and (for large exposures) collapse.
LC₅₀ of material: See Section 2

Eye contact: Dripping or splashing of electrolyte into eyes will cause redness and irritation.

Inhalation: Vapours or mist may irritate respiratory tract. Continuous inhalation of vapours may lead to azide poisoning (see above).

Ingestion: Swallowing will cause irritation to mouth, throat and esophagus. May cause stomach pain and vomiting. If significant amounts swallowed, may lead to azide poisoning.

Exposure limits: ACGIH TLV-TWA: 100 mg/m³ for Ethylene Glycol.

Acute effects: See under "Routes of entry". Adverse effects are not expected under normal handling conditions.

Chronic effects: Prolonged skin contact may cause dermatitis.

Carcinogenicity: No component in the electrolyte solution is listed as carcinogenic by the International Agency for Research on Cancer (IARC) or the American Conference of Government Industrial Hygienists (ACGIH).

Teratogenicity, mutagenicity, other reproductive effects: Ethylene glycol has shown embryotoxic and fetotoxic effects in animal studies. May be mutagenic.

Sensitization to material: Contains substances that may cause skin allergies in rare cases.

Synergistic materials: None known.

SECTION VII - FIRST AID

Inhalation: Remove victim to open air immediately. Get medical attention right away for any breathing problems.

Skin: Wash affected area with lukewarm, gently-flowing water. Remove contaminated clothing. If irritation persists, or for prolonged contact, get medical attention.

Eyes: Immediately flush eyes with large quantities of lukewarm, gently-flowing water for at least 15 minutes, while holding eyelids open. Get medical attention from an eye specialist immediately.

Ingestion: Rinse mouth thoroughly with cold water, then have victim drink several glass of water. However, never give anything by mouth if victim is unconscious or rapidly losing consciousness. If directed by a physician or Poison Control Centre, induce vomiting. If vomiting occurs naturally, lean victim forward to prevent aspiration of material. Get immediate medical attention.

SECTION VIII - PREVENTIVE MEASURES

Spill, leak or release: If unit is damaged, a maximum of 2 mL of liquid can leak, because all liquid is absorbed in a sponge. In case of damage, wear protective gloves and glasses. Absorb free liquid in inert absorbent, such as vermiculite, sheet silicate or dry sand. Do not use metal tools, or place used absorbent in a metal container. Clean residue with a mild alkali solution, such as sodium bicarbonate.

Waste disposal: Dispose of waste in accordance with all local, provincial and federal regulations. Parts such as circuit board, cylinder housing and lid are reusable.

Protective equipment:

Respiratory/type: No respiratory protection required for normal conditions of use.

Gloves/type: Wear chemical-resistant gloves, such as natural rubber, Neoprene, nitrile rubber, polyvinyl chloride (PVC), butyl rubber or Viton™.

Eye/type: Wear chemical safety goggles, preferably with side shields.

Footwear/type: Wear safety boots as per health and safety regulations

Other/type: Emergency shower and eye wash station should be close to work area.

Engineering controls: No special controls are needed for normal conditions of use.

Handling procedures and equipment: if the lubricant dispenser is handled duly and as directed, no dangers exist from the constituents of the drive unit, because the dispenser is situated in a hermetically-welded gas and liquid-tight strong polypropylene container, which is itself enclosed in a strong plastic housing. Avoid crushing, dropping and exposure to extremely high temperatures.

Storage requirements: Store the lubricant tins in an area below 40°C. Do not store with acids or heavy metal salts.

Special shipping instructions: Not regulated by Transportation of Dangerous Goods Regulations. Protect container against damage.

SECTION IX - PREPARATION INFORMATION

Prepared by: Comlube Technology Inc.

Telephone #: (905) 438-8418

Preparation date: January, 2009

The information and data presented herein are based on test, reports and research we believe to be accurate and reliable. The information and data are provided without warranty, guarantee or liability on our part and are therefore, provided to our customers for their own investigation, verification and consideration.