

SAFETY DATA SHEET

According to Regulation (EC) No.1907/2006/EC as amended by the Commission Regulation 2015/830/EC

Date of issue: 12.5.2016

Date of revision:

ECOLIQUID

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier

Trade name: A+TKS AL-5 DTD 406B

Identification No.: not allocated, it is not a substance

1.2 Relevant identified uses of the substance or mixture and uses advised against

Application - De-icing fluid for TKS-in flight de-icing systems. AL - 5 (DTD 406B) NATO code: S-745, Aviation using, Approved for all de-icing systems according the POH, From Spinner-to-Tail, all aircrafts TKS, ground de-icing also.

1.3 Details of the supplier of the safety data sheet:

ECOLIQUID s.r.o.

Ondřejovská 699

251 64 Mnichovice

Czech republic

www.ecoliquid.eu

TEL: +420 731 122 512

1.4 Emergency telephone number:

Medical Toxicology Information Service UK

24 hour telephone service

Mary Sheridan House

15 St Thomas Street

London SE1 9RY

Tel: 020 7188 0600

Fax: 020 7188 0800

Website: www.medtox.co.uk

SECTION 2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

Classification according to regulation (EC) č.1272/2008 (CLP) – Acute toxicity

Acute Tox. 4,

H302

STOT RE 2,

H373

Flam. Liq. 4

Full text of H-Statements: see section 16

2.2 Label elements according to regulation 1272/2008/EC:

Hazard pictogram(s):



Signal Word (CLP):

Hazard Statements:

Warning

H302 Harmful if swallowed.

H373 May cause damage to organs Kidneys through prolonged or repeated exposure if swallowed.

Precautionary Statements (CLP):

P102 - Keep out of reach of children.

P210 - Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

P260 Do not breathe vapour/spray.

P264 Wash your hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

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P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P314 Get medical advice/attention if you feel unwell.

P330 Rinse mouth.

P501 Dispose of contents/container in accordance with local regulations.

2.3 Other hazards

Hazards not otherwise classified: Not available.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**3.1 Not used****3.2 Mixtures:**

Name	CAS number EC number Index number	Content in % a ml/L	Classification according to regulation (EC) č.1272/2008 (CLP)
Ethylene Glycol	(CAS) 107-21-1 (EC) 203-473-3 (IN) 603-027-00-1	85-90% 850-900 ml	Acute Tox. 4, H302 STOT RE 2; H373
Water	(CAS) 7732-18-5 (EC) : 231-791-2	00-10% 00-100 ml	
Ethanol D.	(CAS) 64-17-5 (EC) 200-578-6 (IN) 603-002-00-5	05-10% 50-100 ml	Flam. Liq. 2, H225 Eye Irrit. 2, H319

Full text of H-Statements: see section 16

SECTION 4 First-aid measures**4.1 Description of first aid measures****General Information****If Inhaled:**

Treat Symptomatically.

Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.

In Case of Skin Contact:

Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.

In Case of Eye Contact:

Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.

If Swallowed:

DO NOT DELAY. If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

4.2 Most important symptoms and effects, both acute and delayed**Symptoms/effects:**

Kidney toxicity may be recognized by blood in the urine or increased or decreased urine flow. Other signs and symptoms can include nausea, vomiting, abdominal cramps, diarrhoea, lumbar pain shortly after ingestion, and possibly narcosis and death. Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision. Skin irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blisters. Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing.

4.3 Indications of any immediate medical attention and special treatment needed

IMMEDIATE TREATMENT IS EXTREMELY IMPORTANT! May cause significant renal, respiratory, and CNS toxicity. May cause significant acidosis. Call a doctor or poison control centre for guidance.

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SECTION 5 Fire-fighting measures

5.1 Extinguishing Media

Extinguishing Media:

Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

5.2 Special Hazards

Special Hazards:

Material will not burn unless preheated. Carbon monoxide may be evolved if incomplete combustion occurs. Containers exposed to intense heat from fires should be cooled with large quantities of water.

5.3 Advice for firefighters

Advice for firefighters:

Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).

Further Information:

Clear fire area of all non-emergency personnel. Evacuate the area of all non-essential personnel. Keep adjacent containers cool by spraying with water.

SECTION 6 Accidental release measures

6.1 Personal precautions, protective equipment, and emergency procedures

Personal precautions, protective equipment, and emergency procedures:

Observe all relevant local and international regulations. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained. Avoid contact with skin, eyes and clothing.

6.2 Environmental precautions

Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers. Use appropriate containment to avoid environmental contamination. Ventilate contaminated area thoroughly.

6.3 Methods and materials for containment and cleaning up

Methods and materials for containment and cleaning up:

Contain run-off from residue flush and dispose of properly. Soak up residue with an absorbent such as clay, sand or other suitable material. For small liquid spills (< 1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

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SECTION 7 Handling and storage

7.1 Safe Handling

Safe Handling:

Avoid breathing of or direct contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material. Ensure that all local regulations regarding handling and storage facilities are followed. Use local exhaust extraction over processing area. Handle and open container with care in a well-ventilated area. Do not empty into drains. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Handling Temperature: Ambient.

7.2 Safe Storage

Safe Storage:

Tanks must be clean, dry and rust free. Keep container tightly closed. Must be stored in a diked (bunded) well-ventilated area, away from sunlight, ignition sources and other sources of heat. Cleaning, inspection and maintenance of storage tanks is a specialist operation, which requires the implementation of strict procedures and precautions. Drums should be stacked to a maximum of 3 high. Storage Temperature: Ambient.

SECTION 8 Exposure controls/personal protection

8.1 Control parameters

Ethylene glycol, (CAS: 107-21-1): PEL 50 mg/m³, MPC 100 mg/m³, conversion factor to ppm 0,244. PEL – permissible exposure limit; MPC – maximum permissible concentration at the workplace; Note. D – significant skin penetration or severe skin irritation occurs during exposure.

8.2 Exposure controls

8.2.1 Appropriate technical measures

Do not eat, drink or smoke when working with the product. Ensure adequate ventilation or exhaustion of the work area so that exposure limits (if any) are not exceeded. Wear suitable respiratory protection if exposure limits are exceeded.

8.2.2 Individual protection including personal protection equipment

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- a) Face protection: protective glasses or face shield
- b) Skin protection: Protective workwear and shoes. The choice of specific types of clothing such as gloves, protective face shield, boots, apron or the whole suit, depending on the type of work. Contaminated clothing must be washed before reuse.
Hand protection: Protective gloves suitable according EN 374. Suitable material: NBR (Nitrile rubber). CR (chloroprene rubber). PVC Polyvinyl chloride). Penetration time: > 480 min. Protective hand cream.
- c) Respiratory protection: Not commonly used. If there is a possibility of inhaling, use a protective mask with a filter against organic vapours and aerosols. Type: A. In case of accident, fire or high concentration use isolating breathing device.
- d) Thermal hazard: Data not available.

SECTION 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:

Liquid

Colour:

Pellucid

Odour:

No odour

Odour threshold:

data not available

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pH:	data not available
Relative evaporation rate(butyl acetate = 1):	data not available
Melting point/ melting point range:	data not available
Solidification temperature:	data not available
Boiling point:	80 °C
Flash point:	111 °C
Auto-ignition temperature:	data not available
Decomposition temperature:	data not available
Flammability (solid, gas):	Highly flammable liquid and vapour
Vapour pressure:	data not available
Relative vapour density in 20 °C:	data not available
Relative density:	data not available
Density:	1,11 g/cm ³
Solubility:	data not available
Partition coefficient n-octanol/water (log Pow):	data not available
Viscosity, kinematic:	data not available
Viscosity, dynamic:	data not available
Explosive properties:	data not available
Oxidising properties:	data not available
Limited amount:	data not available

9.2 Other information

Any other information is not available.

SECTION 10

Stability and reactivity

10.1 Reactivity

No corrosive effect on metals. No hazardous reactions when stored and handled according to safety instructions. Does not produce flammable gases in the presence of water. Vapours may form explosive mixtures with air.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Reacts with oxygen and oxidizing reagents. Reacts with (some) bases at elevated temperatures. Reacts with (some) metals when exposed to heat and water. Exothermic reaction with (some) acids. Flammable liquid and vapours. May form flammable/explosive mixture of vapours with air.

10.4 Conditions to avoid

Avoid these conditions: high temperature (> 40 °C), humidity, sunshine, ignition sources, direct sunlight.

10.5 Incompatible materials

Isolate from strong oxidizers, strong acids, strong bases.

10.6

Smokes. May release flammable gases. Carbon monoxide. Carbon dioxide.

SECTION 11

Toxicological information

11.1 Information on toxicological effects

Toxicokinetic, metabolism and distribution:

Administration: oral.

Metabolism: calcium oxalate

Elimination: kidneys.

Acute toxicity:

Lethal dose for human: cca 100 ml

LD50, oral: rat = 7712 mg/kg

LD50, dermal: mouse > 3500 mg/kg

LC50, inhaling, in form of aerosol, rat > 2,5 mg/16 hours.

Skin corrosion/irritation:

Not classified

Respiratory or skin sensitisation:

Not classified

Germ cell mutagenicity:

Not classified

Carcinogenicity:

Not classified

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Reproductive toxicity: Not classified
Toxicity for specific target organ – single exposure: Not classified
Toxicity for specific target organ – repeated exposure: Not classified
Aspiration hazard: Not classified

SECTION 12	Ecological information
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12.1 Toxicity

Data not available. Avoid intrusion into nature, soil, water, canalization, surface and subsurface water.

12.2 Persistence and degradability

Biodegradable.

12.3 Bio accumulative potential

Data not available.

12.4 Mobility in soil

Data not available.

12.5 Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB.

12.6 Other adverse effects

Not available.

SECTION 13	Disposal considerations
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13.1 Waste treatment methods**Local legislation (of waste):**

Dispose safely in accordance with local/national regulations. Act no.185/2001 Coll. on waste, as amended, Act no.477/2001 Coll. on packaging and on the change of some laws (law on packaging), as amended, decree no. 376/2001 Coll. assessment of hazardous properties of waste, as amended, decree no.381/2001 Coll. (catalogue of waste) as amended, č.383/2001 Coll. on the details of waste management, as amended. Avoid release to the environment.

Additional information:

Handle empty containers with care, as any residual fumes are flammable.

SECTION 14	Transport information
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In accordance with ADR / IATA / IMDG

ADR	IATA	IMG
14.1 UN number		
Not applicable	Not applicable	Not applicable
14.2 Official shipping name (OSN)		
Not a hazardous cargo according to the stated regulations		
14.3 Transport hazard class		
Not applicable	Not applicable	Not applicable
14.4 Packing group		
Not applicable	Not applicable	Not applicable
14.5 Environmental hazards		
NO	NO	NO

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Additional information not available

14.6 Special precautions for user – Not applicable

SECTION 15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1 EU regulation

Does not contain substances subject to restrictions under Annex XVII

Does not contain any substance on the list of substances for possible inclusion in Annex XIV of REACH

Does not contain substances included in the Annex XIV REACH, Regulation REACH: Regulation of the European Parliament and of the Council (EC) no.1907/2006 on Registration, evaluation, authorization and restriction of chemicals; as amended.

Regulation CLP: Regulation of the European Parliament and of the Council (EC) no. 1272/2008 on Classification, labelling and packaging of substances and mixtures; as amended.

Seveso III: Directive of the European Parliament and of the Council 2012/18/EU on the control of major-accident hazards involving dangerous substances.

Information on the directive 2012/18/EU (SEVESO III) Not subjected to 2012/18/EU (SEVESO III)

Other information, restriction, prohibitions and regulations:

Ensure compliance with all national/local regulations. Government Decree no.194/2001 Coll, on technical requirements for aerosol dispensers, as amended by Government Decree no. 305/2006 Coll. Government Regulation no. 161/2007 Coll, which lays down the conditions for protecting the health of employees at work, as amended. Act of the Czech National Council no. 133/1985 Coll, as amended. ČSN 650201- Flammable liquids, operations and warehouses. Decree no.246/2001 Coll, on fire prevention. Ensure compliance with all applicable national and local regulation.

15.1.2 National regulations

- Act no. 350/2011 Coll., on chemical substances and chemical mixtures and on amendments to certain acts (chemical law).
- Decree no. 402/2011 Coll., of 8 December 2011 on the evaluation of hazardous properties of chemical substances and chemical mixtures and packaging and labelling.
- Regulation (EC) no. 1907/2006 of the European Parliament and of the Council of 18 December 2006 on registration, evaluation, authorization and restriction of chemicals, on establishing a European Chemicals Agency
- Commission regulation (EU) no. 453/2010 of 20 May 2010, amending regulation (EC) no.1907/2006 of the European Parliament and of the Council on the registration evaluation, authorization and restriction of chemicals (REACH)
- Directive no. 1999/45/EC of 31 May 1999 of the European Parliament and of the Council on approximation of the laws, regulations and administrative provisions of the member states relating to the classification, packaging and labelling of the dangerous substances
- Council Directive no. 67/548/EHC of 27 June 1967 on approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of the dangerous substances
- Regulation (EC) no. 1272/2008 on classification, labelling and packaging of substances and mixtures.
- Commission directive no. 2000/39/EC of 8 June 2000 on establishing the first list of indicative limit values of exposure on the workplace for the implementation of Council Directive no. 98/24/ES on the safety and protection of the health of the employees from the risks related to chemical factors used at work.
- Commission directive no. 2006/15/EC of 7 February 2006 on establishing second list of indicative limit values of exposure at the workplace for the implementation of Council Directive no. 98/24/EC and amending Directives no. 91/322/EHS and no. 2000/39/EC.
- Commission directive no. 2009/161/EU of 17 December 2009 on establishing the third list of indicative limit values of exposure at the workplace for the implementation of Council Directive no. 98/24/EC and amending Commission directive no. 2000/39/EC.
- European waste catalogue
- Decree of the Ministry of the Environment no. 383/2001 Coll., on the details of the waste management (waste catalogue)
- Act no. 185/2001 Coll. on waste, as amended, and its implementing regulations

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- Act no. 309/2006 Coll., which regulates other requirements for safety and protection of health at work in employment relationship and on securing safety and health protection in the activity or provision of services outside the employment relationship.
- Government regulation no. 361/2007 Coll. which determines conditions of the health protection at work.
- Act no. 309/2001 Coll., as amended, which determines conditions of the health protection of employees at work.
- Decree no. 432/2003 Coll., on categorization of work, limit values of indicators of biological exposure tests.
- Government regulation no.101/2005 Coll., on more detailed requirements for the workplace and working environment.
- Act no. 201/2012 Coll. on air protection, as amended, and its implementing regulations
- Directive 1999/13/EC on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations
- Act no. 477/2001 Coll. on packaging, as amended, and its implementing regulations and other related regulations.
- Regulation (EC) no. 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents
- Act no. 120/2002 Coll. on conditions for placing biocidal products and effective substances on the market and amending certain related laws
- Regulation (EC) no. 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products

15.2 Chemical safety assessment

No additional data available.

SECTION 16 Other information

A list of standard risk phrases:

H302 Harmful if swallowed.

H373 May cause damage to organs through prolonged or repeated exposure.

This safety data sheet complies with the requirements of Annex II of the European Parliament and Council regulation (EC) no.1907/2006 as amended by Commission regulation (EU) no. 2015/830. The safety data sheet was made on the basis of information provided by the company. Classification and process used to derive the classification for the mixtures according to regulation (EC) no. 1272/2008 [CLP]: H225 – Based on the test data, H319 – Calculation method

Note

The aim of this SDS is to enable users to take the necessary measures related to health protection, safety on the workplace and protection of the environment.

It is the responsibility of the persons who have received this SDS to ensure that anyone who may use the product, handle it or come to the contact with it, have been acquainted with the information contained in this SDS and understood it.

If the recipient subsequently creates a product containing this product, it is his sole responsibility to ensure the transfer of all the factual information from the supplier's SDS to the SDS of his product, in accordance with valid regulations and laws.

All the information and guidance provided in this SDS are based on the current state of the scientific and technological knowledge. The manufacturer will not be responsible for any defect of the product if the occurrence of such defect could not be detected according to scientific and technological knowledge at the date of issue of the SDS.