

SAFETY DATA SHEET

according to Commission Regulation (EU) 2020/878 as amended



HVAC Universal

Creation date 18th April 2023
Revision date Version 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Substance / mixture HVAC Universal
UFI mixture
2F00-G0CQ-000X-4GXG

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

Mixture's intended use

Universal liquid concentrate for cleaning condensers (undiluted) and evaporators (diluted up to 1:6).

Main intended use

PC-CLN-OTH Other cleaning, care and maintenance products (excludes biocidal products)

Mixture uses advised against

The product should not be used in ways other than those referred in Section 1.

1.3. Details of the supplier of the safety data sheet

Supplier

Name or trade name Liquid Technologies Sp. z o.o.
Address ul. Gdańska 13, Wrocław, 50-344
Poland
Identification number (CRN) 368412743
VAT Reg No PL8982237296
Phone +48 518 90 92 94
E-mail info@ltchem.pl
Web address www.ltchem.pl

Competent person responsible for the safety data sheet

Name Liquid Technologies Sp. z o.o.
E-mail info@ltchem.pl

1.4. Emergency telephone number

European emergency number: 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification of the mixture in accordance with Regulation (EC) No 1272/2008

The mixture is classified as dangerous.

Skin Corr. 1A, H314

Eye Dam. 1, H318

Full text of all classifications and hazard statements is given in the section 16.

Most serious adverse effects on human health and the environment

Causes severe skin burns and eye damage. Causes serious eye damage. Harmful if swallowed.

2.2. Label elements

Hazard pictogram



Signal word

Danger

Hazardous substances

potassium hydroxide
sodium hydroxide

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Hazard statements

H314 Causes severe skin burns and eye damage.

Precautionary statements

P102 Keep out of reach of children.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a doctor.
P405 Store locked up.
P501 Dispose of contents/container to by handing over to the person authorized to dispose of waste or by returning to the supplier.

Supplemental information

<5 % non-ionic surfactants, perfumes

Requirements for child-resistant fastenings and tactile warning of danger

Container must carry a tactile warning of danger. Container must be fitted with child-resistant fastening.

2.3. Other hazards

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605. Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixture of substances and additives specified below.

Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
Index: 019-002-00-8 CAS: 1310-58-3 EC: 215-181-3	potassium hydroxide	3,5-4,5	Met. Corr. 1, H290 Acute Tox. 4, H302 Skin Corr. 1A, H314 Specific concentration limit: Skin Irrit. 2, H315: 0.5 % ≤ C < 2 % Skin Corr. 1A, H314: C ≥ 5 % Skin Corr. 1B, H314: 2 % ≤ C < 5 % Eye Irrit. 2, H319: 0.5 % ≤ C < 2 %	
Index: 011-002-00-6 CAS: 1310-73-2 EC: 215-185-5 Registration number: 01-2119457892-27	sodium hydroxide	≤1	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318 Specific concentration limit: Skin Corr. 1B, H314: 2 % ≤ C < 5 % Skin Corr. 1A, H314: C ≥ 5 % Eye Irrit. 2, H319: 0.5 % ≤ C < 2 % Skin Irrit. 2, H315: 0.5 % ≤ C < 2 %	

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Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
CAS: 68515-73-1 EC: 500-220-1 Registration number: 01-2119488530-36	Alkyl polyglycoside C8-10	0,5-1,5	Eye Dam. 1, H318	
Index: 607-130-00-2 CAS: 123-92-2 EC: 204-662-3	isopentyl acetate	≤0,001	Flam. Liq. 3, H226 EUH066	1, 2

Notes

- Note C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.
- A substance for which exposure limits are set.

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

If inhaled

Terminate the exposure immediately; move the affected person to fresh air. Take care of your own safety, do not let the affected person walk! Beware of the contaminated clothes. Depending on the situation, call the medical rescue service and ensure medical treatment considering the frequent need of further observation for at least 24 hours.

If on skin

Remove contaminated clothes. Wash with plenty of soap and water. If irritation occurs, rinse the skin with a stream of water.

If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person.

If swallowed

DO NOT INDUCE VOMITING! Even the induced vomiting can cause complications as in case of detergents and other foaming substances.

4.2. Most important symptoms and effects, both acute and delayed

If inhaled

Inhaling vapours can cause corrosion of the breathing system.

If on skin

Causes severe skin burns.

If in eyes

Causes serious eye damage.

If swallowed

Corrosion of the digestion system can occur.

4.3. Indication of any immediate medical attention and special treatment needed

Symptomatic treatment.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

Unsuitable extinguishing media

Water - full jet.

5.2. Special hazards arising from the substance or mixture

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

5.3. Advice for firefighters

Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Use a self-contained breathing apparatus and full-body protective clothing. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Do not inhale mist/vapours/spray. Prevent contact with skin and eyes.

6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water.

6.3. Methods and material for containment and cleaning up

Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies. After removal of the product, wash the contaminated site with plenty of water. Do not use solvents.

6.4. Reference to other sections

See the Section 7, 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Prevent formation of gases and vapours in concentrations exceeding the occupational exposure limits. Do not inhale mist/vapours/spray. Prevent contact with skin and eyes. Wash hands and exposed parts of the body thoroughly after handling. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Store locked up.

7.3. Specific end use(s)

not available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

The mixture contains substances for which occupational exposure limits are set.

European Union

Commission Directive 2000/39/EC

Substance name (component)	Type	Value
isopentyl acetate (CAS: 123-92-2)	OEL 8 hours	270 mg/m ³
	OEL 8 hours	50 ppm
	OEL 15 minutes	540 mg/m ³
	OEL 15 minutes	100 ppm

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DNEL

Alkyl polyglycoside C8-10

Workers / consumers	Route of exposure	Value	Effect	Value determination	Source
Workers	Inhalation	420 mg/m ³	Chronic effects systemic		ECHA
Consumers	Inhalation	124 mg/m ³	Chronic effects systemic		ECHA
Workers	Dermal	59500 mg/kg bw/day	Chronic effects systemic		ECHA
Consumers	Dermal	35700 mg/kg bw/day	Chronic effects systemic		ECHA
Consumers	Oral	35.7 mg/kg bw/day	Chronic effects systemic		ECHA

potassium hydroxide

Workers / consumers	Route of exposure	Value	Effect	Value determination	Source
Workers	Inhalation	1 mg/m ³	Chronic effects local		
Consumers	Inhalation	1 mg/m ³	Chronic effects local		

PNEC

Alkyl polyglycoside C8-10

Route of exposure	Value	Value determination	Source
Drinking water	176 µg/l		ECHA
Water (intermittent release)	270 µg/l		ECHA
Marine water	17.6 µg/l		ECHA
Microorganisms in sewage treatment	560 mg/l		ECHA
Freshwater sediment	1.516 mg/kg of food		ECHA
Sea sediments	0.152 mg/kg of food		ECHA

8.2. Exposure controls

Take off contaminated clothing and wash before reuse. Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

Eye/face protection

Protective goggles or face shield (based on the nature of the work performed).

Skin protection

Hand protection: Protective gloves resistant to the product. When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Observe other recommendations of the manufacturer. Other protection: protective workwear. Contaminated skin should be washed thoroughly.

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Respiratory protection

Halfmask with a filter against organic vapours or a self-contained breathing apparatus as appropriate if exposure limit values of substances are exceeded or in a poorly ventilated environment.

Thermal hazard

Not available.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	liquid
Colour	violet
Odour	characteristic
Melting point/freezing point	data not available
Boiling point or initial boiling point and boiling range	data not available
Flammability	data not available
Lower and upper explosion limit	data not available
Flash point	data not available
Auto-ignition temperature	data not available
Decomposition temperature	data not available
pH	13-14 (undiluted at 20 °C)
Kinematic viscosity	data not available
Solubility in water	soluble
Partition coefficient n-octanol/water (log value)	not determined
Vapour pressure	data not available
Density and/or relative density	
Density	1,2 g/cm ³ at 20 °C
Relative vapour density	data not available
Particle characteristics	does not apply to mixtures

9.2. Other information

not available

SECTION 10: Stability and reactivity

10.1. Reactivity

not available

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Unknown.

10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents.

10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

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SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Inhalation of solvent vapors above values exceeding exposure limits for working environment may result in acute inhalation poisoning, depending on the level of concentration and exposure time. No toxicological data is available for the mixture.

Acute toxicity

Based on available data the classification criteria are not met.

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Route of exposure	Parameter	Value	Exposure time	Species	Sex	Value determination
Oral	ATE	8242 mg/kg				Calculation of value

potassium hydroxide

Route of exposure	Parameter	Value	Exposure time	Species	Sex	Value determination
Oral	LD ₅₀	333 mg/kg bw		Rat (Rattus norvegicus)		

Skin corrosion/irritation

Causes severe skin burns and eye damage.

potassium hydroxide

Route of exposure	Result	Exposure time	Species
	Corrosive		

Serious eye damage/irritation

Causes severe skin burns and eye damage.

potassium hydroxide

Route of exposure	Result	Exposure time	Species
	Corrosive		

Respiratory or skin sensitisation

Based on available data the classification criteria are not met.

Germ cell mutagenicity

Carcinogenicity

Based on available data the classification criteria are not met.

Reproductive toxicity

Based on available data the classification criteria are not met.

Toxicity for specific target organ - single exposure

Based on available data the classification criteria are not met.

Toxicity for specific target organ - repeated exposure

Based on available data the classification criteria are not met.

Aspiration hazard

Based on available data the classification criteria are not met.

11.2. Information on other hazards

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 12: Ecological information

12.1. Toxicity

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Acute toxicity

The product is not classified as hazardous to the aquatic environment.

Alkyl polyglycoside C8-10

Parameter	Value	Exposure time	Species	Environment
LC ₅₀	126 mg/l	96 hours	Fish (Branchydanio rerio)	
EC ₅₀	151 mg/l	48 hours	Crustaceans (Acartia tonsa)	
EC ₅₀	27 mg/l	72 hours	Algae and other aquatic plants (Scenedesmus subspicatus)	

12.2. Persistence and degradability

Biodegradability

Alkyl polyglycoside C8-10

Parameter	Value	Exposure time	Environment	Result
	>70 %	28 days		

The mixture is biodegradable.

12.3. Bioaccumulative potential

No data for the mixture.

12.4. Mobility in soil

No data for the mixture.

12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

12.6. Endocrine disrupting properties

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

12.7. Other adverse effects

Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling. The waste code should be assigned at the place of its production.

Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

SECTION 14: Transport information

14.1. UN number or ID number

UN 1814

14.2. UN proper shipping name

POTASSIUM HYDROXIDE SOLUTION

14.3. Transport hazard class(es)

8 Corrosive substances

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14.4. Packing group

III - substances presenting low danger

14.5. Environmental hazards

not relevant

14.6. Special precautions for user

Reference in the Sections 4 to 8.

14.7. Maritime transport in bulk according to IMO instruments

not relevant

Additional information

Hazard identification No.

80

UN number

1814

Classification code

C5

Safety signs

8



Air transport - ICAO/IATA

Packaging instructions passenger 852

Cargo packaging instructions 856

Marine transport - IMDG

EmS (emergency plan) F-A, S-B

MFAG 705

SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. REGULATION (EC) No 648/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 March 2004 on detergents, as amended. Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2. Chemical safety assessment

A safety assessment for the mixture is not required.

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

H226 Flammable liquid and vapour.
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.

Guidelines for safe handling used in the safety data sheet

P102 Keep out of reach of children.

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P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a doctor.
P405	Store locked up.
P501	Dispose of contents/container to by handing over to the person authorized to dispose of waste or by returning to the supplier.

A list of additional standard phrases used in the safety data sheet

EUH066 Repeated exposure may cause skin dryness or cracking.

Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

Key to abbreviations and acronyms used in the safety data sheet

ADR	European agreement concerning the international carriage of dangerous goods by road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
EC	Identification code for each substance listed in EINECS
EC ₅₀	Concentration of a substance when it is affected 50% of the population
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
EU	European Union
EuPCS	European Product Categorisation System
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC ₅₀	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD ₅₀	Lethal dose of a substance in which it can be expected death of 50% of the population
log K _{ow}	Octanol-water partition coefficient
OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bioaccumulative

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Acute Tox.	Acute toxicity
Eye Dam.	Serious eye damage
Flam. Liq.	Flammable liquid
Met. Corr.	Corrosive to metals
Skin Corr.	Skin corrosion

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

More information

Classification procedure - calculation method.

Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.
