

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 16.11.2023

Version number 30 (replaces version 29)

Revision: 16.11.2023

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

· **1.1 Product identifier**

· **Product name: Total Alkalinity Reagent**

· **Catalog number:** 424341, 418564, 418512-2

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

· **Application of the substance / the preparation:** Reagent for water analysis

· **1.3 Details of the supplier of the safety data sheet**

· **Supplier:**

Tintometer GmbH
Schleefstraße 8-12
44287 Dortmund
Made in Germany
www.lovibond.com

phone: +49 (0)231 94510-0
e-mail: sales@lovibond.com

The Tintometer Limited
Lovibond® House
Sun Rise Way
Amesbury
Wiltshire SP4 7GR
United Kingdom

phone : +44 1980 664800
e-mail: SDS@lovibond.uk

· **Informing department:**

e-mail: sds@lovibond.com
Product Safety Department

· **1.4 Emergency telephone number:**

+44 1235 239670
Languages: English

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS05 corrosion

Met. Corr.1 H290 May be corrosive to metals.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the GB CLP regulation.

· **Hazard pictograms**



GHS02

GHS05

· **Signal word** Warning

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Hazard statements

H226 Flammable liquid and vapour.

H290 May be corrosive to metals.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280 Wear protective gloves / eye protection.

P233 Keep container tightly closed.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P403+P235 Store in a well-ventilated place. Keep cool.

Labelling of packages where the contents do not exceed 125 ml
Hazard pictograms


GHS02

Signal word Warning

Hazard statements Void

2.3 Other hazards

Vapours have anaesthetic effect.

At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.

Vapours of the product are heavier than air and may accumulate on the ground, in mines, drains or cellars with higher concentration.

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

Determination of endocrine-disrupting properties

CAS: 78-93-3 butanone	List II	0.1–1%
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SECTION 3: Composition/information on ingredients

3.2 Mixtures
Description: aqueous solution

Dangerous components:

CAS 64-17-5: Eye Irrit. 2, H319 c ≥ 50% (SCL = specific concentration limit, registrant)

Ethanol denatured with MEK (methyl ethyl ketone = 2-butanone)

CAS: 64-17-5 EINECS: 200-578-6 Index No: 603-002-00-5 Reg.nr.: 01-2119457610-43-XXXX	ethanol ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319 Specific concentration limit: Eye Irrit. 2; H319: C ≥ 50 %	10–20%
CAS: 78-93-3 EINECS: 201-159-0 Index No: 606-002-00-3 Reg.nr.: 01-2119457290-43-XXXX	butanone ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336, EUH066	0.1–1%
CAS: 7647-01-0 EINECS: 231-595-7 Index No: 017-002-01-X Reg.nr.: 01-2119484862-27-XXXX	hydrochloric acid ⚠ Met. Corr. 1, H290; Skin Corr. 1B, H314; ⚠ STOT SE 3, H335 Specific concentration limits: Skin Corr. 1B; H314: C ≥ 25 % Skin Irrit. 2; H315: 10 % ≤ C < 25 % Eye Irrit. 2; H319: 10 % ≤ C < 25 % STOT SE 3; C ≥ 10 %	0.1–1%

Additional information For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures
General information Instantly remove any clothing soiled by the product.

After inhalation Supply fresh air; consult doctor in case of symptoms.

After skin contact Instantly wash with water and soap and rinse thoroughly.

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- **After eye contact** Rinse opened eye for several minutes (at least 15 min) under running water. Then consult doctor.
 - **After swallowing**
Rinse out mouth and then drink 1-2 glasses of water.
In case of persistent symptoms consult doctor.
 - **4.2 Most important symptoms and effects, both acute and delayed:**
irritations
after swallowing and inhalation:
drowsiness
coughing
sickness
vomiting
absorption
 - **4.3 Indication of any immediate medical attention and special treatment needed:** No further relevant information available.
-

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
 - **Suitable extinguishing agents**
CO₂, extinguishing powder or water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.
 - **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
 - **5.2 Special hazards arising from the substance or mixture**
Can form explosive gas-air mixtures.
combustible
Formation of toxic gases is possible during heating or in case of fire.
Can be released in case of fire:
Carbon monoxide (CO) and carbon dioxide (CO₂)
 - **5.3 Advice for firefighters**
 - **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
 - **Additional information**
Collect contaminated fire fighting water separately. It must not enter drains.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.
-

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
 - **Advice for non-emergency personnel:**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
 - **Advice for emergency responders:** Protective equipment: see section 8
 - **6.2 Environmental precautions:**
Do not allow product to reach sewage system or water bodies.
Prevent material from reaching sewage system, holes and cellars.
Damp down gases/fumes/haze with water spray jet.
 - **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Neutralize with diluted sodium hydroxide solution or by throwing on lime sand, lime or sodium carbonate.
Absorb with liquid-binding material (sand, diatomite, universal binders).
Dispose of contaminated material as waste according to item 13.
 - **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.
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SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
- **Advice on safe handling:**
Use only in well ventilated areas.
Protect from heat.

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Keep ignition sources away - Do not smoke.

Take action to prevent static discharges.

Hygiene measures:

Do not inhale gases / fumes / aerosols.

Take off immediately all contaminated clothing.

Wash hands during breaks and at the end of the work.

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

7.2 Conditions for safe storage, including any incompatibilities
Requirements to be met by storerooms and containers: Store in cool location.

Information about storage in one common storage facility:

Store away from metals.

Store away from oxidising agents.

Further information about storage conditions:

Protect from heat and direct sunlight.

Protect from the effects of light.

Protect from humidity and keep away from water.

Recommended storage temperature: 20°C +/- 5°C

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Components with limit values that require monitoring at the workplace:
CAS: 64-17-5 ethanol
WEL (Great Britain) Long-term value: 1920 mg/m³, 1000 ppm
CAS: 78-93-3 butanone
WEL (Great Britain) Short-term value: 899 mg/m³, 300 ppmLong-term value: 600 mg/m³, 200 ppm

Sk, BMGV

IOELV (European Union) Short-term value: 900 mg/m³, 300 ppmLong-term value: 600 mg/m³, 200 ppm
Regulatory information

WEL (Great Britain): EH40/2020

IOELV (European Union): (EU) 2019/1831

DNELs

Derived No Effect Level (DNEL)

CAS: 64-17-5 ethanol

Oral DNEL 87 mg/kg (Consumer / long-term / systemic effects)

Dermal DNEL 343 mg/kg (Worker / long-term / systemic effects)

206 mg/kg (Consumer / long-term / systemic effects)

Inhalative DNEL 1900 mg/m³ (Worker / acute / local effects)950 mg/m³ (Worker / long-term / systemic effects)950 mg/m³ (Consumer / acute / local effects)114 mg/m³ (Consumer / long-term / systemic effects)
CAS: 78-93-3 butanone

Oral DNEL 31 mg/kg (Consumer / long-term / systemic effects)

Dermal DNEL 1161 mg/kg (Worker / long-term / systemic effects)

412 mg/kg (Consumer / long-term / systemic effects)

Inhalative DNEL 600 mg/m³ (Worker / long-term / systemic effects)106 mg/m³ (Consumer / long-term / systemic effects)
Recommended monitoring procedures:

Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

PNECs

Predicted No Effect Concentration (PNEC)

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CAS: 64-17-5 ethanol	
PNEC	580 mg/l (Sewage treatment plant) 0.79 mg/l (Marine water) 2.75 mg/l (Aquatic intermittent release) 0.96 mg/l (Fresh water)
PNEC	0.63 mg/kg (Soil) 3.6 mg/kg (Fresh water sediment)
CAS: 78-93-3 butanone	
PNEC	55.8 mg/l (Fresh water)
PNEC	22.5 mg/kg (Soil) 287.7 mg/kg (Marine sediment) 55.8 mg/kg (Marine water) 284.74 mg/kg (Fresh water sediment)
Ingredients with biological limit values:	
CAS: 78-93-3 butanone	
BMGV (Great Britain)	70 µmol/L Medium: urine Sampling time: post shift Parameter: butan-2-one

- Regulatory information BMGV (Great Britain): EH40/2011

- Additional information: The lists that were valid during the compilation were used as basis.

8.2 Exposure controls

Engineering measures:

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See item 7.

Individual protection measures, such as personal protective equipment

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.

Eye/face protection

Safety glasses

Use safety glasses that have been tested and approved in accordance with government standards such as EN 166.

Hand protection

Protective gloves.

Preventive skin protection by use of skin-protecting agents is recommended.

After use of gloves apply skin-cleaning agents and skin cosmetics.

Material of gloves

Butyl rubber, BR

Recommended thickness of the material: ≥ 0.35 mm

Penetration time of glove material

Value for the permeation: Level = 1 (< 10 min)

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

As protection from splashes gloves made of the following materials are suitable:

nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

Value for the permeation: Level = 1 (< 10 min)

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Other skin protection (body protection):

Protective work clothing.

Breathing equipment:

Use breathing protection against the effects of fumes/dust/aerosol.

Recommended filter device for short term use:

Filter A

Environmental exposure controls

Do not allow product to reach sewage system or water bodies.

Risk of explosion.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state

Fluid

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· Form:	Solution
· Colour:	Pink
· Odour:	Like alcohol
· Odour threshold:	CAS 64-17-5: 0.1 - 5058.5 ppm
· Melting point/Freezing point:	Not determined.
· Boiling point or initial boiling point and boiling range	78°C (CAS 64-17-5, CAS: 64-17-5 ethanol)
· Flammability	Flammable liquid and vapour.
· Explosive properties:	Product is not explosive. However, formation of explosive air/steam mixtures is possible.
· Lower and upper explosion limit	
Lower:	3.5 Vol % (CAS 64-17-5, CAS: 64-17-5 ethanol)
Upper:	15.0 Vol % (CAS 64-17-5, CAS: 64-17-5 ethanol)
· Flash point:	37°C (DIN EN ISO 13736)
· Auto-ignition temperature:	Not determined.
· Decomposition temperature:	Not determined.
· pH at 20°C	1.5
	Strongly acidic
· Kinematic viscosity	Not determined.
· Solubility	
· Water:	Fully miscible
· Partition coefficient n-octanol/water (log value)	Not applicable (mixture).
· Vapour pressure at 20°C:	59 hPa (CAS 64-17-5, CAS: 64-17-5 ethanol)
· Density and/or relative density	
· Density at 20°C:	0.97 g/cm ³
· Relative density:	Not determined.
· Relative gas density	Not determined.
· Particle characteristics	Not applicable (liquid).
· 9.2 Other information	.
· Information with regard to physical hazard classes	
· Corrosive to metals	May be corrosive to metals.
· Metals that are corroded by the substance or mixture	Information on incompatible materials can be found in Sections 7 and 10.
· Metal corrosion rate:	acc. to "Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Fifth revised Edition"
· Corrosion rate (steel)	3.39 mm/a
· Corrosion rate (aluminium)	12.29 mm/a
· Other safety characteristics	
· Oxidising properties:	none
· Additional information	
· Solids content:	< 0.5 %
· Solvent content:	
· Organic solvents:	10 - 20 %
· Water:	> 80 %

SECTION 10: Stability and reactivity

- **10.1 Reactivity** Fumes can combine with air to form an explosive mixture.
- **10.2 Chemical stability** Stable at ambient temperature (room temperature).
- **10.3 Possibility of hazardous reactions**
 Reacts with metals forming hydrogen (Danger of explosion in case of large amounts!)
 Corrosive action on metals
 Reacts with alkaline metals
 Reacts with reducing agents
 Reacts with peroxides
 Reacts with acids
 Nitric acid
 Reacts with strong oxidizing agents
 Reacts with alkaline earth metals
 ---> Explosive
 --> exothermic reaction
- **10.4 Conditions to avoid** Heating.

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10.5 Incompatible materials:

metals
rubber
various plastics

10.6 Hazardous decomposition products:

Inflammable gases/vapours
In case of fire: see section 5.

SECTION 11: Toxicological information

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

· **Acute toxicity** Based on available data, the classification criteria are not met.

LD/LC50 values that are relevant for classification:
CAS: 64-17-5 ethanol

Oral	LD50	10470 mg/kg (rat) OECD 401
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Dermal	LD50	>20000 mg/kg (rabbit)
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CAS: 78-93-3 butanone

Oral	LD50	3400 mg/kg (rat) (OECD 401)
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Dermal	LD50	>8000 mg/kg (rabbit)
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· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.

Information on components:
CAS: 64-17-5 ethanol

Irritation of skin	OECD 404	(rabbit: no irritation) (ECHA, registrant)
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Irritation of eyes	OECD 405	(rabbit: irritation)
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CAS: 78-93-3 butanone

Irritation of skin	OECD 404	(rabbit: slight irritation) (IUCLID)
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Irritation of eyes	OECD 405	(rabbit: severe irritations)
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· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

Information on components:
CAS: 64-17-5 ethanol

Sensitisation	OECD 406	(guinea pig: negative) (read across CAS 67-56-1)
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CAS: 78-93-3 butanone

Sensitisation	OECD 406	(guinea pig: negative) (IUCLID)
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· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

· **Carcinogenicity** Based on available data, the classification criteria are not met.

· **Reproductive toxicity** Based on available data, the classification criteria are not met.

Information on components:
CAS: 64-17-5 ethanol

OECD 471	(negative) (Bacterial Reverse Mutation Test - Ames test) (Salmonella typhimurium)
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CAS: 78-93-3 butanone

OECD 471	(negative) (Bacterial Reverse Mutation Test - Ames test) (IUCLID)
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· **STOT (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.

· **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

Information on likely routes of exposure

Under occupational conditions, the main uptake route for ethanol is through the respiratory tract. [GESTIS]

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The main intake pathways for butanone (MEK) are via the respiratory tract and the skin. [GESTIS]

Additional toxicological information:

Inhalation of concentrated vapours as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc. CAS 78-93-3 is skin-resorbing.

CAS: 64-17-5 ethanol

(source: GESTIS)

Main toxic effects:

Acute: Irritant effect on the eyes (liquid ethanol); disorders of well-being; due to high doses disturbance of the central nervous system.

In case of acute inhalative exposure, ethanol has a low toxicity. The odor becomes noticeable in the range of 80 ppm, the threshold for eye irritation is much higher (>10000 ppm). High exposures can cause coughing and tears.

chronic: degreasing of the skin (liquid ethanol);

ingestion of high doses causes damage to various organ systems, especially the liver.

CAS: 78-93-3 butanone

(source: GESTIS)

Main toxic effects:

Acute: Irritant effect on the eyes and respiratory tract, disturbance of the central nervous system (narcotic effect)

chronic: skin damage

11.2 Information on other hazards**Endocrine disrupting properties**

CAS: 78-93-3 butanone

List II 0.1–1%

Other information

According to the information available to us, the chemical, physical and toxicological properties of the substances mentioned in Chapter 3 have not been thoroughly investigated.

SECTION 12: Ecological information

12.1 Toxicity**Aquatic toxicity:****CAS: 64-17-5 ethanol**

LC50 8140 mg/l/48h (gold orfe)
(IUCLID)

EC50 9268–14221 mg/l/48h (Daphnia magna)
(IUCLID)

NOEC 9.6 mg/l (Daphnia magna) (9d)
(ECHA)

CAS: 78-93-3 butanone

EC50 5091 mg/l/48h (Daphnia magna)
(IUCLID)

LC50 3220 mg/l/96h (fathhead minnow)
(IUCLID)

Bacterial toxicity:**CAS: 64-17-5 ethanol**

EC5 6500 mg/l (Pseudomonas putida) (16h)

CAS: 78-93-3 butanone

EC5 1150 mg/l (Pseudomonas putida) (16h)
(IUCLID)

12.2 Persistence and degradability

The solvent is biodegradable.

CAS: 64-17-5 ethanol

OECD 301 E 94 % (readily biodegradable) (Modified OECD Screening Test)

12.3 Bioaccumulative potential

log Pow < 1 = Does not accumulate in organisms.

CAS: 64-17-5 ethanol

log Pow -0.32 (.)

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CAS: 78-93-3 butanone

log Pow 0.29 (.) (experimental)

- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
- **12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects** Avoid transfer into the environment.
- **Water hazard:**
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Hand over to disposers of hazardous waste.

- **European waste catalogue**

16 05 06* laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

- **14.1 UN number or ID number**
- **ADR, IMDG, IATA** UN2924
- **14.2 UN proper shipping name**
- **ADR** 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S. (ETHANOL (ETHYL ALCOHOL), HYDROCHLORIC ACID)
- **IMDG** FLAMMABLE LIQUID, CORROSIVE, N.O.S. (ETHANOL (ETHYL ALCOHOL), HYDROCHLORIC ACID)
- **IATA** FLAMMABLE LIQUID, CORROSIVE, N.O.S. (ETHANOL, HYDROCHLORIC ACID)

- **14.3 Transport hazard class(es)**

- **ADR**



- **Class** 3 (FC) Flammable liquids.
- **Label** 3+8

- **IMDG**



- **Class** 3 Flammable liquids.
- **Label** 3/8

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· IATA 	
· Class · Label	3 Flammable liquids. 3 (8)
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user · Kemler Number: · EMS Number: · Segregation groups · Stowage Category · Stowage Code	Warning: Flammable liquids. 38 F-E,S-C (SGG1) Acids A SW2 Clear of living quarters.
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category · Tunnel restriction code	3 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

* SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
· Poisons Act UK
· Regulated explosives precursors

Products containing less than 1% of any of the reportable substances are in general of no concern:

CAS: 7647-01-0	hydrochloric acid	10%
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· Regulated poisons

None of the ingredients is listed.

· Reportable explosives precursors

None of the ingredients is listed.

· Reportable poisons

None of the ingredients is listed.

· Regulation (EU) 2019/1148 on the marketing and use of explosives precursors not regulated

· Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)

None of the ingredients is listed.

· Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:

None of the ingredients is listed.

· Regulation (EC) No 273/2004 on drug precursors

CAS: 78-93-3	butanone	3
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CAS: 7647-01-0	hydrochloric acid	3
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Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

CAS: 78-93-3	butanone	3
CAS: 7647-01-0	hydrochloric acid	3

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:
None of the ingredients is listed.

REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)
None of the ingredients is listed.

LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)
None of the ingredients is listed.

Substances of very high concern (SVHC) according to REACH, Article 57

This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).

Substances of very high concern (SVHC) according to UK REACH

This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).

Directive 2012/18/EU (SEVESO III):

Named dangerous substances - ANNEX I None of the ingredients is listed.

Seveso category P5c FLAMMABLE LIQUIDS

Qualifying quantity (tonnes) for the application of lower-tier requirements 5000 t

Qualifying quantity (tonnes) for the application of upper-tier requirements 50000 t

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

Information about limitation of use: Not required.

National regulations

VOC-value EC: 800.2 g/l

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

Training hints Provide adequate information, instruction and training for operators.

Relevant phrases

H225 Highly flammable liquid and vapour.
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
EUH066 Repeated exposure may cause skin dryness or cracking.

Abbreviations and acronyms:

OECD: Organisation for Economic Co-operation and Development

STOT: specific target organ toxicity

SE: single exposure

RE: repeated exposure

EC50: half maximal effective concentration

IC50: half maximal inhibitory concentration

NOEL or NOEC: No Observed Effect Level or Concentration

c.c.: closed cup

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (UK REACH)

PNEC: Predicted No-Effect Concentration (UK REACH)

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Safety data sheet

according to 1907/2006/EC, Article 31

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Product name: Total Alkalinity Reagent

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LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Met. Corr. 1: Corrosive to metals – Category 1
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· Sources

Data arise from safety data sheets, reference works and literature.

ECHA: European CHemicals Agency <http://echa.europa.eu>

GESTIS- Stoffdatenbank (Substance Database, Germany)

IUCLID (International Uniform Chemical Information Database)

· * **Data compared to the previous version altered.**

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