



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

Printing date 25.01.2024

Version number 1.03 (replaces version 1.02)

Revision: 25.01.2024

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

· 1.1 Product identifier

· Trade name: **TENSAQUA LMO**

· Article number: 99980004101

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

· Technical function Corrosion inhibitor

· Application of the substance

/ the mixture Water conditioner

· 1.3 Details of the supplier of the safety data sheet

· Manufacturer/Supplier: Tensio
Doornpark 36
9120 Beveren
Belgium
Tel.: +32 3 755 48 74
Fax.: +32 3 755 51 55
e-mail: info@tensio.be

· Further information

obtainable from: Product Safety Departement: SDS@tensio.be

· 1.4 Emergency telephone number:

België / Belgique: Antigifcentrum / Centre Antipoison : +32 70 245 245

Nederland: Nationaal Vergiftigingen Informatie Centrum : +31 30 274 88 88

Members of the public seeking specific information on poisons should contact:

In England and Wales: NHS 111 - dial 111

In Scotland: NHS 24 - dial 111

+3237554874

2 Hazards identification

· 2.1 Classification of the substance or mixture

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

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

· 2.2 Label elements

· Labelling according to

Regulation (EC) No 1272/2008 The product is classified and labelled according to the GB CLP regulation.

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· **Hazard pictograms**



GHS05 GHS07

· **Signal word**

Danger

· **Hazard-determining components of labelling:**

*hydroxyphosphonoacetic acid
2-aminoethanol
potassium hydroxide
sodium hydroxide*

· **Hazard statements**

*H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.*

· **Precautionary statements**

*P260 Do not breathe dusts or mists.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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 POISON CENTER/doctor.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.*

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*

3 Composition/information on ingredients

· **3.2 Mixtures**

- **Description:** *Mixture of substances listed below with nonhazardous additions.*

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Dangerous components:

CAS: 23783-26-8 ELINCS: 405-710-8	hydroxyphosphonoacetic acid STOT RE 2, H373; Skin Corr. 1B, H314; Acute Tox. 4, H302; Skin Sens. 1, H317	≥5–<10%
CAS: 141-43-5 EINECS: 205-483-3	2-aminoethanol Skin Corr. 1B, H314; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332 Specific concentration limit: STOT SE 3; H335: C ≥ 5%	≥5–≤10%
CAS: 1310-58-3 EINECS: 215-181-3 Reg.nr.: 01-2119487136-33-XXXX	potassium hydroxide Skin Corr. 1A, H314; Acute Tox. 4, H302 Specific concentration limits: Skin Corr. 1A; H314: C ≥ 5 % Skin Corr. 1B; H314: 2 % ≤ C < 5 % Skin Irrit. 2; H315: 0.5 % ≤ C < 2 % Eye Irrit. 2; H319: 0.5 % ≤ C < 2 %	≥5–≤10%
CAS: 1310-73-2 EINECS: 215-185-5 Reg.nr.: 01-2119457892-27-XXXX	sodium hydroxide Skin Corr. 1A, H314; Acute Tox. 4, H302 Specific concentration limits: Skin Corr. 1A; H314: C ≥ 5 % Skin Corr. 1B; H314: 2 % ≤ C < 5 % Skin Irrit. 2; H315: 0.5 % ≤ C < 2 % Eye Irrit. 2; H319: 0.5 % ≤ C < 2 %	≥5–≤10%
	Derivate of acrylic acid copolymer Met. Corr. 1, H290; Eye Dam. 1, H318; Aquatic Chronic 3, H412	≤2.5%

Additional information:

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

4 First aid measures

4.1 Description of first aid measures

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Skin contact: burns, pain, redness.
 Eye contact: lesions, irritations, pain, tearing, redness.

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Inhalation: malaise, dizziness

Ingestion: burns, irritation, pain.

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

Treat symptomatically. An eyewash is recommended in the immediate work area.

5 Firefighting measures

· 5.1 Extinguishing media

· Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· 5.2 Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

· 5.3 Advice for firefighters

· Protective equipment:

Mouth respiratory protective device.

6 Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

· 6.2 Environmental precautions:

Do not allow to enter sewers/ surface or ground water.

· 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralising agent.

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

· 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

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- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

CAS: 141-43-5 2-aminoethanol (≥5–≤10%)

WEL (Great Britain)	Short-term value: 7.6 mg/m ³ , 3 ppm Long-term value: 2.5 mg/m ³ , 1 ppm Sk
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IOELV (EU)	Short-term value: 7.6 mg/m ³ , 3 ppm Long-term value: 2.5 mg/m ³ , 1 ppm Skin
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CAS: 1310-58-3 potassium hydroxide (≥5–≤10%)

WEL (Great Britain)	Short-term value: 2 mg/m ³
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CAS: 1310-73-2 sodium hydroxide (≥5–≤10%)

WEL (Great Britain)	Short-term value: 2 mg/m ³
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- **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Appropriate engineering controls**

No further data; see section 7.

· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

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· **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

Butyl rubber, BR

Recommended thickness of the material: ≥ 0.19 mm

Nitrile rubber, NBR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

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

· **Eye/face protection**



Tightly sealed goggles

9 Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Physical state**

Fluid

· **Colour:**

Brown

· **Odour:**

Characteristic

· **Odour threshold:**

Not determined.

· **Melting point/freezing point:**

Undetermined.

· **Boiling point or initial boiling point and boiling range**

100 °C (CAS: 7732-18-5 water, distilled, conductivity or of similar purity)

· **Flammability**

Not applicable.

· **Lower and upper explosion limit**

· **Lower:**

Not determined.

· **Upper:**

Not determined.

· **Flash point:**

> 60 °C (calc.)

· **Auto-ignition temperature:**

385 °C

· **Decomposition temperature (SADT):**

Not determined.

· **pH at 20 °C**

>13

· **Viscosity:**

· **Kinematic viscosity**

Not determined.

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· Dynamic:	Not determined.
· Solubility	
· water:	Not miscible or difficult to mix.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	23 hPa (CAS: 7732-18-5 water, distilled, conductivity or of similar purity)
· Density and/or relative density	
· Density at 20 °C:	1.24 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· 9.2 Other information	
· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· Solvent content:	
· Organic solvents:	8.5 %
· VOC (EC)	8.50 %
· Change in condition	
· Evaporation rate	Not determined.
· Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

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10 Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

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 relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	3,336 mg/kg (rat)
Dermal	LD50	11,765 mg/kg (rabbit)
Inhalative	LC50/ 4h	129 mg/l

- **Skin corrosion/irritation** Causes severe skin burns and eye damage.
- **Serious eye damage/irritation** Causes serious eye damage.
- **Respiratory or skin sensitisation** May cause an allergic skin reaction.
- **STOT-single exposure** May cause respiratory irritation.
- **11.2 Information on other hazards**

· Endocrine disrupting properties

None of the ingredients is listed.

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

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- **vPvB:** *Not applicable.*
- **12.6 Endocrine disrupting properties** *The product does not contain substances with endocrine disrupting properties.*
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:** *Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even small quantities leak into the ground.
The surfactants ingredients of the product are biodegradable according to the requirements of regulation 648/2004/EC.
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.*

13 Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** *Must not be disposed together with household garbage. Do not allow product to reach sewage system.*
- **Uncleaned packaging:**
- **Recommendation:** *Disposal must be made according to official regulations.*

* **14 Transport information**

- **14.2 UN proper shipping name**
- **ADR** *UN3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (POTASSIUM HYDROXIDE, SODIUM HYDROXIDE SOLUTION)*
- **IMDG, IATA** *CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (POTASSIUM HYDROXIDE, SODIUM HYDROXIDE SOLUTION)*
- **Class** *8 Corrosive substances.*
- **Label** *8*
- **ADR, IMDG, IATA** *II*
- **14.5 Environmental hazards:**
- **Marine pollutant:** *No*

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- **14.6 Special precautions for user** *Warning: Corrosive substances.*
- **Hazard identification number (Kemler code):** 80
- **EMS Number:** F-A,S-B
- **Segregation groups** (SGG18) Alkalis
- **Stowage Category** B
- **Stowage Code** SW2 Clear of living quarters.
- **Segregation Code** SG35 Stow "separated from" SGG1-acids
- **14.7 Maritime transport in bulk according to IMO instruments** Not applicable.
- **Limited quantities (LQ)** 1L
- **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

- **Transport category** 2
- **Tunnel restriction code** E
- **Limited quantities (LQ)** 1L
- **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

- **UN "Model Regulation":** UN 3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (POTASSIUM HYDROXIDE, SODIUM HYDROXIDE SOLUTION), 8, II

15 Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Poisons Act**

· Regulated explosives precursors
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None of the ingredients is listed.

· Regulated poisons

None of the ingredients is listed.

· Reportable explosives precursors

None of the ingredients is listed.

· Reportable poisons

CAS: 1310-58-3	potassium hydroxide	17% of total caustic alkalinity
CAS: 1310-73-2	sodium hydroxide	12% of total caustic alkalinity

- **Labelling according to**

Regulation (EC) No 1272/2008 The product is classified and labelled according to the GB CLP regulation.

- **Hazard pictograms**



GHS05 GHS07

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- **Signal word** *Danger*

- **Hazard-determining components of labelling:** *hydroxyphosphonoacetic acid
2-aminoethanol
potassium hydroxide
sodium hydroxide*

- **Hazard statements** *H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.*

- **Precautionary statements** *P260 Do not breathe dusts or mists.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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 POISON CENTER/doctor.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.*

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** *None of the ingredients is listed.*

- **National regulations:**

- **Information about limitation of use:**

- **15.2 Chemical safety assessment:**

Class	Share in %
NK	8,5

A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases** *H290 May be corrosive to metals.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.*

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H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

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

H412 Harmful to aquatic life with long lasting effects.

· **Contact:**

Wim Lampaert

MSc Chemistry

· **Abbreviations and acronyms:**

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

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)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

ATE: Acute toxicity estimate values

Met. Corr. 1: Corrosive to metals – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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