

SAFETY DATA SHEET

according to: 1907/2006, 2015/830

Buffer A

Version EN: 2.0

Issue: 20.08.2019

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

1.1. Product identifier

Buffer A

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

Identified uses: laboratory chemicals

Uses advised against: not specified

1.3. Details of the supplier of the safety data sheet

Producer:

EURx Sp. z o.o.

80-297 Gdańsk, ul. Przyrodników 3

tel. +48 58 524-06-97, +48 58 341-74-23, 8.00 -16.00, working days.

E-mail address: eurx@eurx.com.pl

1.4. Emergency telephone number

112 (Emergency telephone)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

According to Reg. 1272/2008

Skin Corr. 1B; H314

Eye Dam. 1; H318

Human health dangers:

Causes severe skin burns and eye damage.

Environmental hazards:

None.

Physic-chemical hazards:

None.

2.2. Label elements

Contains: Sodium hydroxide [CAS No.: 1310-73-2]

Pictograms:



Signal Word: Danger

Hazard Statement (H):

H314 – Causes severe skin burns and eye damage.

Precautionary Statement (P):

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 POISON CENTER/doctor

P405 – Store locked up.

2.3. Other hazards

The product contains no substance meet the criteria for PBT or vPvB.

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable.

3.2. Mixtures

Hazardous components:

Product identifier	Contains [%]	Classification CLP	
		Hazard Class and Category Code(s)	Hazard Statement Code(s)
Sodium hydroxide* ⁽¹⁾ CAS No.: 1310-73-2 EINECS No.: 215-185-5 Index No.: 011-002-00-6 REACH No.: 01-2119457892-27-XXXX	≥ 1 - ≤ 4	Skin Corr. 1A	H314

For full text of H-statements: see SECTION 16

*Substance for which workplace exposure limits are available

⁽¹⁾ Specific Conc. Limits:

Eye Irrit. 2; 0,5 % ≤ C < 2 %

Skin Irrit. 2; 0,5 % ≤ C < 2 %

Skin Corr. 1A; C ≥ 5 %

Skin Corr. 1B; 2 % ≤ C < 5 %

SECTION 4: First aid measures

4.1. Description of first aid measures

Skin contact

Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water. Keep warm and in a quiet place. Call a physician or poison control centre immediately. Wash contaminated clothing before re-use.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician or poison control centre immediately. Take victim immediately to hospital.

Inhalation

Move to fresh air. Oxygen or artificial respiration if needed. Victim to lie down in the recovery position, cover and keep him warm. Call a physician immediately.

Ingestion

Call a physician or poison control centre immediately. Take victim immediately to hospital. If swallowed, rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Artificial respiration and/or oxygen may be necessary.

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

Causes severe skin burns and eye damage.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: foam, dry powder extinguishers, CO₂, water spray. Use appropriate extinguishing method for conditions.

Unsuitable extinguishing media: Do not use a direct water jet.

5.2. Special hazards arising from the substance or mixture

The product is not flammable. Not combustible.

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Reacts violently with water. Gives off hydrogen by reaction with metals.

5.3. Advice for firefighters

Containers in fire area cooled with water spray, if it is possible to remove the danger zone.
Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.
Do not allow fire-fighting water run-off into surface water, groundwater and sewer.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: to notify the appropriate service. Remove from the threats all person who does not participate in the removal of failure.

For emergency responders: Ventilate the area. Wear suitable protective clothing.

6.2. Environmental Precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3. Methods and material for containment and cleaning up

Absorb with inert, absorbent material (such as sand, earth, vermiculite, diatomaceous earth, etc.). Placed the contaminated material in properly labeled containers for disposal in accordance with applicable regulations.

6.4. Reference to other sections

Disposal considerations – see section 13.

Personal precautions – see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Use only in well ventilated area. Avoid breathing vapors. Avoid contact with eyes. Avoid contact with skin.
Handle in accordance with good industrial hygiene and safety practice: Do not eat, drink and smoke at work, wash your hands after use, remove contaminated clothing and protective equipment before entering places for meals.

7.2. Conditions for safe storage, including any incompatibilities

Store in original container. Keep in a well-ventilated and dry place. Keep in properly labelled containers. Keep container closed. Keep away from incompatible products. To avoid thermal decomposition, do not overheat.

7.3. Specific end use(s)

See section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits:

Sodium hydroxide [CAS No.: 1310-73-2]

	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m ³	ppm	mg/m ³
Australia				2 (1)
Austria		2 inhalable aerosol		4 inhalable aerosol
Belgium		2		
Canada – Ontario				2 (1)
Canada – Québec				2 (1)
Denmark		2		2
Finland				2 (1)
France		2		
Hungary		2		2

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Ireland			2 (1)
Japan - JSOH		2 (1)	
Latvia		0,5	
New Zealand			2 (1)
People's Republic of China			2 (1)
Poland		0,5	1
Romania		1	3 (1)
Singapore			2
South Korea			2 (1)
Spain		2	
Sweden		1 (1)	2 (1)(2)
Switzerland		2 inhalable aerosol	2 inhalable aerosol
USA – NIOSH			2 (1)
USA – OSHA		2	
United Kingdom			2
	Remarks		
Australia	(1) Ceiling limit value		
Canada - Ontario	(1) Ceiling limit value		
Canada - Québec	(1) Ceiling limit value		
Finland	(1) Ceiling limit value		
Ireland	(1) 15 minutes reference period		
Japan - JSOH	(1) Occupational exposure limit ceiling: Reference value to the maximal exposure concentration of the substance during a working day		
New Zealand	(1) Ceiling limit value		
People's Republic of China	(1) Ceiling limit value		
Romania	(1) 15 minutes average value		
South Korea	(1) Ceiling limit value		
Sweden	(1) Inhalable fraction (2) 15 minutes average value		
USA - NIOSH	(1) Ceiling limit value (15 min)		

8.2. Exposure controls

Appropriate engineering controls:

Ensure adequate ventilation. Apply technical measures to comply with the occupational exposure limits.

Provide eye wash bottles or eye wash stations in compliance with applicable standards.

Take off contaminated clothing and shoes immediately.

Handle in accordance with good industrial hygiene and safety practice.

Individual protection measures, such as personal protective equipment:



Eye / face protection:

Chemical resistant goggles must be worn (EN 166).

Skin protection

Hand protection:

It is recommended to use protective gloves resistant to chemicals (EN374).

Suitable material:

PVC, Neoprene, Natural Rubber, butyl-rubber (thickness > 0,38mm, penetration time > 480min.).

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The selection of suitable gloves does not only depend on the material, but also on the brand and quality resulting from differences in manufacturers. Resistance of the material, the glove can be determined after the tests. The exact time of the destruction of the protective gloves must be determined by the manufacturer.

Other:

Protective clothing.

Respiratory protection:

Avoid breathing vapors. If there is a risk of exposure to concentrated vapors, use a mask with filter (EN 143).

Thermal hazards:

Not applicable.

Environmental exposure controls:

Not allowed to spread in the environment and run-off into drains and watercourses.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	colorless
Odour	no data available
Odour threshold	no data available
pH	>12
Melting point/freezing point	no data available
Initial boiling point and boiling range	no data available
Flash point	no data available
Evaporation rate	no data available
Flammability	no data available
Upper/lower flammability or explosive limits	no data available
Vapour pressure	no data available
Vapour density	no data available
Relative density	~1 g/cm ³
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	no data available
Solubility(ies)	no data available
Decomposition temperature	no data available
Viscosity;	no data available
Explosive properties	no data available
Oxidising properties	no data available

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9.2. Other information

None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Potential for exothermic hazard.

May be corrosive to metals.

10.2. Chemical stability

Under normal circumstances the product is stable.

10.3. Possibility of hazardous reactions

Gives off hydrogen by reaction with metals.

Exothermic reaction with strong acids.

Risk of violent reaction.

Risk of explosion.

Reacts violently with water.

10.4. Conditions to avoid

Keep away from direct sunlight.

To avoid thermal decomposition, do not overheat.

Exposure to moisture.

Freezing

10.5. Incompatible materials

Metals, Oxidizing agents, Water, Acids, Aluminium, other light metals and their alloys

10.6. Hazardous decomposition products

Hydrogen

SECTION 11: Toxicological information

11.1. Information on toxicological effects

(a) acute toxicity: Based on the available data, the classification criteria are not met

(b) skin corrosion/irritation: **Causes severe skin burns and eye damage.**

(c) serious eye damage/irritation: **Causes serious eye damage.**

(d) respiratory or skin sensitisation: Based on the available data, the classification criteria are not met

(e) germ cell mutagenicity: Based on the available data, the classification criteria are not met

(f) carcinogenicity: Based on the available data, the classification criteria are not met

(g) reproductive toxicity: Based on the available data, the classification criteria are not met

(h) STOT-single exposure: Based on the available data, the classification criteria are not met

(i) STOT-repeated exposure: Based on the available data, the classification criteria are not met

(j) aspiration hazard: Based on the available data, the classification criteria are not met

SECTION 12: Ecological information

12.1. Toxicity

The product is not classified as dangerous to the environment.

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

The product contains no substance meet the criteria for PBT or vPvB.

12.6. Other adverse effects

Not applicable.

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal methods:

Dilute with plenty of water. Solutions with high pH-value must be neutralized before discharge. Neutralise with acid. In accordance with local and national regulations.

Contaminated packaging:

Where possible recycling is preferred to disposal or incineration. Clean container with water. Dispose of as unused product. In accordance with local and national regulations.

EU REGULATIONS

Directive 2008/98/EC Of The European Parliament And Of The Council of 19 November 2008 on waste and repealing certain Directives

SECTION 14: Transport information

14.1. UN number

ADR/RID/IMDG/ICAO: 1824

14.2. UN proper shipping name

ADR/RID/IMDG: SODIUM HYDROXIDE, SOLUTION

ICAO: Sodium hydroxide, solution

14.3. Transport hazard class(es)

ADR/RID/IMDG/ICAO: 8

14.4. Packing group

ADR/RID/IMDG/ICAO: III

14.5. Environmental hazards

ADR/RID/IMDG/ICAO: no

14.6. Special precautions for user

ADR/RID/IMDG/ICAO:

Labels: 8

IMDG:

EmS code: F-A, S-B

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

not applicable

SECTION 15: Regulatory information

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

EU REGULATIONS:

1. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a 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.
2. Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
3. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Text with EEA relevance).
4. Directive 2008/98/EC Of The European Parliament And Of The Council of 19 November 2008 on waste and repealing certain Directives

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15.2. Chemical safety assessment

No chemical safety assessments for the mixture.

- List of substances subject to authorization (REACH; Annex XIV): not applicable
- Candidate list of SVHCs: not applicable
- Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (REACH; Annex XVII): not applicable

SECTION 16: Other information

Abbreviations and acronyms, list of relevant hazard statements used in the safety data sheet:

H314 – Causes severe skin burns and eye damage.

H318 – Causes serious eye damage.

Skin Corr. 1A Skin corrosion cat. 1A

Skin Corr. 1B Skin corrosion cat. 1B

Eye Dam. 1 – Serious eye damage cat. 1

Skin Irrit. 2 – Skin irritation cat. 2

Eye Irrit. 2 - Eye irritation cat. 2

PBT – Persistent, Bioaccumulative and Toxic

vPvB – very Persistent and very Bioaccumulative

ADR – International Carriage of Dangerous Goods by Road

RID – International Carriage of Dangerous Goods by Rail

IMDG – International Maritime Dangerous Goods

ICAO – Safe Transport of Dangerous Goods by Air

Method of classification:

Skin Corr. 1B; H314: Calculation method

Eye Dam. 1; H318: Calculation method

Training:

Before working with the product is recommended safety training of employees in connection with the occurrence of workplace chemicals. Documentation should be prepared and employees should be familiarized with the results of risk assessment in the workplace associated with the presence of chemical agents.

Key literature:

Annex to Regulation (EU) 2015/830.

Current legislation (Section 15).

Information Agency for Chemical Substances.

The information in this MSDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this MSDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.

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Lyse All

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

1.1. Product identifier Lyse All

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

Identified uses: laboratory chemicals
Uses advised against: not specified

1.3. Details of the supplier of the safety data sheet

Producer: EURx Sp. z o.o.
80-297 Gdańsk, ul. Przyrodników 3
tel. +48 58 524-06-97, +48 58 341-74-23, 8.00 -16.00, working days.
E-mail address: eurx@eurx.com.pl

1.4. Emergency telephone number 112 (Emergency telephone)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

According to Reg. 1272/2008

Eye Irrit. 2; H319

Human health dangers:

Causes serious eye irritation.

Environmental hazards:

None.

Physic-chemical hazards:

None.

2.2. Label elements

Pictograms:



Signal Word: Warning

Hazard Statement (H):

H319 – Causes serious eye irritation

Precautionary Statement (P):

P280 – Wear protective gloves/eye protection.

P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 – If eye irritation persists: Get medical advice/ attention.

2.3. Other hazards

The product contains no substance meet the criteria for PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable.

3.2. Mixtures

Hazardous components:

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Product identifier	Contains [%]	Classification CLP	
		Hazard Class and Category Code(s)	Hazard Statement Code(s)
Disodium dihydrogen ethylenediaminetetraacetate CAS No.: 6381-92-6 EINECS No.: 205-358-3 Index No.: - REACH No.: 01-2119486775-20-XXXX	<2	Acute Tox. 4 STOT RE 2	H332 H373
2-(2-[4-(1,1,3,3-Tetramethylbutyl)phenoxy]ethoxy)ethanol ¹ CAS No.: 9036-19-5 EINECS No.: 232-658-1 Index No.: 604-075-00-6 REACH No.: -	≤2	Acute Tox. 4 Eye Dam. 1 Aquatic Chronic 2	H302 H318 H411

For full text of H-statements: see SECTION 16

¹ Substance from Candidate list of SVHCs

SECTION 4: First aid measures

4.1. Description of first aid measures

Skin contact

Remove contaminated clothing. Wash off with plenty of water. Seek medical attention.

Eye contact

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

Inhalation

Keep patient calm, remove to fresh air, seek medical attention.

Ingestion

Do NOT induce vomiting. Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

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

Causes serious eye irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: foam, dry powder extinguishers, CO₂, water spray. Use appropriate extinguishing method for conditions.

Unsuitable extinguishing media: Do not use a direct water jet.

5.2. Special hazards arising from the substance or mixture

None.

5.3. Advice for firefighters

Containers in fire area cooled with water spray, if it is possible to remove the danger zone.

Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Do not allow fire-fighting water run-off into surface water, groundwater and sewer.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Notify the appropriate service. Keep unnecessary people away; isolate hazard area.

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For emergency responders: Ventilate the area. Avoid contact with eyes and skin.

6.2. Environmental Precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Absorb with inert, absorbent material (such as sand, earth, vermiculite, diatomaceous earth, etc.). Placed the contaminated material in properly labeled containers for disposal in accordance with applicable regulations.

6.4. Reference to other sections

Disposal considerations – see section 13.

Personal precautions – see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Use only in well ventilated area. Avoid contact with eyes.

Handle in accordance with good industrial hygiene and safety practice: Do not eat, drink and smoke at work, wash your hands after use, remove contaminated clothing and protective equipment before entering places for meals.

7.2. Conditions for safe storage, including any incompatibilities

Store in original container. Keep in a well-ventilated and dry place. Keep in properly labelled containers. Keep container closed.

7.3. Specific end use(s)

See section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits: no substance for which workplace exposure limits are available.

Disodium dihydrogen ethylenediaminetetraacetate [CAS No.: 6381-92-6]

DNEL general population, oral, long-term, systemic effects: 25 mg/kg

DNEL worker, inhalation, acute, local effects: 3 mg/m³

DNEL worker, inhalation, long-term, local effects: 1,5 mg/m³

DNEL general population, inhalation, acute, local effects: 1,2 mg/m³

DNEL general population, inhalation, long-term, local effects: 0,6 mg/m³

PNEC freshwater: 2,2 mg/l

PNEC marine water: 0,22 mg/l

PNEC water, intermittent releases: 1,2 mg/l

PNEC soil: 0,72mg/kg

PNEC Sewage treatment plant: 43 mg/l

PNEC Sewage treatment plant: 1084mg/l

8.2. Exposure controls

Appropriate engineering controls:

Ensure adequate ventilation.

Handle in accordance with good industrial hygiene and safety practice.

Individual protection measures, such as personal protective equipment:



Eye / face protection:

Chemical resistant goggles (EN 166).

Skin protection

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Hand protection:

It is recommended to use protective gloves resistant to chemicals (EN374).

Suitable material:

Nitrile rubber (thickness: >0,11mm, penetration time: >480min.).

The selection of suitable gloves does not only depend on the material, but also on the brand and quality resulting from differences in manufacturers. Resistance of the material, the glove can be determined after the tests. The exact time of the destruction of the protective gloves must be determined by the manufacturer.

Other:

Protective clothing.

Respiratory protection:

Use with adequate ventilation.

Thermal hazards:

Not applicable.

Environmental exposure controls:

Not allowed to spread in the environment and run-off into drains and watercourses.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid
Colour	colorless
Odour	no data available
Odour threshold	no data available
pH	≈6.0
Melting point/freezing point	no data available
Initial boiling point and boiling range	no data available
Flash point	no data available
Evaporation rate	no data available
Flammability	no data available
Upper/lower flammability or explosive limits	no data available
Vapour pressure	no data available
Vapour density	no data available
Relative density	no data available
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	no data available
Solubility(ies)	no data available
Decomposition temperature	no data available
Viscosity;	no data available

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Explosive properties	no data available
Oxidising properties	no data available

9.2. Other information

None.

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Under normal circumstances the product is stable.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

No data available.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

- (a) acute toxicity: Based on the available data, the classification criteria are not met
- (b) skin corrosion/irritation: Based on the available data, the classification criteria are not met
- (c) serious eye damage/irritation: **Causes serious eye irritation.**
- (d) respiratory or skin sensitisation: Based on the available data, the classification criteria are not met
- (e) germ cell mutagenicity: Based on the available data, the classification criteria are not met
- (f) carcinogenicity: Based on the available data, the classification criteria are not met
- (g) reproductive toxicity: Based on the available data, the classification criteria are not met
- (h) STOT-single exposure: Based on the available data, the classification criteria are not met
- (i) STOT-repeated exposure: Based on the available data, the classification criteria are not met
- (j) aspiration hazard: Based on the available data, the classification criteria are not met

Disodium dihydrogen ethylenediaminetetraacetate [CAS No.: 6381-92-6]

LD50 oral, rat: 2800mg/kg

2-(2-[4-(1,1,3,3-Tetramethylbutyl)phenoxy]ethoxy)ethanol [CAS No.: 9036-19-5]

LD50 (rat, oral): 2000mg/kg

LD50 (dermal, rabbit): 3000mg/kg

SECTION 12: Ecological information

12.1. Toxicity

The product is not classified as dangerous to the environment.

Disodium dihydrogen ethylenediaminetetraacetate [CAS No.: 6381-92-6]

EC50/72h: >100mg/l (Aquatic plants)

EC50/48h: >100mg/l (Daphnia magna)

2-(2-[4-(1,1,3,3-Tetramethylbutyl)phenoxy]ethoxy)ethanol [CAS No.: 9036-19-5]

EC50 (Daphnia magna): 18-26mg/l, 48h

Fish LC50: 4-8,9mg/l, 96h

12.2. Persistence and degradability

Disodium dihydrogen ethylenediaminetetraacetate [CAS No.: 6381-92-6]

Biodegradable.

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12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

The product contains no substance meet the criteria for PBT or vPvB.

12.6. Other adverse effects

Not applicable.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal methods:

Waste must be disposed of in accordance with local authority requirements.

Contaminated packaging:

Packaging, that can not be reused after cleaning must be disposed or recycled in accordance with all federal, national and local regulations.

EU REGULATIONS

Directive 2008/98/EC Of The European Parliament And Of The Council of 19 November 2008 on waste and repealing certain Directives

SECTION 14: Transport information

14.1. UN number

ADR/RID/IMDG/ICAO: Not classified as dangerous in the meaning of transport regulations.

14.2. UN proper shipping name

ADR/RID/IMDG/ICAO: Not classified as dangerous in the meaning of transport regulations.

14.3. Transport hazard class(es)

ADR/RID/IMDG/ICAO: Not classified as dangerous in the meaning of transport regulations.

14.4. Packing group

ADR/RID/IMDG/ICAO: Not classified as dangerous in the meaning of transport regulations.

14.5. Environmental hazards

ADR/RID/IMDG/ICAO: Not classified as dangerous in the meaning of transport regulations.

14.6. Special precautions for user

ADR/RID/IMDG/ICAO: Not classified as dangerous in the meaning of transport regulations.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Not classified as dangerous in the meaning of transport regulations.

SECTION 15: Regulatory information

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

EU REGULATIONS:

1. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a 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.
2. Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
3. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Text with EEA relevance).
4. Directive 2008/98/EC Of The European Parliament And Of The Council of 19 November 2008 on waste and repealing certain Directives

15.2. Chemical safety assessment

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No chemical safety assessments for the mixture.

- List of substances subject to authorization (REACH; Annex XIV): not applicable
- Candidate list of SVHCs: **2-(2-[4-(1,1,3,3-Tetramethylbutyl)phenoxy]ethoxy)ethanol [CAS No.: 9036-19-5]**
- Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (REACH; Annex XVII): not applicable

SECTION 16: Other information

Abbreviations and acronyms, list of relevant hazard statements used in the safety data sheet:

- H302** – Harmful if swallowed
- H318** – Causes serious eye damage
- H319** – Causes serious eye irritation
- H332** – Harmful if inhaled
- H373** – May cause damage to organs through prolonged or repeated exposure
- H411** – Toxic to aquatic life with long lasting effects
- Acute Tox. 4** – Acute toxicity cat. 4
- Eye Dam. 1** – Serious eye damage cat. 1
- Eye Irrit. 2** – Eye irritation cat. 2
- STOT RE 2** – Specific target organ toxicity - repeated exposure cat. 2
- Aquatic Chronic 2** – Hazardous to the aquatic environment cat. 2
- DNEL** – derived no-effect level
- PNEC** – predicted no-effect concentration
- LC50** – lethal concentration, 50%
- LD50** – lethal dose, 50%
- EC50** – effective concentration, 50%
- PBT** – Persistent, Bioaccumulative and Toxic
- vPvB** – very Persistent and very Bioaccumulative
- ADR** – International Carriage of Dangerous Goods by Road
- RID** – International Carriage of Dangerous Goods by Rail
- IMDG** – International Maritime Dangerous Goods
- ICAO** – Safe Transport of Dangerous Goods by Air

Method of classification:

Eye Irrit. 2; H319 – Calculation method

Training:

Before working with the product is recommended safety training of employees in connection with the occurrence of workplace chemicals. Documentation should be prepared and employees should be familiarized with the results of risk assessment in the workplace associated with the presence of chemical agents.

Key literature:

Annex to Regulation (EU) 2015/830.
Current legislation (Section 15).
Information Agency for Chemical Substances.

The information in this MSDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this MSDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.

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

1.1. Product identifier

RL

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

Identified uses: laboratory chemicals
Uses advised against: not specified

1.3. Details of the supplier of the safety data sheet

Producer: EURx Sp. z o.o.
80-297 Gdańsk, ul. Przyrodników 3
tel. +48 58 524-06-97, +48 58 341-74-23, 8.00 -16.00, working days.
E-mail address: eurx@eurx.com.pl

1.4. Emergency telephone number 112 (Emergency telephone)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

According to Reg. 1272/2008

Acute Tox. 4; H302
Acute Tox. 4; H332
Aquatic Chronic 3; H412

Human health dangers:

Harmful if swallowed or if inhaled.

Environmental hazards:

Harmful to aquatic life with long lasting effects

Physic-chemical hazards:

None.

2.2. Label elements

Contains: Guanidinium thiocyanate (CAS No.: 593-84-0)

Pictograms:



Signal Word: Warning

Hazard Statement (H):

H302+H332 – Harmful if swallowed or if inhaled
H412 – Harmful to aquatic life with long lasting effects

Precautionary Statement (P):

P273 – Avoid release to the environment.
P301+P312 – IF SWALLOWED: Call a POISON CENTER/ doctor/... if you feel unwell.
P304+P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing.

EUH032 – Contact with acids liberates very toxic gas

2.3. Other hazards

The product contains no substance meet the criteria for PBT or vPvB.

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable.

3.2. Mixtures

Hazardous components:

Product identifier	Contains [%]	Classification CLP	
		Hazard Class and Category Code(s)	Hazard Statement Code(s)
Guanidinium thiocyanate CAS No.: 593-84-0 EINECS No.: 209-812-1 Index No.: 615-004-00-3 REACH No.: -	<50	Acute Tox. 4 Aquatic Chronic 3	H302 H312 H332 H412
4-morpholinopropanesulphonic acid CAS No.: 1132-61-2 EINECS No.: 214-478-5 Index No.: - REACH No.: -	<5	Skin Irrit. 2 Eye Irrit. 2 STOT SE 3	H315 H319 H335
Disodium dihydrogen ethylenediaminetetraacetate CAS No.: 6381-92-6 EINECS No.: 205-358-3 Index No.: - REACH No.: 01-2119486775-20-XXXX	<2	Acute Tox. 4 STOT RE 2	H332 H373

For full text of H-statements: see SECTION 16

SECTION 4: First aid measures

4.1. Description of first aid measures

Skin contact

Remove contaminated clothing. Wash off with plenty of water. Seek medical attention.

Eye contact

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

Inhalation

Keep patient calm, remove to fresh air, seek medical attention.

Ingestion

Do NOT induce vomiting. Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

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

Harmful if swallowed or if inhaled.

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

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: foam, dry powder extinguishers, CO₂, water spray. Use appropriate extinguishing method for conditions.

Unsuitable extinguishing media: Do not use a direct water jet.

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5.2. Special hazards arising from the substance or mixture

Development of hazardous combustion gases or vapours possible in the event of fire.

Hazardous combustion products: hydrogen sulphide, ammonia, carbon oxides, hydrocyanic acid (HCN).

5.3. Advice for firefighters

Containers in fire area cooled with water spray, if it is possible to remove the danger zone.

Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Do not allow fire-fighting water run-off into surface water, groundwater and sewer.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Notify the appropriate service. Keep unnecessary people away; isolate hazard area.

For emergency responders: Ventilate the area. Wear suitable protective clothing.

6.2. Environmental Precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Absorb with inert, absorbent material (such as sand, earth, vermiculite, diatomaceous earth, etc.). Placed the contaminated material in properly labeled containers for disposal in accordance with applicable regulations.

6.4. Reference to other sections

Disposal considerations – see section 13.

Personal precautions – see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Use only in well ventilated area. Avoid breathing vapors. Avoid contact with eyes. Avoid contact with skin.

Handle in accordance with good industrial hygiene and safety practice: Do not eat, drink and smoke at work, wash your hands after use, remove contaminated clothing and protective equipment before entering places for meals.

7.2. Conditions for safe storage, including any incompatibilities

Store in original container. Keep in a well-ventilated and dry place. Keep in properly labelled containers. Keep container closed. Do not store together with: oxidizing agents, acids.

7.3. Specific end use(s)

See section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits: no substance for which workplace exposure limits are available.

Guanidinium thiocyanate [CAS No.: 593-84-0]

DNEL general population, oral, long-term, systemic effects: 0,155 mg/kg

DNEL worker, dermal, long-term, systemic effects: 0,31 mg/kg

DNEL general population, dermal, long term, systemic effects: 0,155 mg/kg

DNEL worker, inhalation, acute, systemic effects: 3,28 mg/m³

DNEL worker, inhalation, long-term, systemic effects: 1,092 mg/m³

DNEL general population, inhalation, long-term, systemic effects: 0,27mg/m³

PNEC freshwater: 0,0424mg/l

PNEC marine water: 0,00424mg/l

PNEC soil: 0,00803mg/kg

Disodium dihydrogen ethylenediaminetetraacetate [CAS No.: 6381-92-6]

DNEL general population, oral, long-term, systemic effects: 25 mg/kg

DNEL worker, inhalation, acute, local effects: 3 mg/m³

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DNEL worker, inhalation, long-term, local effects: 1,5 mg/m³
 DNEL general population, inhalation, acute, local effects: 1,2 mg/m³
 DNEL general population, inhalation, long-term, local effects: 0,6 mg/m³
 PNEC freshwater: 2,2 mg/l
 PNEC marine water: 0,22 mg/l
 PNEC water, intermittent releases: 1,2 mg/l
 PNEC soil: 0,72mg/kg
 PNEC Sewage treatment plant: 43 mg/l

8.2. Exposure controls

Appropriate engineering controls:

Ensure adequate ventilation.
 Handle in accordance with good industrial hygiene and safety practice.

Individual protection measures, such as personal protective equipment:



Eye / face protection:

Chemical resistant goggles must be worn (EN 166).

Skin protection

Hand protection:

It is recommended to use protective gloves resistant to chemicals (EN374).

Suitable material:

Nitrile rubber (thickness: >0,4mm, penetration time: >480min.).

The selection of suitable gloves does not only depend on the material, but also on the brand and quality resulting from differences in manufacturers. Resistance of the material, the glove can be determined after the tests. The exact time of the destruction of the protective gloves must be determined by the manufacturer.

Other:

Protective clothing.

Respiratory protection:

Use with adequate ventilation. In case of insufficient local exhaust ventilation: respiratory air fed breathing apparatus if there is a risk of exposure to high vapour concentrations. If using a half mask: organic vapour cartridge AX type.

Thermal hazards:

Not applicable.

Environmental exposure controls:

Not allowed to spread in the environment and run-off into drains and watercourses.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	yellowish
Odour	no data available
Odour threshold	no data available
pH	≈6,5
Melting point/freezing point	no data available
Initial boiling point and boiling range	no data available

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Flash point	no data available
Evaporation rate	no data available
Flammability	no data available
Upper/lower flammability or explosive limits	no data available
Vapour pressure	no data available
Vapour density	no data available
Relative density	no data available
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	no data available
Solubility(ies)	no data available
Decomposition temperature	no data available
Viscosity;	no data available
Explosive properties	no data available
Oxidising properties	no data available

9.2. Other information

None.

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Under normal circumstances the product is stable.

10.3. Possibility of hazardous reactions

Contact with acids liberates very toxic gas.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

10.5. Incompatible materials

Peroxides, oxidizing agents, acids.

10.6. Hazardous decomposition products

Under fire conditions: Hydrogen sulphide, sulphur dioxide, ammonia, hydrocyanic acid, carbon oxides, nitric oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

(a) acute toxicity: **Harmful if swallowed or if inhaled.**

ATE mix oral: >1000mg/kg

ATE mix dermal: >2200mg/kg

ATE mix inhalation (vapours): >21mg/l

ATE mix inhalation (dust/mist): >2,8mg/l

(b) skin corrosion/irritation: Based on the available data, the classification criteria are not met

(c) serious eye damage/irritation: Based on the available data, the classification criteria are not met

(d) respiratory or skin sensitisation: Based on the available data, the classification criteria are not met

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- (e) germ cell mutagenicity: Based on the available data, the classification criteria are not met
- (f) carcinogenicity: Based on the available data, the classification criteria are not met
- (g) reproductive toxicity: Based on the available data, the classification criteria are not met
- (h) STOT-single exposure: Based on the available data, the classification criteria are not met
- (i) STOT-repeated exposure: Based on the available data, the classification criteria are not met
- (j) aspiration hazard: Based on the available data, the classification criteria are not met

Guanidinium thiocyanate [CAS No.: 593-84-0]

LD50 oral, rat: 354mg/kg

4-morpholinopropanesulphonic acid [CAS No.: 1132-61-2]

LD50 oral, rat: >2000mg/kg

Disodium dihydrogen ethylenediaminetetraacetate [CAS No.: 6381-92-6]

LD50 oral, rat: 2800mg/kg

SECTION 12: Ecological information

12.1. Toxicity

Harmful to aquatic life with long lasting effects

Guanidinium thiocyanate [CAS No.: 593-84-0]

EC50/72 h 130 mg/l (Algae)

EC50/48 h 42,4 mg/l (Aquatic Invertebrata)

LC50/96 h 89,1 mg/l (Fish)

Disodium dihydrogen ethylenediaminetetraacetate [CAS No.: 6381-92-6]

EC50/72 h >100 mg/l (Aquatic plants)

EC50/48 h >100 mg/l (Daphnia magna)

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

The product contains no substance meet the criteria for PBT or vPvB.

12.6. Other adverse effects

Not applicable.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal methods:

Waste must be disposed of in accordance with local authority requirements.

Contaminated packaging:

Packaging, that cannot be reused after cleaning must be disposed or recycled in accordance with all federal, national and local regulations.

EU REGULATIONS

Directive 2008/98/EC Of The European Parliament And Of The Council of 19 November 2008 on waste and repealing certain Directives

SECTION 14: Transport information

14.1. UN number

ADR/RID/IMDG/ICAO: Not classified as dangerous in the meaning of transport regulations.

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14.2. UN proper shipping name

ADR/RID/IMDG/ICAO: Not classified as dangerous in the meaning of transport regulations.

14.3. Transport hazard class(es)

ADR/RID/IMDG/ICAO: Not classified as dangerous in the meaning of transport regulations.

14.4. Packing group

ADR/RID/IMDG/ICAO: Not classified as dangerous in the meaning of transport regulations.

14.5. Environmental hazards

ADR/RID/IMDG/ICAO: Not classified as dangerous in the meaning of transport regulations.

14.6. Special precautions for user

ADR/RID/IMDG/ICAO: Not classified as dangerous in the meaning of transport regulations.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Not classified as dangerous in the meaning of transport regulations.

SECTION 15: Regulatory information

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

EU REGULATIONS:

1. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a 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.
2. Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
3. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Text with EEA relevance).
4. Directive 2008/98/EC Of The European Parliament And Of The Council of 19 November 2008 on waste and repealing certain Directives

15.2. Chemical safety assessment

No chemical safety assessments for the mixture.

- List of substances subject to authorization (REACH; Annex XIV): not applicable
- Candidate list of SVHCs: not applicable
- Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (REACH; Annex XVII): not applicable

SECTION 16: Other information

Abbreviations and acronyms, list of relevant hazard statements used in the safety data sheet:

- H302** – Harmful if swallowed
- H312** – Harmful in contact with skin
- H315** – Causes skin irritation
- 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
- Acute Tox. 4** – Acute toxicity cat. 4
- Skin Irrit. 2** – Skin irritation cat. 2

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Eye Irrit. 2 – Eye irritation cat. 2

STOT SE 3 – Specific target organ toxicity - single exposure cat. 3

STOT RE 2 – Specific target organ toxicity - repeated exposure cat. 2

Aquatic Chronic 3 – Hazardous to the aquatic environment cat. 3

DNEL – derived no-effect level

PNEC – predicted no-effect concentration

ATE – Acute Toxicity Estimate

LC50 – lethal concentration, 50%

LD50 – lethal dose, 50%

EC50 – effective concentration, 50%

PBT – Persistent, Bioaccumulative and Toxic

vPvB – very Persistent and very Bioaccumulative

ADR – International Carriage of Dangerous Goods by Road

RID – International Carriage of Dangerous Goods by Rail

IMDG – International Maritime Dangerous Goods

ICAO – Safe Transport of Dangerous Goods by Air

Method of classification:

Acute Tox. 4; H302 – Calculation method

Acute Tox. 4; H332 – Calculation method

Aquatic Chronic 3; H412 – Calculation method

Training:

Before working with the product is recommended safety training of employees in connection with the occurrence of workplace chemicals. Documentation should be prepared and employees should be familiarized with the results of risk assessment in the workplace associated with the presence of chemical agents.

Key literature:

Annex to Regulation (EU) 2015/830.

Current legislation (Section 15).

Information Agency for Chemical Substances.

The information in this MSDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this MSDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.

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

1.1. Product identifier

Wash miRNA

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

Identified uses: laboratory chemicals
Uses advised against: not specified

1.3. Details of the supplier of the safety data sheet

Producer: EURx Sp. z o.o.
80-297 Gdańsk, ul. Przyrodników 3
tel. +48 58 524-06-97, +48 58 341-74-23, 8.00 -16.00, working days.
E-mail address: eurx@eurx.com.pl

1.4. Emergency telephone number 112 (Emergency telephone)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

According to Reg. 1272/2008

Flam. Liq. 2; H225

Eye Irrit. 2; H319

Human health dangers:

Causes serious eye irritation.

Environmental hazards:

None.

Physic-chemical hazards:

Highly flammable liquid and vapour.

2.2. Label elements

Pictograms:



Signal Word: Danger

Hazard Statement (H):

H225 – Highly flammable liquid and vapour.

H319 – Causes serious eye irritation

Precautionary Statement (P):

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

P280 – Wear protective gloves/protective clothing/eye protection/face protection

P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

P337+P313 – If eye irritation persists: Get medical advice/ attention.

2.3. Other hazards

The product contains no substance meet the criteria for PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.1. Substances

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Not applicable.

3.2. Mixtures

Hazardous components:

Product identifier	Contains [%]	Classification CLP	
		Hazard Class and Category Code(s)	Hazard Statement Code(s)
Ethanol* (1) CAS No.: 64-17-5 EINECS No.: 200-578-6 Index No.: 603-002-00-5 REACH No.: 01-2119457610-43-XXXX	<90	Flam. Liq. 2 Eye Irrit. 2	H225 H319

For full text of H-statements: see SECTION 16

*Substance for which workplace exposure limits are available

(1) Specific Conc. Limits:

Eye Irrit. 2; C ≥50%

SECTION 4: First aid measures

4.1. Description of first aid measures

Skin contact

Remove contaminated clothing. Wash off with plenty of water. Seek medical attention.

Eye contact

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

Inhalation

Keep patient calm, remove to fresh air, seek medical attention.

Ingestion

Do NOT induce vomiting. Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

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

Causes serious eye irritation.

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

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: foam, dry powder extinguishers, CO₂, water spray. Use appropriate extinguishing method for conditions.

Unsuitable extinguishing media: Do not use a direct water jet.

5.2. Special hazards arising from the substance or mixture

Flammable liquid and vapour. Development of hazardous combustion gases or vapours possible in the event of fire. Hazardous combustion products: Carbon oxides, ammonia, hydrogen chloride, nitrogen oxides (NO_x)

5.3. Advice for firefighters

Containers in fire area cooled with water spray, if it is possible to remove the danger zone.

Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Do not allow fire-fighting water run-off into surface water, groundwater and sewer.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Notify the appropriate service. Keep unnecessary people away; isolate hazard area.

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For emergency responders: Ventilate the area. Eliminate all sources of ignition. Wear suitable protective clothing.

6.2. Environmental Precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Absorb with inert, absorbent material (such as sand, earth, vermiculite, diatomaceous earth, etc.). Place the contaminated material in properly labeled containers for disposal in accordance with applicable regulations.

6.4. Reference to other sections

Disposal considerations – see section 13.

Personal precautions – see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Use only in well ventilated area. Avoid breathing vapors. Avoid contact with eyes. Avoid contact with skin.

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

Handle in accordance with good industrial hygiene and safety practice: Do not eat, drink and smoke at work, wash your hands after use, remove contaminated clothing and protective equipment before entering places for meals.

7.2. Conditions for safe storage, including any incompatibilities

Store in original container. Keep in a well-ventilated and dry place. Keep in properly labelled containers. Keep container closed. Store away from sources of heat or ignition. Do not store together with strong bases, strong acids and oxidizing agents.

7.3. Specific end use(s)

See section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits:

Ethanol [CAS No.: 64-17-5]

	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m ³	ppm	mg/m ³
Australia	1000	1880		
Austria	1000	1900	2000	3800
Belgium	1000	1907		
Canada - Ontario			1000	
Canada - Québec	1000	1880		
Denmark	1000	1900	2000	3800
Finland	1000	1900	1300 (1)	2500 (1)
France	1000	1900	5000	9500
Germany (AGS)	500	960	1000 (1)	1920 (1)
Germany (DFG)	200	380	800 (1)	1520 (1)
Hungary		1900		7600
Ireland			1000 (1)	
Latvia		1000		
New Zealand	1000	1880		
Poland		1900		
Romania	1000	1900	5000 (1)	9500 (1)
Singapore	1000	1880		
South Korea	1000	1900		

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Spain			1000	1910
Sweden	500	1000	1000 (1)	1900 (1)
Switzerland	500	960	1000	1920
The Netherlands		260		1900
USA - NIOSH	1000	1900		
USA - OSHA	1000	1900		
United Kingdom	1000	1920		
	Remarks			
Finland	(1) 15 minutes average value			
Germany (AGS)	(1) 15 minutes average value			
Germany (DFG)	(1) 15 minutes average value			
Ireland	(1) 15 minutes reference period			
Romania	(1) 15 minutes average value			
Sweden	(1) 15 minutes average value			

8.2. Exposure controls

Appropriate engineering controls:

Ensure adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Handle in accordance with good industrial hygiene and safety practice.

Individual protection measures, such as personal protective equipment:



Eye / face protection:

Chemical resistant goggles must be worn (EN 166).

Skin protection

Hand protection:

It is recommended to use protective gloves resistant to chemicals (EN374).

Suitable material:

Nitrile rubber, butyl rubber (thickness: >0,4mm, penetration time: >480min.).

The selection of suitable gloves does not only depend on the material, but also on the brand and quality resulting from differences in manufacturers. Resistance of the material, the glove can be determined after the tests. The exact time of the destruction of the protective gloves must be determined by the manufacturer.

Other:

Protective clothing.

Respiratory protection:

Use with adequate ventilation. In case of insufficient local exhaust ventilation and/or handling with open equipment: Respiratory air fed breathing apparatus if there is a risk of exposure to high vapour concentrations. If using a half mask: organic vapour cartridge AX type.

Thermal hazards:

Not applicable.

Environmental exposure controls:

Not allowed to spread in the environment and run-off into drains and watercourses.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid
Colour	colorless

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Odour	alcoholic
Odour threshold	no data available
pH	7.5
Melting point/freezing point	no data available
Initial boiling point and boiling range	no data available
Flash point	<23°C
Evaporation rate	no data available
Flammability	no data available
Upper/lower flammability or explosive limits	no data available
Vapour pressure	no data available
Vapour density	no data available
Relative density	no data available
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	no data available
Solubility(ies)	no data available
Decomposition temperature	no data available
Viscosity;	no data available
Explosive properties	no data available
Oxidising properties	no data available

9.2. Other information

None.

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Under normal circumstances the product is stable.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

10.5. Incompatible materials

strong bases, strong acids and oxidizing agents.

10.6. Hazardous decomposition products

No data available.

SECTION 11: Toxicological information

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11.1. Information on toxicological effects

- (a) acute toxicity: Based on the available data, the classification criteria are not met
- (b) skin corrosion/irritation: Based on the available data, the classification criteria are not met
- (c) serious eye damage/irritation: **Causes serious eye irritation.**
- (d) respiratory or skin sensitisation: Based on the available data, the classification criteria are not met
- (e) germ cell mutagenicity: Based on the available data, the classification criteria are not met
- (f) carcinogenicity: Based on the available data, the classification criteria are not met
- (g) reproductive toxicity: Based on the available data, the classification criteria are not met
- (h) STOT-single exposure: Based on the available data, the classification criteria are not met
- (i) STOT-repeated exposure: Based on the available data, the classification criteria are not met
- (j) aspiration hazard: Based on the available data, the classification criteria are not met

Ethanol [CAS: 64-17-5]

LD50 oral, rat: 7g/kg

LC50 inhalation, rat (vapour): 124700mg/m³, 4h

SECTION 12: Ecological information

12.1. Toxicity

The product is not classified as dangerous to the environment.

Ethanol [CAS: 64-17-5]

Alage (Ulva pertusa) EC50 17,921 mg/l, 96h

Daphnia magna EC50 2000 µg/l, 48h

Artemia franciscana LC50 25500 µg/l, 48h

Fish (Oncorhynchus mykiss) LC50 42000µg/l, 96h

Daphnia magna NOEC: 100µl/l, 21d

Fish (Gambusia holbrooki) NOEC: 0,375µl/l, 12week

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

Ethanol [CAS: 64-17-5]

Log Po/w: -0,35 – low potential

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

The product contains no substance meet the criteria for PBT or vPvB.

12.6. Other adverse effects

Not applicable.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal methods:

Waste must be disposed of in accordance with local authority requirements.

Contaminated packaging:

Packaging, that can not be reused after cleaning must be disposed or recycled in accordance with all federal, national and local regulations.

EU REGULATIONS

Directive 2008/98/EC Of The European Parliament And Of The Council of 19 November 2008 on waste and repealing certain Directives

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SECTION 14: Transport information

14.1. UN number

ADR/RID/IMDG/ICAO: 1993

14.2. UN proper shipping name

ADR/RID/IMDG: FLAMMABLE LIQUID, N.O.S. (Ethanol)

ICAO: Flammable liquid, n.o.s. (ethanol)

14.3. Transport hazard class(es)

ADR/RID/IMDG/ICAO: 3

14.4. Packing group

ADR/RID/IMDG/ICAO: III

14.5. Environmental hazards

ADR/RID/IMDG/ICAO: no

14.6. Special precautions for user

ADR/RID/IMDG/ICAO:

Labels: 3

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

not applicable

SECTION 15: Regulatory information

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

EU REGULATIONS:

1. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a 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.
2. Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
3. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Text with EEA relevance).
4. Directive 2008/98/EC Of The European Parliament And Of The Council of 19 November 2008 on waste and repealing certain Directives

15.2. Chemical safety assessment

No chemical safety assessments for the mixture.

- List of substances subject to authorization (REACH; Annex XIV): not applicable
- Candidate list of SVHCs: not applicable
- Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (REACH; Annex XVII): not applicable

SECTION 16: Other information

Abbreviations and acronyms, list of relevant hazard statements used in the safety data sheet:

H225 – Highly flammable liquid and vapour

H319 – Causes serious eye irritation

Flam. Liq. 2 – Flammable liquid cat. 2

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Eye Irrit. 2 – Eye irritation cat. 2

DNEL – derived no-effect level

PNEC – predicted no-effect concentration

ATE – Acute Toxicity Estimate

LC50 – lethal concentration, 50%

LD50 – lethal dose, 50%

EC50 – effective concentration, 50%

NOEC – no observed effects concentration

PBT – Persistent, Bioaccumulative and Toxic

vPvB – very Persistent and very Bioaccumulative

ADR – International Carriage of Dangerous Goods by Road

RID – International Carriage of Dangerous Goods by Rail

IMDG – International Maritime Dangerous Goods

ICAO – Safe Transport of Dangerous Goods by Air

Method of classification:

Flam. Liq. 2; H225 – Based on flash point

Eye Irrit. 2; H319 – Calculation method

Training:

Before working with the product is recommended safety training of employees in connection with the occurrence of workplace chemicals. Documentation should be prepared and employees should be familiarized with the results of risk assessment in the workplace associated with the presence of chemical agents.

Key literature:

Annex to Regulation (EU) 2015/830.

Current legislation (Section 15).

Information Agency for Chemical Substances.

The information in this MSDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this MSDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.