

Trade name: **Solution A**  
Print date: 03.12.2019  
Revision date: 02.12.2019

Version 1.1

replaces version 1.0

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

- 1.1 Product identifier **Solution A**
- 1.2 Relevant identified uses of the substance or mixture and uses advised against  
Identified uses kit element for detection of microorganism
- 1.3 Supplier SY-LAB Geräte GmbH  
Tullnerbachstraße 61-65  
A-3011 Neupurkersdorf  
T: +43 2231 62252-0  
F: +43 2231 62193
- Competent person Email: [sales@sylab.com](mailto:sales@sylab.com)
- 1.4 Emergency telephone number Please contact the regional poison center or emergency call.  
**Austrian toxicity information centre Vienna:**  
+43 1 406 43 43  
Available 24 hours

**SECTION 2: Hazards identification**

- 2.1 Classification of the substance or mixture  
According to regulation (EC) Nr. 1272/2008

**Skin irritation Category 2**  
**Serious eye damage Category 1**

- H315 Causes skin irritation.  
H318 Causes serious eye damage.

- 2.2 Label elements  
According to regulation (EC) Nr. 1272/2008



**Danger**

- H315\* Causes skin irritation.  
H318 Causes serious eye damage.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P302 + P352\* IF ON SKIN: Wash with plenty of soap and water.  
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 or doctor/physician.  
P332 + P313\* If skin irritation occurs: Get medical advice/attention.  
P501 Dispose of contents/container to hazardous waste collection point.

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\* It is not necessary to provide this information if the nominal volume is less than 125 ml under certain conditions.

 Hazard components for labelling

sodium dodecyl sulphate (CAS: 151-21-3)

2.3 Other hazards

None known.



**SECTION 3: Composition/information on ingredients**

3.2 Mixtures

 Chemical characterization

Mixture of the following ingredients and nonhazardous additives.

 Hazardous ingredients

Chemical name	CAS # / EC # / Index #	%-w/w	Classification acc. to (EC) No. 1272/2008*	
sodium dodecyl sulphate	151-21-3 / 205-788-1 / ---	5 - 15	Flam. Sol. 2 Acute Tox. 4 Acute Tox. 3 Skin Irrit. 2 Eye Dam. 1 STOT SE 3	H228 H302 H311 H315 H318 H335
trometamol	77-86-1 / 201-064-4 / ---	< 0,5	Skin Irrit. 2 Eye Irrit. 2 STOT SE 3	H315 H319 H335

\* Full text of Hazard statements and hazard categories: see section 16.



**SECTION 4: First aid measures**

4.1 Description of first aid measures

Seek medical advice if symptoms occur.


Never give anything by mouth to an unconscious person or a person with cramps.

Change contaminated, saturated clothing.

 In case of inhalation

Provide fresh air. In case of problems, consult a physician.


If unconscious place in recovery position and seek medical advice.

 In case of skin contact

After contact with skin, wash with soap and plenty of water.

Change contaminated, saturated clothing – wash before reuse.

If symptoms occur, consult a physician.

 In case of eye contact

In case of contact with eyes, remove contact lens and flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart.

Consult an eye specialist/hospital immediately.

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 In case of ingestion

Rinse mouth thoroughly with cold water. Avoid vomiting. Get medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Depending on the condition of the patients, the doctor must assess the symptoms and the overall general condition.



## **SECTION 5: Firefighting measures**

5.1 Extinguishing media

 Suitable extinguishing media

Use fire fighting measures that suit the environment.

Water spray, foam CO<sub>2</sub>

 Extinguishing media which must not be used for safety reasons

Waterjet

5.2 Special hazards arising from the substance or mixture

Not flammable, as long as all water has not been vaporized.

Fire may cause formation of CO<sub>x</sub>, NO<sub>x</sub>

5.3 Advice for firefighters

Special protective equipment:

Wear a self-contained breathing apparatus and chemical protective clothing.

Water spray may be useful in cooling equipment exposed to heat and flame.



## **SECTION 6: Accidental release measures**

6.1 Personal precautions, protective equipment and emergency procedures

Restricted access to contaminated areas, until cleaning work is finished.

Wear personal protection equipment. Avoid contact with skin and eyes.

Provide adequate ventilation.

6.2 Environmental precautions

Do not allow product to enter into surface water or drains.

In case of entry into waterways, soil or drains, inform the responsible authorities.

6.3 Methods and material for containment and cleaning up

Absorb with liquid binding material (e. g. sand, kieselguhr, Universal binder, acid binder).





Treat the recovered material as prescribed in the section on waste disposal (section 13).

6.4 Reference to other sections




See protective measures under section 8 and disposal under section 13.



**SECTION 7: Handling and storage**

- 7.1 Precautions for safe handling  
Provide adequate ventilation. Avoid eye and skin contact. Keep container tightly closed.  
Observe protective measures and safety instructions.
- 7.2 Conditions for safe storage, including any incompatibilities
-  Precautions against fire and explosion  
No special measures required.
  -  Requirements on storage and packaging/containers  
Keep dry. Protect from light.  
Keep container tightly closed.
  -  Incompatibility with materials  
None known.
  -  Conditions of storage +2 bis +25 °C
- 7.3 Specific end use(s)  
Kit element for detection of microorganism.

**SECTION 8: Exposure controls/personal protection**

- 8.1 Control parameters  
Observe the member state specific regulations.
- Valid for Austria & Germany:** The product does not contain any relevant quantities of substances with critical values that have to be monitored at the workplace.
- 8.2 Exposure control
-  General protection and hygiene measures  
When handling with chemical substances observe usual precautionary measures.  
Keep away from foods and drinks.  
When using do not eat, drink or smoke.  
Wash hands after working with product.  
Avoid contact with skin and eyes. Avoid breathing aerosol/vapour.
- Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.  
An eyewash station should be made available in the immediate working area.
-  Respiratory protection  
In normal cases not necessary.
  -  Hand protection  
Wear protective gloves (Glove material e. g. nitril rubber) EN 374.

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The selection of suitable gloves depends not only on the material, but also on other quality characteristics. Breakthrough times and swelling properties of the material must be taken into consideration.

 Eye protection

Protective goggles. EN 166.

 Body protection

Wear resistant clothing.

 Environmental exposure controls

Do not allow to enter into surface water or drains.

In case of entry into waterways, soil or drains, inform the responsible authorities.



## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

 Physical state / Appearance	liquid
 Colour	colorless
 Odour	none
 Odour threshold	No information available.
 pH value	No information available.
 Melting point/range	No information available.
 Boiling point/range	No information available.
 Flash point	n.a.
 Evaporation rate	No information available.
 Flammability (solid, gas)	n. a.
 Upper/lower explosive limits	No information available.
 Vapour pressure (27 °C)	No information available.
 Density (20 °C)	No information available.
 Solubility in water (20 °C)	fully miscible
 Partition coefficient: n-octanol/water;	No information available.
 Auto-ignition temperature	No information available.
 Decomposition temperature	No information available.
 Viscosity	No information available.
 Explosion properties	No information available.
 Oxidising properties	No information available.

### 9.2 Other information

None.



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**SECTION 10: Stability and reactivity**

- 10.1 Reactivity  
No hazardous reactions known if used as prescribed.
- 10.2 Chemical stability  
Stable under normal conditions.
- 10.3 Possibility of hazardous reactions  
No hazardous reactions known if used as prescribed.
- 10.4 Conditions to avoid  
Extreme temperatures.
- 10.5 Incompatible materials  
No data available.
- 10.6 Hazardous decomposition products  
No decomposition if used as prescribed.

**SECTION 11: Toxicological information**

- 11.1 Information on toxicological effects  
Toxicological data for the product are not available.

 LD<sub>50</sub> values of single components relevant for classification (manufacturer's data)


name	CAS-Nr	
sodium dodecyl sulphate	151-21-3	LD <sub>50</sub> (oral/rat): 1288 mg/kg LD <sub>50</sub> (dermal/rabbit): 580 mg/kg

 Acute toxicity

Based on available data, classification criteria are not fulfilled.

 Skin corrosion/irritation

Category 2: Causes skin irritation.

 Serious eye damage/irritation

Category 1: Causes serious eye damage.

 Skin/Respiratory sensitization

Sensitization is not expected. Based on available data, classification criteria are not fulfilled.

 Germ cell mutagenicity

The product does not contain any ingredients in a concentration of equal or higher than 0.1 %, which are classified as mutagen.

Based on available data, classification criteria are not fulfilled.

 Carcinogenicity

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None of the substances in a concentration of equal or higher than 0.1 % in this product is listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).  
Based on available data, classification criteria are not fulfilled.

 Reproductive toxicity

The product does not contain any ingredients in a concentration of equal or higher than 0.1 %, which are classified as toxic for reproduction.  
Based on available data classification criteria are not fulfilled.

 Specific target organ toxicity – single exposure

Based on available data, classification criteria are not fulfilled.

 Specific target organ toxicity – repeated exposure

Based on available data, classification criteria are not fulfilled.

 Aspiration hazard

Based on available data, classification criteria are not fulfilled.

 Other information

The product was classified on the basis of the calculation procedure of the CLP- Regulation (EC) 1272/2008.



## **SECTION 12: Ecological information**

### 12.1 Toxicity

Ecotoxicological data for the product are not available.  
The product was classified on the basis of the calculation procedure of the CLP- Regulation (EC) 1272/2008.

 Aquatic Toxicity of ingredients

*sodium dodecyl sulphate* (CAS: 151-21-3) (source : manufacturer´s data)  
fish toxicity : LC50 (96 h) 3,6 mg/l – *Oncorhynchus mykiss*  
NOEC (96 h): 19,5 mg/l – *Oncorhynchus mykiss*

### 12.2 Persistence and degradability

*sodium dodecyl sulphate* (CAS: 151-21-3) (source : manufacturer´s data)  
Biodegradability 90 % - readily biodegradable

### 12.3 Bioaccumulative potential

No data available.

### 12.4 Mobility in soil

No data available for this product.

### 12.5 Results of PBT and vPvB assessment

No data available for this product.

### 12.6 Other adverse effects

Do not allow to enter waters, waste water or soil.



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**SECTION 13: Disposal considerations**

13.1 Waste treatment methods

Any disposal practice must be in compliance with all local and national laws and regulations. Customers are advised to check their local legislation governing the disposal of waste materials. If this preparation becomes a waste, the final user must define and assign the appropriate European Waste Catalogue code. Use only authorized contractors.

 European waste catalogue

16 05 06\* (laboratory chemicals consisting of or containing dangerous substances including mixtures of laboratory chemicals)

Notes: The European Waste Catalogue (EWC) classifies waste materials and categorises them according to what they are and how they were produced. This may cause other classifications. The final decision belongs to the last user.

 Uncleaned packaging

Recommendation: Completely emptied packages can be recycled by authorized contractors.

**SECTION 14: Transport information**

No dangerous good in sense of the transport regulation for land, air and sea.

14.1 UN number

Not applicable.

14.2 UN proper shipping name

Not applicable.

14.3 Transport hazard class(es)

Not applicable.

14.4 Packing group

Not applicable.

14.5 Environmental hazards

Not applicable.

14.6 Special precautions for user

Not applicable.

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

Safety Data Sheet according to REACH – Regulation (EC) No. 1907/2006.

The mixture was classified on the basis of the calculation procedure of the CLP- Regulation (EC) 1272/2008 (Annex 1).



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**national law:**

Austria:

▲ VbF – Regulation on combustible liquids (BGBl 1991/240)  
 Not applicable

Germany:

▲ Ordinance on Installations for the Handling of Substances Hazardous to water (AwSV) of 18.04.2017  
 WGK 1 (slightly hazardous for water)

15.2 Chemical safety assessment  
 Not applicable.

**SECTION 16: Other information**

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product. All materials may present unknown hazards and should be used with caution and only for identified uses described in section 1. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

The mixture was classified on the basis of the calculation procedure of the CLP- Regulation (EC) 1272/2008 (Annex 1). The classification of ingredients is based on manufacturer's data, hazardous substances database (GESTIS) and the European Chemical Agency (ECHA).

▲ Relevant Hazard Statements

H228	Flammable solid.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

▲ Relevant hazard categories

Acute Tox. 3	Acute toxicity Category 3
Acute Tox. 4	Acute toxicity Category 4
Eye Irrit. 2	Serious eye irritation Category 2
Eye Dam. 1	Serious eye damage Category 1
Flam. Sol. 2	Flammable Solid Category 2
Skin Irrit. 2	Skin Irritation Category 2
STOT SE 3	Specific target organ toxicity – single exposure Category 3

▲ Version  
 Version No. 1.1 replaces V1.0  
 Update: 2, 3, 8, 9.1, 11, 15

▲ Created by  
 UmEnA GmbH Web: [www.umena.at](http://www.umena.at)

▲ Abbreviations  
 n.a. Not applicable.

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

- 1.1 Product identifier **Solution B**
- 1.2 Relevant identified uses of the substance or mixture and uses advised against  
Identified uses kit element for detection of microorganism
- 1.3 Supplier SY-LAB Geräte GmbH  
Tullnerbachstraße 61-65  
A-3011 Neupurkersdorf  
T: +43 2231 62252-0  
F: +43 2231 62193
- Competent person Email: [sales@sylab.com](mailto:sales@sylab.com)
- 1.4 Emergency telephone number Please contact the regional poison center or emergency call.  
**Austrian toxicity information centre Vienna:**  
+43 1 406 43 43  
Available 24 hours

**SECTION 2: Hazards identification**

- 2.1 Classification of the substance or mixture  
▲ According to regulation (EC) No. 1272/2008

**Corrosive to metals Category 1**  
**Skin corrosion Category 1B**  
**Serious eye damage category 1**

- H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.

- 2.2 Label elements  
▲ According to regulation (EC) No. 1272/2008



**Danger**

- H290\* May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.  
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.


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P310 Immediately call a POISON CENTER or doctor/physician.  
P501 Dispose of contents/container to hazardous waste collection point.

\* It is not necessary to provide this information if the nominal volume is less than 125 ml under certain conditions.

 Hazard components for labelling  
sodium hydroxide (CAS: 1310-73-2)

2.3 Other hazards  
None known.



**SECTION 3: Composition/information on ingredients**

3.2 Mixtures

 Chemical characterization

Mixture of the following ingredients and nonhazardous additives.

 Hazardous ingredients

Chemical name	CAS # / EC # / Index #	%-w/w	Classification acc. to 67/548/EC* (EC) No. 1272/2008*	
sodium hydroxide**	1310-73-2 / 215-185-5 / 011-002-00-6	2 - 5	Met. Corr. 1 Skin Corr. 1A	H290 H314

\* Full text of Hazard statements and hazard categories: see section 16.

\*\* Substance with an occupational exposure limit value (see section 8)



**SECTION 4: First aid measures**

4.1 Description of first aid measures

Seek medical advice if symptoms occur.  
Never give anything by mouth to an unconscious person or a person with cramps.  
Change contaminated, saturated clothing.

 In case of inhalation

Provide fresh air. In case of problems, consult a physician.  
If unconscious place in recovery position and seek medical advice.

 In case of skin contact

After contact with skin, wash with soap and plenty of water.  
Change contaminated, saturated clothing – wash before reuse.  
Consult a physician immediately.

 In case of eye contact

In case of contact with eyes, remove contact lens and flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart.  
Consult an eye specialist/hospital immediately.

 In case of ingestion

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Rinse mouth thoroughly with cold water. Make victim drink water (two glasses at most). Avoid vomiting (risk of perforation). Get medical attention immediately. Do not attempt to neutralize.

4.2 Most important symptoms and effects, both acute and delayed

Corrosive to skin, eyes and mucous membranes, cough, shortness of breath, collapse, death.  
Risk of blindness!

4.3 Indication of any immediate medical attention and special treatment needed

Depending on the condition of the patients, the doctor must assess the symptoms and the overall general condition.



## **SECTION 5: Firefighting measures**

5.1 Extinguishing media

 Suitable extinguishing media

Use firefighting measures that suit the environment.  
Water spray, foam, CO<sub>2</sub>

 Extinguishing media which must not be used for safety reasons

Waterjet

5.2 Special hazards arising from the substance or mixture

Not flammable.  
Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Special protective equipment:

Wear a self-contained breathing apparatus and chemical protective clothing.  
Prevent fire extinguishing water from contaminating surface water or ground water system.



## **SECTION 6: Accidental release measures**

6.1 Personal precautions, protective equipment and emergency procedures

Restricted access to contaminated areas, until cleaning work is finished.  
Wear personal protection equipment. Avoid contact with skin and eyes.  
Provide adequate ventilation. Do not breathe vapours/aerosol.

6.2 Environmental precautions

Do not allow product to enter into surface water or drains.  
In case of entry into waterways, soil or drains, inform the responsible authorities.

6.3 Methods and material for containment and cleaning up

Absorb with liquid binding material (e. g. sand, kieselguhr, Universal binder, acid binder, saw dust).  
Clean up affected area.  
Treat the recovered material as prescribed in the section on waste disposal (section 13).

6.4 Reference to other sections

See protective measures under section 8 and disposal under section 13.







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**SECTION 7: Handling and storage**

- 7.1 Precautions for safe handling  
 Provide adequate ventilation. Avoid eye and skin contact. Keep container tightly closed. Observe protective measures and safety instructions.
- 7.2 Conditions for safe storage, including any incompatibilities
-  Precautions against fire and explosion  
 No special measures required.
  -  Requirements on storage and packaging/containers  
 Keep dry.  
 Keep container tightly closed.
  -  Incompatibility with materials  
 Corrosive to metals.
  -  Conditions of storage +2 bis +25 °C
- 7.3 Specific end use(s)  
 kit element for detection of microorganism

**SECTION 8: Exposure controls/personal protection**

- 8.1 Control parameters  
 Observe the member state specific regulations.


**MAK (maximum workplace concentrations)-value (valid for A acc. to GKV 2018 Annex 1)**

name	CAS#	MAK	TMW / KZW*		notes	duration
			[ppm]	[mg/m <sup>3</sup> ]		
sodium hydroxide	1310-73-2	MAK	--- / ---	2 E / 4 E		8x5 (Mow)

\*TMW Daily average value  
 E Breathable fraction  
 KZW Short-time value  
 Mow instantaneous value

**DNEL-Werte (Derived no effect level)**

name		
<b>sodium hydroxide</b>		
workers		
longterm – local effects	inhalative	1 mg/m <sup>3</sup>
consumers		
longterm – local effects	inhalative	1 mg/m <sup>3</sup>

- 8.2 Exposure control
-  General protection and hygiene measures  
 When handling with chemical substances observe usual precautionary measures.  
 Keep away of foods and drinks.

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When using do not eat, drink or smoke.  
Wash hands after working with product.  
Avoid contact with skin and eyes. Avoid breathing aerosol/vapour.

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

An eyewash station should be made available in the immediate working area.

 Respiratory protection

During generation of vapors/aerosols and/or if workplace limits are exceeded wear respiratory protection. Filter P2

 Hand protection

Wear protective gloves (Glove material e. g. nitril rubber). EN 374.

The selection of suitable gloves depends not only on the material, but also on other quality characteristics. Breakthrough times and swelling properties of the material must be taken into consideration.

 Eye protection

Protective goggles. EN 166.

 Body protection

Wear resistant clothing.

 Environmental exposure controls














Do not allow to enter into surface water or drains.

In case of entry into waterways, soil or drains, inform the responsible authorities.



## **SECTION 9: Physical and chemical properties**

### 9.1 Information on basic physical and chemical properties

 Physical state / Appearance	liquid
 Colour	colorless
 Odour	none
 Odour threshold	No information available.
 pH value	13 - 14
 Melting point/range	No information available.
 Boiling point/range	No information available.
 Flash point	n.a.
 Evaporation rate	No information available.
 Flammability (solid, gas)	n. a.
 Upper/lower explosive limits	n. a.
 Vapour pressure (27 °C)	No information available.
 Density (20 °C)	No information available.








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 Solubility in water (20 °C)	fully miscible
 Partition coefficient: n-octanol/water;	No information available.
 Auto-ignition temperature	No information available.
 Decomposition temperature	No information available.
 Viscosity	No information available.
 Explosion properties	No information available.
 Oxidising properties	No information available.

9.2 Other information

None.



**SECTION 10: Stability and reactivity**

10.1 Reactivity

No hazardous reactions known if used as prescribed.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Risk of ignition or formation of inflammable gases or vapours with:

Metals, light metals (formation of hydrogen – risk of explosion!)

Violent reactions possible with:

Nitriles, ammonium compounds, cyanides, magnesium, organic nitro compounds, organic combustible substances, phenols, powdered alkaline earth metals, acids.

10.4 Conditions to avoid

No information available.

10.5 Incompatible materials

Aluminium, brass, metals, metal alloys, Zinc, Tin, light metals

10.6 Hazardous decomposition products

No decomposition if used as prescribed.



**SECTION 11: Toxicological information**

11.1 Information on toxicological effects

Toxicological data for the product are not available.

 LD<sub>50</sub> values of single components relevant for classification

No data available.

 Acute toxicity

Based on available data, classification criteria are not fulfilled.

 Skin corrosion/irritation

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Category 1B: Causes severe skin burns and eye damage.

 Serious eye damage/irritation

Category 1: Causes serious eye damage.

 Skin/Respiratory sensitization

Sensitization is not expected. Based on available data, classification criteria are not fulfilled.

 Germ cell mutagenicity

The product does not contain any ingredients in a concentration of equal or higher than 0.1 %, which are classified as mutagen.

Based on available data, classification criteria are not fulfilled.

 Carcinogenicity


None of the substances in a concentration of equal or higher than 0.1 % in this product is listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

Based on available data, classification criteria are not fulfilled.

 Reproductive toxicity

The product does not contain any ingredients in a concentration of equal or higher than 0.1 %, which are classified as toxic for reproduction.

Based on available data classification criteria are not fulfilled.

 Specific target organ toxicity – single exposure

Based on available data, classification criteria are not fulfilled.

 Specific target organ toxicity – repeated exposure

Based on available data, classification criteria are not fulfilled.

 Aspiration hazard

Based on available data, classification criteria are not fulfilled.

 Other information

The product was classified on the basis of the calculation procedure of the CLP- Regulation (EC) 1272/2008.



## SECTION 12: Ecological information

### 12.1 Toxicity

Ecotoxicological data for the product are not available.

The product was classified on the basis of the calculation procedure of the CLP- Regulation (EC) 1272/2008.

 Aquatic Toxicity of ingredients

*sodium hydroxide* (source : external MSDS)

fish toxicity : LC50 (96 h) : 125 mg/l – *Gambusia affinis*

### 12.2 Persistence and degradability

*sodium hydroxide* :

The methods for determining the biological degradability are not applicable to inorganic substances.



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- 12.3 Bioaccumulative potential  
No data available.
- 12.4 Mobility in soil  
No data available for this product.
- 12.5 Results of PBT and vPvB assessment  
*sodium hydroxide* :  
Not applicable for inorganic substances.
- 12.6 Other adverse effects  
Do not allow to enter waters, waste water or soil.  
Harmful effect due to pH shift.



**SECTION 13: Disposal considerations**

13.1 Waste treatment methods

Any disposal practice must be in compliance with all local and national laws and regulations. Customers are advised to check their local legislation governing the disposal of waste materials. If this preparation becomes a waste, the final user must define and assign the appropriate European Waste Catalogue code. Use only authorized contractors.

European waste catalogue

16 05 06\* (laboratory chemicals consisting of or containing dangerous substances including mixtures of laboratory chemicals)

Notes: The European Waste Catalogue (EWC) classifies waste materials and categorises them according to what they are and how they were produced. This may cause other classifications. The final decision belongs to the last user.

Uncleaned packaging

Recommendation: Completely emptied packages can be recycled by authorized contractors.



**SECTION 14: Transport information**

14.1 UN number

1824

14.2 UN proper shipping name

SODIUM HYDROXIDE SOLUTION

14.3 Transport hazard class(es)

8



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14.4 Packing group

II

14.5 Environmental hazards

None.

14.6 Special precautions for user

Colorless liquid. Corrosive to aluminium, zinc and tin. Reaction with ammonium salts (formation of ammonia gas). Causes burns of skin, eyes and mucous membranes. Violent reaction with acids. Tunnel restriction code E.

EmS: F-A, S-B

IBC02

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

Safety Data Sheet according to REACH – Regulation (EC) No. 1907/2006.


The mixture was classified on the basis of the calculation procedure of the CLP- Regulation (EC) 1272/2008 (Annex 1).

**national law:**

Austria:

 VbF – Regulation on combustible liquids (BGBl 1991/240)  
Not applicable

Germany:

 Ordinance on Installations for the Handling of Substances Hazardous to water (AwSV) of 18.04.2017  
WGK 1 (slightly hazardous for water)

15.2 Chemical safety assessment

Not applicable.



**SECTION 16: Other information**

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product. All materials may present unknown hazards and should be used with caution and only for identified uses described in section 1. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

The mixture was classified on the basis of the calculation procedure of the CLP- Regulation (EC) 1272/2008 (Annex 1). The classification of ingredients is based on manufacturer´s data, hazardous substances database (GESTIS) and the European Chemical Agency (ECHA).

 Relevant Hazard Statements

H290

May be corrosive to metals.

H314

Causes severe skin burns and eye damage.

**Safety Data Sheet**  
according to regulation (EC) No 1907/2006 (REACH)

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 Relevant hazard categories

Met. Corr. 1                      Corrosive to metals Category 1  
Skin Corr. 1A                    Skin corrosion Category 1A

 Version                              Version No. 1.1 replaces V1.0  
Update: 2, 3, 8, 9.1, 11, 14, 15

 Created by                          UmEnA GmbH                      Web: [www.umena.at](http://www.umena.at)

 Abbreviations                      n.a. Not applicable.



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

- 1.1 Product identifier **Solution C**
- 1.2 Relevant identified uses of the substance or mixture and uses advised against  
Identified uses kit element for detection of microorganism
- 1.3 Supplier SY-LAB Geräte GmbH  
Tullnerbachstraße 61-65  
A-3011 Neupurkersdorf  
T: +43 2231 62252-0  
F: +43 2231 62193
- Competent person Email: [sales@sylab.com](mailto:sales@sylab.com)
- 1.4 Emergency telephone number Please contact the regional poison center or emergency call.  
**Austrian toxicity information centre Vienna:**  
+43 1 406 43 43  
Available 24 hours

**SECTION 2: Hazards identification**

- 2.1 Classification of the substance or mixture  
 According to regulation (EC) Nr. 1272/2008  
**Toxic for reproduction Category 1B**  
H360FD May damage fertility. May damage the unborn child

- 2.2 Label elements  
 According to regulation (EC) Nr. 1272/2008



**Danger**

- H360FD May damage fertility. May damage the unborn child
- P201 Obtain special instructions before use.  
P281 Use personal protective equipment as required.  
P308 + P313 IF exposed or concerned: Get medical advice/attention.  
P501 Dispose of contents/container to hazardous waste collection point.

 Hazard components for labelling

boric acid (CAS: 10043-35-3)

- 2.3 Other hazards  
None known.

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**SECTION 3: Composition/information on ingredients**

3.2 Mixtures

 Chemical characterization

Mixture of the following ingredients and nonhazardous additives.

 Hazardous ingredients

Chemical name	CAS # / EC # / Index #	%-w/w	Classification acc. to (EC) No. 1272/2008*	
boric acid <sup>[1],**</sup>	10043-35-3 / 233-139-2 / 005-007-00-2	10 - 20	Repr. 1B	H360FD

\* Full text of Hazard statements and hazard categories: see section 16.


\*\* Substance with an occupational exposure limit value (see section 8)

<sup>[1]</sup> Substance is included in the candidate list of Substances of Very High Concern for Authorization (see section 15)

**SECTION 4: First aid measures**

4.1 Description of first aid measures

Seek medical advice if symptoms occur.  
 Never give anything by mouth to an unconscious person or a person with cramps.  
 Change contaminated, saturated clothing.

 In case of inhalation

Provide fresh air. Consult a physician.  
 If unconscious place in recovery position and seek medical advice.

 In case of skin contact

After contact with skin, wash with soap and plenty of water.  
 Change contaminated, saturated clothing – wash before reuse.  
 Consult a physician.

 In case of eye contact

In case of contact with eyes, remove contact lens and flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart.  
 Consult a doctor.

 In case of ingestion

Rinse mouth thoroughly with cold water. Avoid vomiting. Get medical attention immediately.



4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Depending on the condition of the patients, the doctor must assess the symptoms and the overall general condition.



**SECTION 5: Firefighting measures**

- 5.1 Extinguishing media
-  Suitable extinguishing media
  - Use firefighting measures that suit the environment.  
Water spray, foam CO<sub>2</sub>
  -  Extinguishing media which must not be used for safety reasons
  - Waterjet
- 5.2 Special hazards arising from the substance or mixture
- Boran / boric oxide
- 5.3 Advice for firefighters
- Special protective equipment:  
Wear a self-contained breathing apparatus and chemical protective clothing.  
Water spray may be useful in cooling equipment exposed to heat and flame.  
Prevent fire extinguishing water from contaminating surface water or ground water system.

**SECTION 6: Accidental release measures**

- 6.1 Personal precautions, protective equipment and emergency procedures
- Restricted access to contaminated areas, until cleaning work is finished.  
Wear personal protection equipment. Avoid contact with skin and eyes.  
Provide adequate ventilation. Do not breathe vapour/aerosol.
- 6.2 Environmental precautions
- Do not allow product to enter into surface water or drains.  
In case of entry into waterways, soil or drains, inform the responsible authorities.
- 6.3 Methods and material for containment and cleaning up
- Absorb with liquid binding material (e. g. sand, kieselguhr, Universal binder, acid binder, saw dust).  
Clean up affected area.  
Treat the recovered material as prescribed in the section on waste disposal (section 13).
- 6.4 Reference to other sections
- See protective measures under section 8 and disposal under section 13.

**SECTION 7: Handling and storage**

- 7.1 Precautions for safe handling
- Provide adequate ventilation. Avoid eye and skin contact. Keep container tightly closed. Avoid exposure.  
Observe protective measures and safety instructions.
- 7.2 Conditions for safe storage, including any incompatibilities
-  Precautions against fire and explosion
  - No special measures required.
  -  Requirements on storage and packaging/containers

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Keep dry.  
 Keep container tightly closed. Provide adequate ventilation.

 Incompatibility with materials

No data available.

 Conditions of storage +2 to +25 °C

7.3 Specific end use(s)  
 kit element for detection of microorganism



**SECTION 8: Exposure controls/personal protection**

8.1 Control parameters

Observe the member state specific regulations.

**MAK (maximum workplace concentrations)-value (valid for A acc. to GKV 2018 Annex 1)**

The product does not contain any substance with critical values that have to be monitored at the workplace.

Boric acid is listed in Annex VI of GKV 2011 as definitely toxic for reproduction.

**occupational exposure limit (valid for D acc. to TRGS 900 Jan. 2006) - last update 2019**

		TMW / KZW*		top limiting
name	CAS#	[ppm]	[mg/m <sup>3</sup> ]	exceedance factor
boric acid	10043-35-3	---	0,5	2 (!)

\*TMW Daily average value

KZW

Short-time value

8.2 Exposure control

 General protection and hygiene measures

When handling with chemical substances observe usual precautionary measures.

Keep away from foods and drinks.

When using do not eat, drink or smoke.

Wash hands after working with product.

Avoid contact with skin and eyes. Avoid breathing aerosol/vapour.

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

An eyewash station should be made available in the immediate working area.

 Respiratory protection

During generation of vapors/aerosols and/or if ventilation is insufficient wear respiratory protection.

 Hand protection

Wear protective gloves (Glove material e. g. nitril rubber) EN 374

The selection of suitable gloves depends not only on the material, but also on other quality characteristics. Breakthrough times and swelling properties of the material must be taken into consideration.

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 Eye protection

Protective goggles. EN 166.

 Body protection

Wear resistant clothing.

 Environmental exposure controls





















Do not allow to enter into surface water or drains.

In case of entry into waterways, soil or drains, inform the responsible authorities.



**SECTION 9: Physical and chemical properties**

9.1 Information on basic physical and chemical properties

 Physical state / Appearance	liquid
 Colour	colorless
 Odour	none
 Odour threshold	No information available.
 pH value	No information available.
 Melting point/range	No information available.
 Boiling point/range	No information available.
 Flash point	n.a.
 Evaporation rate	No information available.
 Flammability (solid, gas)	n. a.
 Upper/lower explosive limits	No information available.
 Vapour pressure (27 °C)	No information available.
 Density (20 °C)	No information available.
 Solubility in water (20 °C)	fully miscible
 Partition coefficient: n-octanol/water;	No information available.
 Auto-ignition temperature	No information available.
 Decomposition temperature	No information available.
 Viscosity	No information available.
 Explosion properties	No information available.
 Oxidising properties	No information available.

9.2 Other information

None.



**SECTION 10: Stability and reactivity**

10.1 Reactivity



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No hazardous reactions known if used as prescribed.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known if used as prescribed.

10.4 Conditions to avoid

Extreme temperature.

10.5 Incompatible materials

Potassium, acid anhydride

10.6 Hazardous decomposition products

No decomposition if used as prescribed.

**SECTION 11: Toxicological information**

11.1 Information on toxicological effects


Toxicological data for the product are not available.

 LD<sub>50</sub> values of single components relevant for classification

name	CAS-Nr	
boric acid	10043-35-3	LD <sub>50</sub> (oral/rat): 2660 mg/kg

 Acute toxicity

Based on available data, classification criteria are not fulfilled.

 Skin corrosion/irritation

Based on available data, classification criteria are not fulfilled.

 Serious eye damage/irritation

Based on available data, classification criteria are not fulfilled.

 Skin/Respiratory sensitization

Sensitization is not expected. Based on available data, classification criteria are not fulfilled.

 Germ cell mutagenicity

The product does not contain any ingredients in a concentration of equal or higher than 0.1 %, which are classified as mutagen.

Based on available data, classification criteria are not fulfilled.

 Cancerogenicity

None of the substances in a concentration of equal or higher than 0.1 % in this product is listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

Based on available data, classification criteria are not fulfilled.


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 Reproductive toxicity

The product contains boric acid (CAS# 10043-35-3) between 10 and 20 % (w/w), which is classified as toxic for reproduction category 1B according to CLP-Regulation Annex VI.  
According to the specific concentration limits for boric acid the product is classified as toxic for reproduction category 1B.

 Specific target organ toxicity – single exposure

Based on available data, classification criteria are not fulfilled.

 Specific target organ toxicity – repeated exposure

Based on available data, classification criteria are not fulfilled.

 Aspiration hazard

Based on available data, classification criteria are not fulfilled.

 Other information

The product was classified on the basis of the calculation procedure of the CLP- Regulation (EC) 1272/2008.



**SECTION 12: Ecological information**

12.1 Toxicity

Ecotoxicological data for the product are not available.

The product was classified on the basis of the calculation procedure of the CLP- Regulation (EC) 1272/2008.

 Aquatic Toxicity of ingredients

*boric acid* (CAS : 10043-35-3) (source : external MSDS)

fish toxicity :

LC50 (96 h): 279 mg/l - *Ptychocheilus lucius*

LC0 (96 h): > 1.021 mg/l - *Lepomis macrochirus*

toxicity to daphnia

LC50 (21 d): 53,2 mg/l - *Daphnia magna*

EC50 (48 h): 133 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 for this product.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

Do not allow to enter waters, waste water or soil.



**SECTION 13: Disposal considerations**

13.1 Waste treatment methods

Any disposal practice must be in compliance with all local and national laws and regulations. Customers are advised to check their local legislation governing the disposal of waste materials. If this preparation becomes a waste, the final user must define and assign the appropriate European Waste Catalogue code. Use only authorized contractors.

 European waste catalogue

16 05 06\* (laboratory chemicals consisting of or containing dangerous substances including mixtures of laboratory chemicals)

Notes: The European Waste Catalogue (EWC) classifies waste materials and categorises them according to what they are and how they were produced. This may cause other classifications. The final decision belongs to the last user.

 Uncleaned packaging

Recommendation: Completely emptied packages can be recycled by authorized contractors.

**SECTION 14: Transport information**

No dangerous good in sense of the transport regulation for land, air and sea. (Acc. to ADR 2013)

14.1 UN number

Not applicable.

14.2 UN proper shipping name

Not applicable.

14.3 Transport hazard class(es)

Not applicable.

14.4 Packing group

Not applicable.

14.5 Environmental hazards

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk according to Annex II of MARPOLand the IBC Code

Not applicable.

**SECTION 15: Regulatory information**

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

Safety Data Sheet according to REACH – Regulation (EC) No. 1907/2006.  
The mixture was classified on the basis of the calculation procedure of the CLP- Regulation (EC) 1272/2008 (Annex 1).

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- ▲ Candidate list of Substances of Very High Concern for Authorisation acc. to REACH-Reg (EC) No. 1907/2006: contains boric acid (CAS : 10043-35-3) 10 – 20 % (included on 18<sup>th</sup> of June 2010, toxic for reproduction (article 57c), ED/30/2010)

**national law:**

Austria:

- ▲ VbF – Regulation on combustible liquids (BGBl 1991/240)  
Not applicable

Germany:

- ▲ Ordinance on Installations for the Handling of Substances Hazardous to water (AwSV) of 18.04.2017 WGK 1 (slightly hazardous for water)

15.2 Chemical safety assessment  
Not applicable.



**SECTION 16: Other information**

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product. All materials may present unknown hazards and should be used with caution and only for identified uses described in section 1. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

The mixture was classified on the basis of the calculation procedure of the CLP- Regulation (EC) 1272/2008 (Annex 1). The classification of ingredients is based on manufacturer´s data, hazardous substances database (GESTIS) and the European Chemical Agency (ECHA).

- ▲ Relevant Hazard Statements  
H360FD May damage fertility. May damage the unborn child
- ▲ Relevant hazard categories  
Repr. 1B Toxic for reproduction Category 1B
- ▲ Version  
Version No. 1.1 replaces V1.0  
Update: 2, 3, 8, 9.1, 11, 15
- ▲ Created by  
UmEnA GmbH Web: [www.umena.at](http://www.umena.at)
- ▲ Abbreviations  
n.a. Not applicable.

