

# Safety Data Sheet

according to Regulations 1907/2006/EC (REACH) and 2015/830/EU

REF: 740973.30

Buffer ML (30 mL)

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Printing date: 15.11.2021

Date of issue: 05.06.2018

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

### 1.1 Product identifier

REF 740973.30  
Product name Buffer ML (30 mL)

REACH Registration number(s): see SECTION 3.1/3.2 or  
A registration number for the substance(s) does not exist because the annual tonnage does not require registration or the substance or its use is excluded from registration.

1 x 30 mL ML

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

#### Relevant identified uses

Product for analytical use.

Exposure Scenario Classification according REACH, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0

The exposure scenario is integrated into sections 1-16.

#### Uses advised against

not described

### 1.3 Details of the supplier of the safety data sheet

#### Manufactured by:

MACHEREY-NAGEL GmbH & Co. KG  
Valenciennener Str. 11, 52355 Düren, GERMANY  
Tel.: +49 2421 969 0

E-mail: sds@mn-net.com (msds@mn-net.com)

### 1.4 Emergency telephone number

Outside Germany (DE): Call your regional Poisons Information Service or call local Life Saving Service.  
DE: Gemeinsames Giftinformationszentrum (GGIZ) 99089 Erfurt tel. +49 361 730 730

You find our current versions of SDS (22 languages) in Internet:

<http://www.mn-net.com/SDS>

## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

30 mL ML



GHS07

Signal word

WARNING

#### Hazard identification

#### Hazard classes/categories

H302  
H412

Acute Tox. 4 oral  
Aquatic Chronic 3

### 2.2 Label elements

According CLP directive inner packages must be only labelled with GHS symbol(s) and product identifier(s) (EU 1272/2008 Annex I - 1.5.1.2).

Harmful chemicals/mixtures with signal word: **WARNING** must not be labelled with H and P phrases until 125 mL (EU 1272/2008 Annex I - 1.5.2).

30 mL ML



GHS07

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Signal word: WARNING

H412

Harmful to aquatic life with long lasting effects.

## 2.3 Other hazards

### Possible hazards from physicochemical properties

For guanidine thiocyanate CAS 593-84-0: The properties H314, H332 "Causes severe skin burns and eye damage. Harmful if inhaled." are not relevant, because the mixture solution is buffered to pH 4-9 (see GHS Directive 1272/2008/EC Annex I, chapter 3.2.3.1.2.). ---

### Information pertaining to particular risks to human and possible symptoms

Cause after oral intake, impairments of health when ingested in small quantities. -

### Information pertaining to particular risks to the environment

Harmful to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment.

PBT: not applicable

vPvB: not applicable

Other hazards

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances or 3.2 Mixtures

#### 30 mL ML

Chemical: *guanidinium thiocyanate*

CAS No.: 593-84-0

Classification: H302, Acute Tox. 4 oral, H312, Acute Tox. 4 derm., H314, Skin Corr. 1B, H332, Acute Tox. 4 inh., H412, Aquatic Chronic 3

Formula:  $C_2H_6N_4S$

Pseudonym: guanidine rhodanide

TSCA Inventory: listed

REACH Reg. No.: 01-2120735072-65-0001

EC No.: 209-812-1

Indice No.:

615-004-00-3

RTECS: XL1225000

MFCD:

00013027

KE No.: not listed

Concentration: 45 - <60 %

acc. CLP (GHS): H302, Acute Tox. 4 oral, H412, Aquatic Chronic 3

Chemical: *2-mercaptoethanol*

CAS No.: 60-24-2

Classification: H301, Acute Tox. 3 oral, H310, Acute Tox. 2 derm., H315, Skin Irrit. 2, H317, Skin Sens. 1, H318, Eye Dam. 1, H330, Acute Tox. 2 inh., H410, Aquatic Chronic 1

Formula:  $C_2H_6OS$

Pseudonym: thioglycol, thioethylene glycol

TSCA Inventory: listed

REACH Reg. No.: 01-2119517582-41-xxxx

EC No.: 200-464-6

RTECS: KL5600000

KE No.: KE-23095

Concentration: 0.1 - <1 %

acc. CLP (GHS): The criteria for classification are not fulfilled.

### 3.3 Remarks

When not listed, mixtures are added with water [CAS No. 7732-18-5] to 100%.

List of H and P phrases: see section 16.1

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Place insured person out of danger zone to fresh air immediately. Ensure quiet, warmth, and provide resuscitation if necessary. If necessary contact medical advice.

#### 4.1.1 After SKIN Contact

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Remove contaminated clothing. Rinse the affected skin or mucous membrane thoroughly under running water. (If possible) use soap.

## 4.1.2 After EYE Contact

After contact with the eyes rinse thoroughly under running water with the eyelid wide open with eye washing bottle, eye douche or running water (protect intact eye).

## 4.1.3 After INHALATION of vapours

After inhalation of foam or vapour fresh air should be inhaled. Keep airways free. ---

## 4.1.4 After ORAL Intake

After oral intake lots of water should be drunk after it has been ingested. ---

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

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

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.

### 5.2 Special hazards arising from the substance or mixture

Formation of hazardous and caustic vapour-air mixtures possible. ---

### 5.3 Advice for firefighters

No, for listed product. Product package burns like paper or plastic.

### 5.4 Additional information

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapours. Regular staff training is necessary.

### 6.2 Environmental precautions

not necessary, contains only small amounts of these substances

### 6.3 Methods and material for containment and cleaning up

Bind any escaping liquid with inert absorbent.

Collect small amounts of leaked liquid and flush with water into drains.

### 6.4 Reference to other sections

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Handling in accordance with the test instruction, that comes with the product.

### 7.2 Conditions for safe storage, including any incompatibilities

The original product package of MACHEREY-NAGEL allows a safe storage.

Storage class (VCI): 3

Water hazard class (DE): 3

#### 7.2.1 Requirements for stock rooms and containers

Keep original product packages tightly closed during handling and storage.

### 7.3 Specific end use(s)

Product for analytical use.

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### 30 mL ML

Chemical: *guanidinium thiocyanate*

CAS No.: 593-84-0

DNEL: [inh] 1092 µg/m<sup>3</sup>

DNEL = Derived No-Effect Level (for workers)

PNEC(fresh water): 42.4 µg/L

PNEC = Predicted No Effect Concentration

NIOSH: not listed

[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: not listed

Chemical: *2-mercaptoethanol*

CAS No.: 60-24-2

DNEL: [derm] 0.6 mg/kg

DNEL = Derived No-Effect Level (for workers)

PNEC(fresh water): 0.0004 mg/L

PNEC = Predicted No Effect Concentration

### 8.2 Exposure controls

Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities. The highest level of cleanliness must be maintained at the workplace.

#### 8.2.1 Respiratory protection

No additional recommendations.

#### 8.2.2 Hand protection

Yes, gloves according EN 374 (permeation time >30 min - level 2), consist of PVC (f.ex. from Ansell or KCL).

#### 8.2.3 Eye protection

Yes, safety glasses according EN 166 with integrated side shields or wrap-around protection.

#### 8.2.4 Skin protection

Recommended.

#### 8.2.5 Personal hygiene

Eating, drinking, smoking, taking snuff and storage of food in work areas and at outdoor workplaces is prohibited. Avoid contact with the skin, eyes and clothing. Rinse any clothing on which the substance has been spilled, and soak it in water. Wash hands thoroughly with soap and water when stopping work and before eating, and then apply protective skin cream.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### 30 mL ML

Appearance: liquid

Colour: colourless

Odor: sulfuric

pH:

6.5-7.5

Specific gravity:

1.05 g/cm<sup>3</sup>

### 9.2 Other information

Data for the other parameters of the mixtures are not available, because no registration and no chemical safety report is required.

Relevant Properties of Substance Group

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no further data available.

### 10.2 Chemical stability

No known instability.

### 10.3 Possibility of hazardous reactions

Note: Can form very reactive substances with oxidizing agents. Possible: Contact with acids liberates toxic gas. No further data available.

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## 10.4 Conditions to avoid

Not necessary. ---

## 10.5 Incompatible materials

Avoid contact with strong acids or alkalines.

## 10.6 Hazardous decomposition products

In the original package all parts/all reagents are safety and separated stored. Decompositions are not observed during the expiration period under recommended conditions.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Following information is valid for pure substances. Quantitative data on the toxicity of this product are not available.

#### 30 mL ML

Chemical: *guanidinium thiocyanate* CAS No.: 593-84-0  
TSCA Inventory: listed California Proposition 65 List: not listed  
Australia NICNAS: not listed Canada CEPA 1999: DSL yes  
Japan CSCL/PRTR: not listed, Japan PDSCL: not listed  
Japan ISHL: not listed  
South Korea TCCA: not listed  
Korea Exist.Chem.Inventory: not listed  
LD50<sub>orl rat</sub>: 593 mg/kg  
LC50<sub>drm rbt</sub>: >2000 mg/m<sup>3</sup>  
LC50<sub>ihl rat</sub>: [4h] 5.319 mg/L  
LD50<sub>ipr mus</sub>: 300 mg/kg  
Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

Chemical: *2-mercaptoethanol* CAS No.: 60-24-2  
TSCA Inventory: listed  
Australia NICNAS: yes Canada CEPA 1999: DSL yes  
Japan CSCL/PRTR: Deleterious substance  
Korea Exist.Chem.Inventory: KE-23095  
LD50<sub>orl rat</sub>: 98-162 mg/kg  
LC50<sub>ihl rat</sub>: 625<sub>4h</sub> mg/m<sup>3</sup>  
LD50<sub>drm rbt</sub>: 112-224 mg/kg

## SECTION 12: Ecological information

### 12.1 Toxicity

Following information is valid for pure substances.

#### 30 mL ML

Chemical: *guanidinium thiocyanate* CAS No.: 593-84-0  
Harmful to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment.  
Environmental hazards must not be labelled with P phrases until 125 mL (EU 1272/2008 Annex I - 1.5.2).  
PNEC(fresh water): 42.4 µg/L  
PNEC = Predicted No Effect Concentration  
LC50<sub>fish/96h</sub>: [4d] 89.1 mg/L  
EC50<sub>daphnia/48h</sub>: 42.4 mg/L  
IC50<sub>scenedesmus quadricauda/72h</sub>: 130 mg/L  
EC10<sub>pseudomonas putida/16h</sub>: [10d] 200 mg/L  
Water hazard class (DE): 3  
Dispersion coefficient(octanol-water): [pH 5.1] -1.11  
Storage class (VCI): 12

Chemical: *2-mercaptoethanol* CAS No.: 60-24-2  
PNEC(fresh water): 0.0004 mg/L  
PNEC = Predicted No Effect Concentration  
LC50<sub>leuciscus idus/96h</sub>: 46-100 mg/L  
EC50<sub>daphnia/48h</sub>: 1.52 mg/L  
Water hazard class (DE): 3  
Storage class (VCI): 3

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- 12.2 Persistence and degradability**  
not necessary
- 12.3 Bioaccumulative potential**  
not necessary
- 12.4 Mobility in soil**  
not necessary
- 12.5 Results of PBT and vPvB assessment**  
no data available
- 12.6 Other adverse effects**  
no additional data available

## SECTION 13: Disposal considerations

Do not collect in acidic waste. May form toxic gases.

Please observe local regulations for collection and disposal of hazardous waste and contact waste disposal company, where you will obtain information on laboratory waste disposal (waste code number 16 05 06).

- 13.1 Waste treatment methods**  
Normally it is possible to empty small amounts (diluted!) into drains.

## SECTION 14: Transport information

14.1 - 14.4: No dangerous goods according the transport regulations

- 14.5 Environmental hazards**  
none, contains only small quantities of hazardous substances, contains only small amounts of these substances
- 14.6 Special precautions for user**  
not necessary
- 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**  
German act governing protection from hazardous substances (Chemicals Act / Chemikaliengesetz- ChemG), revised on August 2013  
German order governing protection from hazardous substances (Ordinance on Hazardous Substances / Gefahrstoffverordnung - GefStoffV), revised on November 2010, according to Directive 98/24/EC  
TRGS 200, German engineering rules governing the classification and labelling of hazardous substances, preparations and products, updated October 2011  
MN Leaflet/User manual, also see [www.mn-net.com](http://www.mn-net.com)  
Look for your country-specific regulations.
- 15.2 Chemical safety assessment**  
not necessary for these small amounts ---

## SECTION 16: Other information

- 16.1 List of H and P phrases**
- 16.1.1 List of relevant H phrases**  
H302 Harmful if swallowed.  
H412 Harmful to aquatic life with long lasting effects.
- 16.1.2 List of relevant P phrases**  
P264W Wash with water thoroughly after handling.  
P273 Avoid release to the environment.  
P301+312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
P330 Rinse mouth.
- 16.2 Training advice**  
Multiple safety training of staffs about danger and protection by using hazards in working area.

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## 16.3 Recommended restriction on use

Only for professional user.

An individual package of this product or test kit has a moderate hazardous potential.

## 16.4 Further information

MACHEREY-NAGEL GmbH & Co. KG provides the information contained herein in good faith being up-to-date of own realizations at revision time. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose.

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## 16.5 Sources of key data

Regulation 453/2010/EU REACH - REQUIREMENTS FOR THE COMPILATION OF SAFETY DATA SHEETS

Regulation 487/2013/EU, 4<sup>th</sup> adaptation of CLP regulation to technical and scientific progress

Regulation 669/2018/EU, 4<sup>th</sup> adaptation of CLP regulation to technical and scientific progress

Regulation 1480/2018/EU, 4<sup>th</sup> adaptation of CLP regulation to technical and scientific progress

Regulation 849/2021/EU, 4<sup>th</sup> adaptation of CLP regulation to technical and scientific progress

TRGS 900, German engineering rules governing limits in air at work, updated 03/2019

SUVA .CH, Limits in air at work 2009, revised on 01.2009

KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)

### Revisions/Updates

Reason for Revision: 2016-03 Adaptation of regulation 1221/2015/EU

2017-11 Adaption of ECHA Registration dossier