




# FLYLEAF

## Article: 20H7 ROTI®Prep Plant RNA for molecular biology

Date of compilation: 2023-04-03

### 1 Composition/information on ingredients

#### Bill of materials

| Name of substance    | Identifier | Number of pieces | Classification acc. to GHS   | Pictograms  | Page    |
|----------------------|------------|------------------|--|---|---------|
| Lysis Buffer LSR     |            | 1                | Acute Tox. 4 / H302<br>Acute Tox. 4 / H312<br>Acute Tox. 4 / H332<br>Skin Corr. 1B / H314<br>Eye Dam. 1 / H318<br>Aquatic Chronic 3 / H412 |   | 4 – 21  |
| Lysis Buffer LSK     |            | 1                | Acute Tox. 4 / H302<br>Skin Irrit. 2 / H315<br>Eye Irrit. 2 / H319   |  | 22 – 35 |
| Washing Buffer WSA   |            | 1                | Acute Tox. 4 / H302<br>Acute Tox. 4 / H312<br>Acute Tox. 4 / H332<br>Skin Corr. 1B / H314<br>Eye Dam. 1 / H318<br>Aquatic Chronic 3 / H412 |  | 36 – 52 |
| Washing Solution WSL |            | 1                |  |   | 53 – 64 |

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## 2 Hazards identification

### 2.1 Label elements

**Signal word** Danger

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

#### Pictograms

Danger.



#### Hazard statement(s)

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled  
 H314 Causes severe skin burns and eye damage  
 H412 Harmful to aquatic life with long lasting effects

#### Precautionary statements

##### **Precautionary statements - prevention**

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

#### Supplemental hazard information

EUH032 Contact with acids liberates very toxic gas

**Hazardous ingredients for labelling:** Guanidine thiocyanate,  
Guanidine hydrochloride,

## 3 Transport information

### 3.1 UN number or ID number

|             |         |
|-------------|---------|
| ADR/RID/ADN | UN 3316 |
| IMDG-Code   | UN 3316 |
| ICAO-TI     | UN 3316 |

### 3.2 UN proper shipping name

|             |              |
|-------------|--------------|
| ADR/RID/ADN | CHEMICAL KIT |
| IMDG-Code   | CHEMICAL KIT |
| ICAO-TI     | Chemical kit |

### 3.3 Transport hazard class(es)

|             |   |
|-------------|---|
| ADR/RID/ADN | 9 |
| IMDG-Code   | 9 |
| ICAO-TI     | 9 |

### 3.4 Packing group

|             |    |
|-------------|----|
| ADR/RID/ADN | II |
| IMDG-Code   | II |
| ICAO-TI     | II |

### 3.5 Environmental hazards

not assigned

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### 3.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

### 3.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

### 3.8 Information for each of the UN Model Regulations

#### **Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - Additional information**

|                                       |                                  |
|---------------------------------------|----------------------------------|
| Proper shipping name                  | CHEMICAL KIT                     |
| Particulars in the transport document | UN3316, CHEMICAL KIT, 9, II, (E) |
| Classification code                   | M11                              |
| Special provisions (SP)               | 251, 340                         |
| Excepted quantities (EQ)              | -> SP340                         |
| Limited quantities (LQ)               | -> SP251                         |
| Transport category (TC)               | 2                                |
| Tunnel restriction code (TRC)         | E                                |

#### **Emergency Action Code**

2Z

#### **International Maritime Dangerous Goods Code (IMDG) - Additional information**

|  |                             |
|--|-----------------------------|
| Proper shipping name                     | CHEMICAL KIT                |
| Particulars in the shipper's declaration | UN3316, CHEMICAL KIT, 9, II |
| Marine pollutant                         | -                           |
| Danger label(s)                          | 9                           |



|                          |                  |
|--------------------------|------------------|
| Special provisions (SP)  | 251, 340         |
| Excepted quantities (EQ) | -> SP340         |
| Limited quantities (LQ)  | -> SP251         |
| EmS                      | F-A, <u>S</u> -P |
| Stowage category         | A                |

#### **International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information**

|  |                             |
|--|-----------------------------|
| Proper shipping name                     | Chemical kit                |
| Particulars in the shipper's declaration | UN3316, Chemical kit, 9, II |
| Danger label(s)                          | 9                           |



|                          |           |
|--------------------------|-----------|
| Special provisions (SP)  | A44, A163 |
| Excepted quantities (EQ) | E0        |
| Limited quantities (LQ)  | 1 kg      |

# Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Lysis Buffer LSR

article number:  
Version: **3.0 en**  
Replaces version of: 2022-01-11  
Version: (2)

date of compilation: 2015-11-02  
Revision: 2023-01-27

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

### 1.1 Product identifier

Identification of the substance

**Lysis Buffer LSR**

Article number

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

Relevant identified uses:

Laboratory chemical  
Laboratory and analytical use

Uses advised against:

Do not use for squirting or spraying. Do not use for products which come into direct contact with the skin. Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

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

Carl Roth GmbH + Co KG  
Schoemperlenstr. 3-5  
D-76185 Karlsruhe  
Germany

**Telephone:** +49 (0) 721 - 56 06 0

**Telefax:** +49 (0) 721 - 56 06 149

**e-mail:** [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

**Website:** [www.carlroth.de](http://www.carlroth.de)

Competent person responsible for the safety data sheet: Department Health, Safety and Environment

**e-mail (competent person):**

**[sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)**

### 1.4 Emergency telephone number

| Name  | Street    | Postal code/city     | Telephone    | Website |
|---|-----------|----------------------|--------------|---------|
| National Poisons Information Service<br>City Hospital | Dudley Rd | B187QH<br>Birmingham | 844 892 0111 |         |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification acc. to GHS

| Section | Hazard class              | Category | Hazard class and category | Hazard statement |
|---------|---------------------------|----------|---------------------------|------------------|
| 3.10    | Acute toxicity (oral)     | 4        | Acute Tox. 4              | H302             |
| 3.1D    | Acute toxicity (dermal)   | 4        | Acute Tox. 4              | H312             |
| 3.1I    | Acute toxicity (inhal.)   | 4        | Acute Tox. 4              | H332             |
| 3.2     | Skin corrosion/irritation | 1B       | Skin Corr. 1B             | H314             |

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| Section | Hazard class  | Cat-egory | Hazard class and category | Hazard statement |
|---------|---|-----------|---------------------------|------------------|
| 3.3     | Serious eye damage/eye irritation                     | 1         | Eye Dam. 1                | H318             |
| 4.1C    | Hazardous to the aquatic environment - chronic hazard | 3         | Aquatic Chronic 3         | H412             |

### Supplemental hazard information

| Code   | Supplemental hazard information             |
|--------|---|
| EUH032 | contact with acids liberates very toxic gas |

For full text of abbreviations: see SECTION 16

### The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. Spillage and fire water can cause pollution of watercourses.

## 2.2 Label elements

### Labelling

#### Signal word

**Danger**

#### Pictograms

GHS05, GHS07



#### Hazard statements

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled  
H314 Causes severe skin burns and eye damage  
H412 Harmful to aquatic life with long lasting effects

#### Precautionary statements

##### Precautionary statements - prevention

P261 Avoid breathing mist/vapours  
P273 Avoid release to the environment

##### Precautionary statements - response

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P312 Call a POISON CENTRE/doctor if you feel unwell

#### Supplemental hazard information

EUH032 Contact with acids liberates very toxic gas.

**Hazardous ingredients for labelling:** Guanidine thiocyanate

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### 2.3 Other hazards

#### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

not relevant (mixture)

### 3.2 Mixtures

#### Description of the mixture

| Name of substance     | Identifier   | Wt%     | Classification acc. to GHS   | Pictograms | Notes          |
|-----------------------|--|---------|--|------------|----------------|
| Guanidine thiocyanate | CAS No<br>593-84-0<br><br>EC No<br>209-812-1<br><br>Index No<br>615-004-00-3 | 25 - 50 | Acute Tox. 4 / H302<br>Acute Tox. 4 / H312<br>Acute Tox. 4 / H332<br>Skin Corr. 1B / H314<br>Eye Dam. 1 / H318<br>Aquatic Chronic 3 / H412<br>EUH032 |            | A(a)<br>GHS-HC |

#### Notes

A(a): The name of substance is a general description. It is required that the correct name is stated on the label  
GHS-HC: Harmonised classification (the classification of the substance corresponds to the entry in the list according to 1272/2008/EC, Annex VI)

| Name of substance     | Identifier                                   | Specific Conc. Limits | M-Factors | ATE                                     | Exposure route                              |
|-----------------------|--|-----------------------|-----------|---|---|
| Guanidine thiocyanate | CAS No<br>593-84-0<br><br>EC No<br>209-812-1 | -                     | -         | 593 mg/kg<br>1.100 mg/kg<br>1,5 mg/l/4h | oral<br>dermal<br>inhalation: dust/<br>mist |

For full text of abbreviations: see SECTION 16

## SECTION 4: First aid measures

### 4.1 Description of first aid measures



#### General notes

Take off immediately all contaminated clothing.

#### Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following skin contact

After contact with skin, wash immediately with plenty of water. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

#### Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye.

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### Following ingestion

Rinse mouth with water (only if the person is conscious). Call a doctor.

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

Corrosion, Vomiting, Risk of blindness, Gastric perforation, Risk of serious damage to eyes

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

none

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media



#### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings  
water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

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

Ingredients of the mixture combustible. The product itself does not burn.

#### Hazardous combustion products

In case of fire may be liberated: Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Sulphur oxides (SO<sub>x</sub>), Hydrogen cyanide (HCN, prussic acid)

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Do not allow firefighting water to enter drains or water courses. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

## SECTION 6: Accidental release measures

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



#### For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

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

#### Advice on how to contain a spill

Covering of drains.

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### Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

### Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

## 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Handle and open container with care. Clear contaminated areas thoroughly.

### Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

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

Keep container tightly closed.

### Incompatible substances or mixtures

Observe hints for combined storage.

### Consideration of other advice:

### Ventilation requirements

Keep any substance that emits harmful vapours or gases in a place that allows these to be permanently extracted.

### Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

### 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### National limit values

#### Occupational exposure limit values (Workplace Exposure Limits)

This information is not available.

| Relevant DNELs of components of the mixture |          |           |                         |                                    |                   |                            |
|---|----------|-----------|-------------------------|------------------------------------|-------------------|----------------------------|
| Name of substance                           | CAS No   | End-point | Threshold level         | Protection goal, route of exposure | Used in           | Exposure time              |
| Guanidine thiocyanate                       | 593-84-0 | DNEL      | 1,092 mg/m <sup>3</sup> | human, inhalatory                  | worker (industry) | chronic - systemic effects |
| Guanidine thiocyanate                       | 593-84-0 | DNEL      | 3,28 mg/m <sup>3</sup>  | human, inhalatory                  | worker (industry) | acute - systemic effects   |
| Guanidine thiocyanate                       | 593-84-0 | DNEL      | 0,31 mg/kg bw/day       | human, dermal                      | worker (industry) | chronic - systemic effects |



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| Relevant PNECs of components of the mixture |          |           |                 |                       |                              |                              |
|---|----------|-----------|-----------------|-----------------------|------------------------------|------------------------------|
| Name of substance                           | CAS No   | End-point | Threshold level | Organism              | Environmental compartment    | Exposure time                |
| Guanidine thiocyanate                       | 593-84-0 | PNEC      | 42,4 µg/l       | aquatic organisms     | freshwater                   | short-term (single instance) |
| Guanidine thiocyanate                       | 593-84-0 | PNEC      | 4,24 µg/l       | aquatic organisms     | marine water                 | short-term (single instance) |
| Guanidine thiocyanate                       | 593-84-0 | PNEC      | 20 mg/l         | aquatic organisms     | sewage treatment plant (STP) | short-term (single instance) |
| Guanidine thiocyanate                       | 593-84-0 | PNEC      | 165 µg/kg       | aquatic organisms     | freshwater sediment          | short-term (single instance) |
| Guanidine thiocyanate                       | 593-84-0 | PNEC      | 16,5 µg/kg      | aquatic organisms     | marine sediment              | short-term (single instance) |
| Guanidine thiocyanate                       | 593-84-0 | PNEC      | 8,03 µg/kg      | terrestrial organisms | soil                         | short-term (single instance) |

## 8.2 Exposure controls

### Individual protection measures (personal protective equipment)

#### Eye/face protection



Use safety goggle with side protection. Wear face protection.

#### Skin protection



#### • hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

#### • type of material

NBR (Nitrile rubber)

#### • material thickness

>0,11 mm

#### • breakthrough times of the glove material

>480 minutes (permeation: level 6)

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### • other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

### Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: A (against organic gases and vapours with a boiling point of > 65 °C , colour code: Brown).

### Environmental exposure controls

Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|  |   |
|--|---|
| Physical state   | liquid  |
| Colour   | colourless                                    |
| Odour  | characteristic                                |
| Melting point/freezing point                             | not determined                                |
| Boiling point or initial boiling point and boiling range | ~100 °C at 1.013 hPa                          |
| Flammability   | non-combustible                               |
| Lower and upper explosion limit                          | not determined                                |
| Flash point  | not determined                                |
| Auto-ignition temperature                                | not determined                                |
| Decomposition temperature                                | not relevant                                  |
| pH (value)   | not determined                                |
| Kinematic viscosity                                      | not determined                                |
| <u>Solubility(ies)</u>                                   |   |
| Water solubility   | miscible in any proportion                    |
| <u>Partition coefficient</u>                             |   |
| Partition coefficient n-octanol/water (log value):       | this information is not available             |
| Vapour pressure  | not determined                                |
| <u>Density and/or relative density</u>                   |   |
| Density  | 1,145 g/cm <sup>3</sup> at 20 °C              |
| Relative vapour density                                  | information on this property is not available |

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Particle characteristics not relevant (liquid)

### Other safety parameters

Oxidising properties none

## 9.2 Other information

Information with regard to physical hazard classes: hazard classes acc. to GHS (physical hazards): not relevant

Other safety characteristics:

Miscibility completely miscible with water

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is not reactive under normal ambient conditions.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### 10.3 Possibility of hazardous reactions

**Dangerous/dangerous reactions with:** Acids

### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

### 10.5 Incompatible materials

There is no additional information.

#### **Release of toxic materials with**

Acids.

### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Test data are not available for the complete mixture.

#### **Classification procedure**

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

#### **Classification acc. to GHS**

##### **Acute toxicity**

Harmful if swallowed. Harmful in contact with skin. Harmful if inhaled.

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article number:

| Acute toxicity  |          |               |         |        |        |
|-----------------|----------|---------------|---------|--------|--------|
| Exposure route  | Endpoint | Value         | Species | Method | Source |
| inhalation: gas | LC50     | 4.500 ppmV/4h | monkey  |        |        |

| Acute toxicity estimate (ATE) of components of the mixture |          |                       |             |
|--|----------|-----------------------|-------------|
| Name of substance  | CAS No   | Exposure route        | ATE         |
| Guanidine thiocyanate                                      | 593-84-0 | oral                  | 593 mg/kg   |
| Guanidine thiocyanate                                      | 593-84-0 | dermal                | 1.100 mg/kg |
| Guanidine thiocyanate                                      | 593-84-0 | inhalation: dust/mist | 1,5 mg/l/4h |

| Acute toxicity of components of the mixture |          |                |          |           |         |
|---|----------|----------------|----------|-----------|---------|
| Name of substance                           | CAS No   | Exposure route | Endpoint | Value     | Species |
| Guanidine thiocyanate                       | 593-84-0 | oral           | LD50     | 593 mg/kg | rat     |

### Skin corrosion/irritation

Causes severe skin burns and eye damage.

### Serious eye damage/eye irritation

Causes serious eye damage.

### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

### Carcinogenicity

Shall not be classified as carcinogenic.

### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

### Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

### Symptoms related to the physical, chemical and toxicological characteristics

#### • If swallowed

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects)

#### • If in eyes

causes burns, Causes serious eye damage, risk of blindness

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- **If inhaled**

Data are not available.

- **If on skin**

causes severe burns, causes poorly healing wounds

- **Other information**

none

### 11.2 Endocrine disrupting properties

None of the ingredients are listed.

### 11.3 Information on other hazards

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

Harmful to aquatic life with long lasting effects.

| Aquatic toxicity (acute) of components of the mixture |          |          |           |                       |               |
|---|----------|----------|-----------|-----------------------|---------------|
| Name of substance                                     | CAS No   | Endpoint | Value     | Species               | Exposure time |
| Guanidine thiocyanate                                 | 593-84-0 | LC50     | 89,1 mg/l | fish                  | 96 h          |
| Guanidine thiocyanate                                 | 593-84-0 | EC50     | 42,4 mg/l | aquatic invertebrates | 48 h          |
| Guanidine thiocyanate                                 | 593-84-0 | ErC50    | 130 mg/l  | algae                 | 72 h          |

| Aquatic toxicity (chronic) of components of the mixture |          |          |           |                |               |
|---|----------|----------|-----------|----------------|---------------|
| Name of substance                                       | CAS No   | Endpoint | Value     | Species        | Exposure time |
| Guanidine thiocyanate                                   | 593-84-0 | EC50     | >185 mg/l | microorganisms | 28 d          |

### 12.2 Persistence and degradability

| Degradability of components of the mixture |          |                           |                  |      |        |        |
|--|----------|---------------------------|------------------|------|--------|--------|
| Name of substance                          | CAS No   | Process                   | Degradation rate | Time | Method | Source |
| Guanidine thiocyanate                      | 593-84-0 | DOC removal               | 46 %             | 28 d |        | ECHA   |
| Guanidine thiocyanate                      | 593-84-0 | carbon dioxide generation | 32 %             | 28 d |        | ECHA   |

### 12.3 Bioaccumulative potential

Data are not available.

| Bioaccumulative potential of components of the mixture |          |     |                              |          |
|--|----------|-----|------------------------------|----------|
| Name of substance                                      | CAS No   | BCF | Log KOW                      | BOD5/COD |
| Guanidine thiocyanate                                  | 593-84-0 |     | -1,5 (pH value: ≥6,2, 20 °C) |          |

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### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

Data are not available.

### 12.6 Endocrine disrupting properties

None of the ingredients are listed.

### 12.7 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

#### Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

#### Properties of waste which render it hazardous

- HP 4** irritant - skin irritation and eye damage
- HP 6** acute toxicity
- HP 8** corrosive
- HP 12** release of an acute toxic gas
- HP 14** ecotoxic

### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

## SECTION 14: Transport information

### 14.1 UN number or ID number

|           |         |
|-----------|---------|
| ADRRID    | UN 1760 |
| IMDG-Code | UN 1760 |
| ICAO-TI   | UN 1760 |

### 14.2 UN proper shipping name

|           |                          |
|-----------|--------------------------|
| ADRRID    | CORROSIVE LIQUID, N.O.S. |
| IMDG-Code | CORROSIVE LIQUID, N.O.S. |
| ICAO-TI   | Corrosive liquid, n.o.s. |



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article number:

|   |   |
|---|---|
| Technical name (hazardous ingredients)  | Guanidine thiocyanate   |
| <b>14.3 Transport hazard class(es)</b>  |   |
| ADRRID  | 8   |
| IMDG-Code   | 8   |
| ICAO-TI   | 8   |
| <b>14.4 Packing group</b>   |   |
| ADRRID  | II  |
| IMDG-Code   | II  |
| ICAO-TI   | II  |
| <b>14.5 Environmental hazards</b>   | non-environmentally hazardous acc. to the dangerous goods regulations           |
| <b>14.6 Special precautions for user</b>  |   |
| Provisions for dangerous goods (ADR) should be complied within the premises.                                    |   |
| <b>14.7 Maritime transport in bulk according to IMO instruments</b>   |   |
| The cargo is not intended to be carried in bulk.  |   |
| <b>14.8 Information for each of the UN Model Regulations</b>  |   |
| <b>Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)Additional information</b>   |   |
| Proper shipping name  | CORROSIVE LIQUID, N.O.S.  |
| Particulars in the transport document   | UN1760, CORROSIVE LIQUID, N.O.S., (contains: Guanidine thiocyanate), 8, II, (E) |
| Classification code   | C9  |
| Danger label(s)   | 8   |
|                              |   |
| Special provisions (SP)   | 274   |
| Excepted quantities (EQ)  | E2  |
| Limited quantities (LQ)   | 1 L   |
| Transport category (TC)   | 2   |
| Tunnel restriction code (TRC)   | E   |
| Hazard identification No  | 80  |
| <b>Emergency Action Code</b>  | 2X  |
| <b>Regulations concerning the International Carriage of Dangerous Goods by Rail (RID)Additional information</b> |   |
| <b>Classification code</b>  | C9  |
| <b>Danger label(s)</b>  | 8   |
|                              |   |

# Safety data sheet

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## Lysis Buffer LSR

article number:

|                                 |     |
|---------------------------------|-----|
| <b>Special provisions (SP)</b>  | 274 |
| <b>Excepted quantities (EQ)</b> | E2  |
| <b>Limited quantities (LQ)</b>  | 1 L |
| <b>Transport category (TC)</b>  | 2   |
| <b>Hazard identification No</b> | 80  |

### International Maritime Dangerous Goods Code (IMDG) - Additional information

|  |  |
|--|--|
| Proper shipping name                     | CORROSIVE LIQUID, N.O.S.   |
| Particulars in the shipper's declaration | UN1760, CORROSIVE LIQUID, N.O.S., (contains: Guanidine thiocyanate), 8, II |
| Marine pollutant                         | -  |
| Danger label(s)                          | 8  |



|                          |          |
|--------------------------|----------|
| Special provisions (SP)  | 274      |
| Excepted quantities (EQ) | E2       |
| Limited quantities (LQ)  | 1 L      |
| EmS                      | F-A, S-B |
| Stowage category         | B        |

### International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

|  |  |
|--|--|
| Proper shipping name                     | Corrosive liquid, n.o.s.   |
| Particulars in the shipper's declaration | UN1760, Corrosive liquid, n.o.s., (contains: Guanidine thiocyanate), 8, II |
| Danger label(s)                          | 8  |



|                          |       |
|--------------------------|-------|
| Special provisions (SP)  | A3    |
| Excepted quantities (EQ) | E2    |
| Limited quantities (LQ)  | 0,5 L |

## SECTION 15: Regulatory information

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

#### Relevant provisions of the European Union (EU)

##### Seveso Directive

| 2012/18/EU (Seveso III) |                                       |   |       |
|-------------------------|---------------------------------------|---|-------|
| No                      | Dangerous substance/hazard categories | Qualifying quantity (tonnes) for the application of lower and upper-tier requirements | Notes |
|                         | not assigned                          |   |       |



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## Lysis Buffer LSR

article number:

### Deco-Paint Directive

|             |              |
|-------------|--------------|
| VOC content | 0 %<br>0 g/l |
|-------------|--------------|

### Industrial Emissions Directive (IED)

|  |       |
|--|-------|
| VOC content                                | 0 %   |
| VOC content (Water content was discounted) | 0 g/l |

### Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

### Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

### Water Framework Directive (WFD)

none of the ingredients are listed

### Regulation on the marketing and use of explosives precursors

none of the ingredients are listed

### Regulation on drug precursors

none of the ingredients are listed

### Regulation on substances that deplete the ozone layer (ODS)

none of the ingredients are listed

### Regulation concerning the export and import of hazardous chemicals (PIC)

none of the ingredients are listed

### Regulation on persistent organic pollutants (POP)

none of the ingredients are listed

### National regulations(GB)

### Restrictions according to GB REACH, Annex 17

none of the ingredients are listed

| Dangerous substances with restrictions (GB REACH, Annex 17) |  |        |    |
|---|--|--------|----|
| Name of substance   | Name acc. to inventory   | CAS No | No |
| Lysis Buffer LSR  | this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC |        | 3  |

### Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

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## Lysis Buffer LSR

article number:

### National inventories

| Country | Inventory  | Status                                 |
|---------|------------|--|
| AU      | AIIC       | all ingredients are listed             |
| CA      | DSL        | all ingredients are listed             |
| CN      | IECSC      | all ingredients are listed             |
| EU      | ECSI       | all ingredients are listed             |
| EU      | REACH Reg. | all ingredients are listed             |
| JP      | CSCL-ENCS  | not all ingredients are listed         |
| KR      | KECI       | not all ingredients are listed         |
| MX      | INSQ       | not all ingredients are listed         |
| NZ      | NZIoC      | all ingredients are listed             |
| PH      | PICCS      | all ingredients are listed             |
| TW      | TCSI       | all ingredients are listed             |
| US      | TSCA       | all ingredients are listed as "ACTIVE" |

#### Legend

|            |   |
|------------|---|
| AIIC       | Australian Inventory of Industrial Chemicals                            |
| CSCL-ENCS  | List of Existing and New Chemical Substances (CSCL-ENCS)                |
| DSL        | Domestic Substances List (DSL)  |
| ECSI       | EC Substance Inventory (EINECS, ELINCS, NLP)                            |
| IECSC      | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ       | National Inventory of Chemical Substances                               |
| KECI       | Korea Existing Chemicals Inventory                                      |
| NZIoC      | New Zealand Inventory of Chemicals                                      |
| PICCS      | Philippine Inventory of Chemicals and Chemical Substances (PICCS)       |
| REACH Reg. | REACH registered substances   |
| TCSI       | Taiwan Chemical Substance Inventory                                     |
| TSCA       | Toxic Substance Control Act   |

## 15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

| Section | Former entry (text/value)   | Actual entry (text/value)   | Safety-relevant |
|---------|---|---|-----------------|
| 2.2     | Labelling of packages where the contents do not exceed 125 ml:<br>Signal word: Danger |   | yes             |
| 2.2     |   | Labelling of packages where the contents do not exceed 125 ml:<br>change in the listing (table) | yes             |
| 2.2     |   | Labelling of packages where the contents do not exceed 125 ml:<br>change in the listing (table) | yes             |
| 2.2     |   | Labelling of packages where the contents do not exceed 125 ml:<br>change in the listing (table) | yes             |

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## Lysis Buffer LSR

article number:

| Section | Former entry (text/value)  | Actual entry (text/value)  | Safety-relevant |
|---------|--|--|-----------------|
| 2.2     |  | Labelling of packages where the contents do not exceed 125 ml:<br>change in the listing (table)          | yes             |
| 2.2     | contains:<br>Guanidine thiocyanate   |  | yes             |
| 14.8    |  | Regulations concerning the International Carriage of Dangerous Goods by Rail (RID)Additional information | yes             |
| 14.8    |  | Classification code:<br>C9   | yes             |
| 14.8    |  | Danger label(s):<br>8  | yes             |
| 14.8    |  | Danger label(s):<br>change in the listing (table)  | yes             |
| 14.8    |  | Special provisions (SP):<br>274  | yes             |
| 14.8    |  | Excepted quantities (EQ):<br>E2  | yes             |
| 14.8    |  | Limited quantities (LQ):<br>1 L  | yes             |
| 14.8    |  | Transport category (TC):<br>2  | yes             |
| 14.8    |  | Hazard identification No:<br>80  | yes             |
| 15.1    | Restrictions according to REACH, Annex XVII  |  | yes             |
| 15.1    |  | Dangerous substances with restrictions (REACH, Annex XVII):<br>change in the listing (table)             | yes             |
| 15.1    | List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list:<br>None of the ingredients are listed. |  | yes             |
| 15.1    | VOC content:<br>0 %  | VOC content:<br>0 %<br>0 g/l   | yes             |
| 15.1    |  | VOC content (Water content was discounted):<br>0 g/l   | yes             |
| 15.1    |  | National regulations(GB)   | yes             |
| 15.1    |  | Restrictions according to GB REACH, Annex 17:<br>none of the ingredients are listed                      | yes             |
| 15.1    |  | Dangerous substances with restrictions (GB REACH, Annex 17):<br>change in the listing (table)            | yes             |
| 15.1    |  | National inventories:<br>change in the listing (table)   | yes             |

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## Lysis Buffer LSR

article number:

### Abbreviations and acronyms

| Abbr.           | Descriptions of used abbreviations  |
|-----------------|---|
| Acute Tox.      | Acute toxicity  |
| ADR             | Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)                     |
| Aquatic Chronic | Hazardous to the aquatic environment - chronic hazard   |
| ATE             | Acute Toxicity Estimate   |
| BCF             | Bioconcentration factor   |
| BOD             | Biochemical Oxygen Demand   |
| CAS             | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)  |
| COD             | Chemical oxygen demand  |
| DGR             | Dangerous Goods Regulations (see IATA/DGR)  |
| DNEL            | Derived No-Effect Level   |
| EC50            | Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval  |
| EC No           | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union) |
| EINECS          | European Inventory of Existing Commercial Chemical Substances   |
| ELINCS          | European List of Notified Chemical Substances   |
| EmS             | Emergency Schedule  |
| ErC50           | ≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control            |
| Eye Dam.        | Seriously damaging to the eye   |
| Eye Irrit.      | Irritant to the eye   |
| GB REACH        | The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)  |
| GHS             | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations   |
| IATA            | International Air Transport Association   |
| IATA/DGR        | Dangerous Goods Regulations (DGR) for the air transport (IATA)  |
| ICAO            | International Civil Aviation Organization   |
| ICAO-TI         | Technical instructions for the safe transport of dangerous goods by air   |
| IMDG            | International Maritime Dangerous Goods Code   |
| IMDG-Code       | International Maritime Dangerous Goods Code   |
| index No        | The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008  |
| LC50            | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval                                 |
| LD50            | Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval  |
| log KOW         | n-Octanol/water   |
| NLP             | No-Longer Polymer   |

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## Lysis Buffer LSR

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| Abbr.       | Descriptions of used abbreviations  |
|-------------|---|
| PBT         | Persistent, Bioaccumulative and Toxic   |
| PNEC        | Predicted No-Effect Concentration   |
| REACH       | Registration, Evaluation, Authorisation and Restriction of Chemicals  |
| RID         | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail) |
| Skin Corr.  | Corrosive to skin   |
| Skin Irrit. | Irritant to skin  |
| VOC         | Volatile Organic Compounds  |
| vPvB        | Very Persistent and very Bioaccumulative  |

### Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### Classification procedure

Physical and chemical properties. The classification is based on tested mixture. Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

### List of relevant phrases (code and full text as stated in section 2 and 3)

| Code | Text   |
|------|--|
| H302 | Harmful if swallowed.                              |
| H312 | Harmful in contact with skin.                      |
| H314 | Causes severe skin burns and eye damage.           |
| H318 | Causes serious eye damage.                         |
| H332 | Harmful if inhaled.                                |
| H412 | Harmful to aquatic life with long lasting effects. |

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

# Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Lysis Buffer LSK

article number:  
Version: **1.0 en**

date of compilation: 2023-04-03

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

### 1.1 Product identifier

Identification of the substance **Lysis Buffer LSK**

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

Relevant identified uses: Laboratory and analytical use  
Laboratory chemical

Uses advised against: Do not use for private purposes (household).  
Food, drink and animal feedingstuffs.

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

Carl Roth GmbH + Co KG  
Schoemperlenstr. 3-5  
D-76185 Karlsruhe  
Germany

**Telephone:**+49 (0) 721 - 56 06 0

**Telefax:** +49 (0) 721 - 56 06 149

**e-mail:** sicherheit@carlroth.de

**Website:** www.carlroth.de

Competent person responsible for the safety data sheet: :Department Health, Safety and Environment

**e-mail (competent person):** **sicherheit@carlroth.de**

### 1.4 Emergency telephone number

| Name  | Street    | Postal code/city     | Telephone    | Website |
|---|-----------|----------------------|--------------|---------|
| National Poisons Information Service<br>City Hospital | Dudley Rd | B187QH<br>Birmingham | 844 892 0111 |         |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification acc. to GHS

| Section | Hazard class                      | Cat-egory | Hazard class and category | Hazard statement |
|---------|-----------------------------------|-----------|---------------------------|------------------|
| 3.10    | Acute toxicity (oral)             | 4         | Acute Tox. 4              | H302             |
| 3.2     | Skin corrosion/irritation         | 2         | Skin Irrit. 2             | H315             |
| 3.3     | Serious eye damage/eye irritation | 2         | Eye Irrit. 2              | H319             |

For full text of abbreviations: see SECTION 16

### 2.2 Label elements

**Labelling**

**Signal word**

**Warning**

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## Lysis Buffer LSK

article number:

### Pictograms

GHS07



### Hazard statements

H302 Harmful if swallowed  
H315 Causes skin irritation  
H319 Causes serious eye irritation

### Precautionary statements

#### Precautionary statements - prevention

P280 Wear protective gloves/eye protection

#### Precautionary statements - response

P302+P352 IF ON SKIN: Wash with plenty of 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

**Hazardous ingredients for labelling:** Guanidine hydrochloride

## 2.3 Other hazards

### Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance in a concentration of  $\geq 0,1\%$ .

### Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\geq 0,1\%$ .

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

not relevant (mixture)

### 3.2 Mixtures

#### Description of the mixture

| Name of substance       | Identifier  | Wt%     | Classification acc. to GHS  | Pictograms | Notes  |
|-------------------------|---|---------|---|------------|--------|
| Guanidine hydrochloride | CAS No<br>50-01-1<br><br>EC No<br>200-002-3<br><br>Index No<br>607-148-00-0 | 25 - 50 | Acute Tox. 4 / H302<br>Acute Tox. 4 / H332<br>Skin Irrit. 2 / H315<br>Eye Irrit. 2 / H319 |            | GHS-HC |

#### Notes

GHS-HC: Harmonised classification (the classification of the substance corresponds to the entry in the list according to 1272/2008/EC, Annex VI)

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| Name of substance       | Identifier                                  | Specific Conc. Limits | M-Factors | ATE                         | Exposure route                    |
|-------------------------|---|-----------------------|-----------|-----------------------------|-----------------------------------|
| Guanidine hydrochloride | CAS No<br>50-01-1<br><br>EC No<br>200-002-3 | -                     | -         | 556,5 mg/kg<br>3,181 mg//4h | oral<br>inhalation: dust/<br>mist |

For full text of abbreviations: see SECTION 16

## SECTION 4: First aid measures

### 4.1 Description of first aid measures



#### General notes

Take off contaminated clothing.

#### Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following skin contact

Rinse skin with water/shower. In case of skin irritation, consult a physician.

#### Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

#### Following ingestion

Rinse mouth with water (only if the person is conscious). Call a doctor.

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

Vomiting, Irritation

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

none

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media



#### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings  
water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

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

Ingredients of the mixture combustible. The product itself does not burn.



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## Lysis Buffer LSK

article number:

### Hazardous combustion products

In case of fire may be liberated: Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

## SECTION 6: Accidental release measures

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



#### For non-emergency personnel

Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

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

#### Advice on how to contain a spill

Covering of drains.

#### Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

#### Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

No special measures are necessary.

#### Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

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

Keep container tightly closed.

#### Incompatible substances or mixtures

Observe hints for combined storage.

#### Consideration of other advice:

#### Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

### 7.3 Specific end use(s)

No information available.

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## Lysis Buffer LSK

article number:

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

##### National limit values

##### Occupational exposure limit values (Workplace Exposure Limits)

This information is not available.

| Relevant DNELs of components of the mixture |         |           |                        |                                    |                   |                            |
|---|---------|-----------|------------------------|------------------------------------|-------------------|----------------------------|
| Name of substance                           | CAS No  | End-point | Threshold level        | Protection goal, route of exposure | Used in           | Exposure time              |
| Guanidine hydrochloride                     | 50-01-1 | DNEL      | 3,5 mg/m <sup>3</sup>  | human, inhalatory                  | worker (industry) | chronic - systemic effects |
| Guanidine hydrochloride                     | 50-01-1 | DNEL      | 10,5 mg/m <sup>3</sup> | human, inhalatory                  | worker (industry) | acute - systemic effects   |
| Guanidine hydrochloride                     | 50-01-1 | DNEL      | 1 mg/kg bw/day         | human, dermal                      | worker (industry) | chronic - systemic effects |

#### 8.2 Exposure controls

##### Individual protection measures (personal protective equipment)

##### Eye/face protection



Use safety goggle with side protection.

##### Skin protection



##### • hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

##### • type of material

NBR (Nitrile rubber)

##### • material thickness

>0,11 mm

##### • breakthrough times of the glove material

>480 minutes (permeation: level 6)

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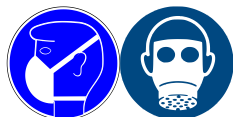
## Lysis Buffer LSK

article number:

### • other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

### Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: A (against organic gases and vapours with a boiling point of > 65 °C , colour code: Brown).

### Environmental exposure controls

Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|  |   |
|--|---|
| Physical state   | liquid  |
| Colour   | clear   |
| Odour  | characteristic                                |
| Melting point/freezing point                             | not determined                                |
| Boiling point or initial boiling point and boiling range | 100 °C at 1.013 hPa                           |
| Flammability   | non-combustible                               |
| Lower and upper explosion limit                          | not determined                                |
| Flash point  | not determined                                |
| Auto-ignition temperature                                | not determined                                |
| Decomposition temperature                                | not relevant                                  |
| pH (value)   | not determined                                |
| Kinematic viscosity                                      | not determined                                |
| <u>Solubility(ies)</u>                                   |   |
| Water solubility   | miscible in any proportion                    |
| <u>Partition coefficient</u>                             |   |
| Partition coefficient n-octanol/water (log value):       | this information is not available             |
| Vapour pressure  | 23 hPa at 20 °C                               |
| <u>Density and/or relative density</u>                   |   |
| Density  | 1,15 g/cm <sup>3</sup> at 20 °C               |
| Relative vapour density                                  | information on this property is not available |

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## Lysis Buffer LSK

article number:

Particle characteristics not relevant (liquid)

### Other safety parameters

Oxidising properties none

## 9.2 Other information

Information with regard to physical hazard classes: hazard classes acc. to GHS (physical hazards): not relevant

Other safety characteristics:

Miscibility completely miscible with water

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is not reactive under normal ambient conditions.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

### 10.5 Incompatible materials

There is no additional information.

### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Test data are not available for the complete mixture.

#### Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

#### Classification acc. to GHS

#### Acute toxicity

Harmful if swallowed.

GHS of the United Nations, annex 4. May be harmful in contact with skin.

| Acute toxicity estimate (ATE) of components of the mixture |         |                       |               |
|--|---------|-----------------------|---------------|
| Name of substance  | CAS No  | Exposure route        | ATE           |
| Guanidine hydrochloride                                    | 50-01-1 | oral                  | 556,5 mg/kg   |
| Guanidine hydrochloride                                    | 50-01-1 | inhalation: dust/mist | 3,181 mg/l/4h |

# Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Lysis Buffer LSK

article number:

| Acute toxicity of components of the mixture |         |                          |          |               |         |
|---|---------|--------------------------|----------|---------------|---------|
| Name of substance                           | CAS No  | Exposure route           | Endpoint | Value         | Species |
| Guanidine hydrochloride                     | 50-01-1 | oral                     | LD50     | 556,5 mg/kg   | rat     |
| Guanidine hydrochloride                     | 50-01-1 | inhalation:<br>dust/mist | LC50     | 3,181 mg/l/4h | rat     |
| Guanidine hydrochloride                     | 50-01-1 | dermal                   | LD50     | >2.000 mg/kg  | rabbit  |

### Skin corrosion/irritation

Causes skin irritation.

### Serious eye damage/eye irritation

Causes serious eye irritation.

### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

### Carcinogenicity

Shall not be classified as carcinogenic.

### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

### Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

### Symptoms related to the physical, chemical and toxicological characteristics

#### • If swallowed

Data are not available.

#### • If in eyes

Causes serious eye irritation

#### • If inhaled

Data are not available.

#### • If on skin

causes skin irritation

#### • Other information

none

## 11.2 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\geq 0,1\%$ .

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### 11.3 Information on other hazards

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

| Aquatic toxicity (acute) of components of the mixture |         |          |           |                       |               |
|---|---------|----------|-----------|-----------------------|---------------|
| Name of substance                                     | CAS No  | Endpoint | Value     | Species               | Exposure time |
| Guanidine hydrochloride                               | 50-01-1 | EC50     | 70,2 mg/l | aquatic invertebrates | 48 h          |
| Guanidine hydrochloride                               | 50-01-1 | ErC50    | 33,5 mg/l | algae                 | 72 h          |

### 12.2 Persistence and degradability

Data are not available.

### 12.3 Bioaccumulative potential

Data are not available.

| Bioaccumulative potential of components of the mixture |         |     |                              |          |
|--|---------|-----|------------------------------|----------|
| Name of substance                                      | CAS No  | BCF | Log KOW                      | BOD5/COD |
| Guanidine hydrochloride                                | 50-01-1 |     | <-1,7 (pH value: 7,4, 20 °C) |          |

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB. Does not contain a PBT-/vPvB-substance in a concentration of  $\geq 0,1\%$ .

### 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\geq 0,1\%$ .

### 12.7 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains.

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### Waste treatment of containers/packagings

Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

#### Properties of waste which render it hazardous

**HP 4** irritant - skin irritation and eye damage

**HP 6** acute toxicity

### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-contaminated packages may be recycled.

## SECTION 14: Transport information

|      |                            |   |
|------|----------------------------|---|
| 14.1 | UN number or ID number     | not subject to transport regulations                                  |
| 14.2 | UN proper shipping name    | not assigned  |
| 14.3 | Transport hazard class(es) | none  |
| 14.4 | Packing group              | not assigned  |
| 14.5 | Environmental hazards      | non-environmentally hazardous acc. to the dangerous goods regulations |

### 14.6 Special precautions for user

There is no additional information.

### 14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

### 14.8 Information for each of the UN Model Regulations

#### International Maritime Dangerous Goods Code (IMDG) - Additional information

Not subject to IMDG.

#### International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Not subject to ICAO-IATA.

## SECTION 15: Regulatory information

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

#### Relevant provisions of the European Union (EU)

##### Seveso Directive

| 2012/18/EU (Seveso III) |                                       |   |       |
|-------------------------|---------------------------------------|---|-------|
| No                      | Dangerous substance/hazard categories | Qualifying quantity (tonnes) for the application of lower and upper-tier requirements | Notes |
|                         | not assigned                          |   |       |

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article number:

### Deco-Paint Directive

|  |       |
|--|-------|
| VOC content                                | 0 %   |
| VOC content (Water content was discounted) | 0 g/l |

### Industrial Emissions Directive (IED)

|  |       |
|--|-------|
| VOC content                                | 0 %   |
| VOC content (Water content was discounted) | 0 g/l |

### Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

### Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

### Water Framework Directive (WFD)

| List of pollutants (WFD) |   |        |           |         |
|--------------------------|---|--------|-----------|---------|
| Name of substance        | Name acc. to inventory  | CAS No | Listed in | Remarks |
| Guanidine hydrochloride  | Organohalogen compounds and substances which may form such compounds in the aquatic environment |        | a)        |         |

#### Legend

A) Indicative list of the main pollutants

### Regulation on the marketing and use of explosives precursors

none of the ingredients are listed

### Regulation on drug precursors

none of the ingredients are listed

### Regulation on substances that deplete the ozone layer (ODS)

none of the ingredients are listed

### Regulation concerning the export and import of hazardous chemicals (PIC)

none of the ingredients are listed

### Regulation on persistent organic pollutants (POP)

none of the ingredients are listed

### Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.



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article number:

### National inventories

| Country | Inventory  | Status                                 |
|---------|------------|--|
| AU      | AIIC       | all ingredients are listed             |
| CA      | DSL        | all ingredients are listed             |
| CN      | IECSC      | all ingredients are listed             |
| EU      | ECSI       | all ingredients are listed             |
| EU      | REACH Reg. | all ingredients are listed             |
| JP      | CSCL-ENCS  | not all ingredients are listed         |
| KR      | KECI       | all ingredients are listed             |
| MX      | INSQ       | all ingredients are listed             |
| NZ      | NZIoC      | all ingredients are listed             |
| PH      | PICCS      | all ingredients are listed             |
| TW      | TCSI       | all ingredients are listed             |
| US      | TSCA       | all ingredients are listed as "ACTIVE" |

#### Legend

|            |   |
|------------|---|
| AIIC       | Australian Inventory of Industrial Chemicals                            |
| CSCL-ENCS  | List of Existing and New Chemical Substances (CSCL-ENCS)                |
| DSL        | Domestic Substances List (DSL)  |
| ECSI       | EC Substance Inventory (EINECS, ELINCS, NLP)                            |
| IECSC      | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ       | National Inventory of Chemical Substances                               |
| KECI       | Korea Existing Chemicals Inventory                                      |
| NZIoC      | New Zealand Inventory of Chemicals                                      |
| PICCS      | Philippine Inventory of Chemicals and Chemical Substances (PICCS)       |
| REACH Reg. | REACH registered substances   |
| TCSI       | Taiwan Chemical Substance Inventory                                     |
| TSCA       | Toxic Substance Control Act   |

## 15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

## SECTION 16: Other information

### Abbreviations and acronyms

| Abbr.      | Descriptions of used abbreviations  |
|------------|---|
| Acute Tox. | Acute toxicity  |
| ADR        | Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road) |
| ATE        | Acute Toxicity Estimate   |
| BCF        | Bioconcentration factor   |
| BOD        | Biochemical Oxygen Demand   |
| CAS        | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)  |
| COD        | Chemical oxygen demand  |
| DGR        | Dangerous Goods Regulations (see IATA/DGR)  |
| DNEL       | Derived No-Effect Level   |

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| Abbr.       | Descriptions of used abbreviations  |
|-------------|---|
| EC50        | Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval  |
| EC No       | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union) |
| EINECS      | European Inventory of Existing Commercial Chemical Substances   |
| ELINCS      | European List of Notified Chemical Substances   |
| ErC50       | ≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control            |
| Eye Dam.    | Seriously damaging to the eye   |
| Eye Irrit.  | Irritant to the eye   |
| GHS         | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations   |
| IATA        | International Air Transport Association   |
| IATA/DGR    | Dangerous Goods Regulations (DGR) for the air transport (IATA)  |
| ICAO        | International Civil Aviation Organization   |
| IMDG        | International Maritime Dangerous Goods Code   |
| index No    | The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008  |
| LC50        | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval                                 |
| LD50        | Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval  |
| log KOW     | n-Octanol/water   |
| NLP         | No-Longer Polymer   |
| PBT         | Persistent, Bioaccumulative and Toxic   |
| REACH       | Registration, Evaluation, Authorisation and Restriction of Chemicals  |
| RID         | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)           |
| Skin Corr.  | Corrosive to skin   |
| Skin Irrit. | Irritant to skin  |
| VOC         | Volatile Organic Compounds  |
| vPvB        | Very Persistent and very Bioaccumulative  |

### Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### Classification procedure

Physical and chemical properties. The classification is based on tested mixture.  
Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

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### List of relevant phrases (code and full text as stated in section 2 and 3)

| Code | Text                           |
|------|--------------------------------|
| H302 | Harmful if swallowed.          |
| H315 | Causes skin irritation.        |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled.            |

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

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## Washing Buffer WSA

article number:  
Version: **5.0 en**  
Replaces version of: 2023-01-27  
Version: (4)

date of compilation: 2015-10-29  
Revision: 2023-03-29

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

### 1.1 Product identifier

Identification of the substance

**Washing Buffer WSA**

Article number

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

Relevant identified uses:

Laboratory chemical  
Laboratory and analytical use

Uses advised against:

Do not use for squirting or spraying. Do not use for products which come into direct contact with the skin. Do not use for private purposes (household). Food, drink and animal feedingstuffs.

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

Carl Roth GmbH + Co KG  
Schoemperlenstr. 3-5  
D-76185 Karlsruhe  
Germany

**Telephone:**+49 (0) 721 - 56 06 0

**Telefax:** +49 (0) 721 - 56 06 149

**e-mail:** [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

**Website:** [www.carlroth.de](http://www.carlroth.de)

Competent person responsible for the safety data sheet: Department Health, Safety and Environment

**e-mail (competent person):**

**[sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)**

### 1.4 Emergency telephone number

| Name  | Street    | Postal code/city     | Telephone    | Website |
|---|-----------|----------------------|--------------|---------|
| National Poisons Information Service<br>City Hospital | Dudley Rd | B187QH<br>Birmingham | 844 892 0111 |         |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification acc. to GHS

| Section | Hazard class                      | Cat-egory | Hazard class and category | Hazard statement |
|---------|-----------------------------------|-----------|---------------------------|------------------|
| 3.1O    | Acute toxicity (oral)             | 4         | Acute Tox. 4              | H302             |
| 3.1D    | Acute toxicity (dermal)           | 4         | Acute Tox. 4              | H312             |
| 3.1I    | Acute toxicity (inhal.)           | 4         | Acute Tox. 4              | H332             |
| 3.2     | Skin corrosion/irritation         | 1B        | Skin Corr. 1B             | H314             |
| 3.3     | Serious eye damage/eye irritation | 1         | Eye Dam. 1                | H318             |

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| Section | Hazard class  | Cat-egory | Hazard class and category | Hazard statement |
|---------|---|-----------|---------------------------|------------------|
| 4.1C    | Hazardous to the aquatic environment - chronic hazard | 3         | Aquatic Chronic 3         | H412             |

### Supplemental hazard information

| Code   | Supplemental hazard information             |
|--------|---|
| EUH032 | contact with acids liberates very toxic gas |

For full text of abbreviations: see SECTION 16

### The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. Spillage and fire water can cause pollution of watercourses.

## 2.2 Label elements

### Labelling

#### Signal word

**Danger**

#### Pictograms

GHS05, GHS07



#### Hazard statements

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled  
H314 Causes severe skin burns and eye damage  
H412 Harmful to aquatic life with long lasting effects

#### Precautionary statements

##### Precautionary statements - prevention

P280 Wear protective gloves/eye protection

##### Precautionary statements - response

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell  
P302+P352 IF ON SKIN: Wash with plenty of 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

#### Supplemental hazard information

EUH032 Contact with acids liberates very toxic gas.

**Hazardous ingredients for labelling:** Guanidine thiocyanate

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### 2.3 Other hazards

#### Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance in a concentration of  $\geq 0,1\%$ .

#### Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\geq 0,1\%$ .

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

not relevant (mixture)

### 3.2 Mixtures

#### Description of the mixture

| Name of substance     | Identifier   | Wt%     | Classification acc. to GHS   | Pictograms | Notes          |
|-----------------------|--|---------|--|------------|----------------|
| Guanidine thiocyanate | CAS No<br>593-84-0<br><br>EC No<br>209-812-1<br><br>Index No<br>615-004-00-3 | 25 - 50 | Acute Tox. 4 / H302<br>Acute Tox. 4 / H312<br>Acute Tox. 4 / H332<br>Skin Corr. 1B / H314<br>Eye Dam. 1 / H318<br>Aquatic Chronic 3 / H412<br>EUH032 |            | A(a)<br>GHS-HC |

#### Notes

A(a): The name of substance is a general description. It is required that the correct name is stated on the label  
GHS-HC: Harmonised classification (the classification of the substance corresponds to the entry in the list according to 1272/2008/EC, Annex VI)

| Name of substance     | Identifier                                   | Specific Conc. Limits | M-Factors | ATE                                     | Exposure route                              |
|-----------------------|--|-----------------------|-----------|---|---|
| Guanidine thiocyanate | CAS No<br>593-84-0<br><br>EC No<br>209-812-1 | -                     | -         | 593 mg/kg<br>1.100 mg/kg<br>1,5 mg/l/4h | oral<br>dermal<br>inhalation: dust/<br>mist |

For full text of abbreviations: see SECTION 16

## SECTION 4: First aid measures

### 4.1 Description of first aid measures



#### General notes

Take off immediately all contaminated clothing. Self-protection of the first aider.

#### Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following skin contact

Rinse skin with water/shower. In case of skin irritation, consult a physician.

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### Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye.

### Following ingestion

Rinse mouth with water (only if the person is conscious). Call a doctor.

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

Corrosion, Vomiting, Risk of blindness, Gastric perforation, Risk of serious damage to eyes

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

none

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media



#### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings  
water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

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

Ingredients of the mixture combustible. The product itself does not burn.

#### Hazardous combustion products

In case of fire may be liberated: Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Sulphur oxides (SO<sub>x</sub>), Hydrogen cyanide (HCN, prussic acid)

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Do not allow firefighting water to enter drains or water courses. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

## SECTION 6: Accidental release measures

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



#### For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

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article number:

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

#### Advice on how to contain a spill

Covering of drains.

#### Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

#### Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Handle and open container with care. Clear contaminated areas thoroughly.

#### Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

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

Keep container tightly closed.

#### Incompatible substances or mixtures

Observe hints for combined storage.

#### Consideration of other advice:

#### Ventilation requirements

Keep any substance that emits harmful vapours or gases in a place that allows these to be permanently extracted.

#### Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

### 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### National limit values

#### Occupational exposure limit values (Workplace Exposure Limits)

This information is not available.

| Relevant DNELs of components of the mixture |          |           |                         |                                    |                   |                            |
|---|----------|-----------|-------------------------|------------------------------------|-------------------|----------------------------|
| Name of substance                           | CAS No   | End-point | Threshold level         | Protection goal, route of exposure | Used in           | Exposure time              |
| Guanidine thiocyanate                       | 593-84-0 | DNEL      | 1,092 mg/m <sup>3</sup> | human, inhalatory                  | worker (industry) | chronic - systemic effects |
| Guanidine thiocyanate                       | 593-84-0 | DNEL      | 3,28 mg/m <sup>3</sup>  | human, inhalatory                  | worker (industry) | acute - systemic effects   |



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article number:

| Relevant DNELs of components of the mixture |          |           |                   |                                    |                   |                            |
|---|----------|-----------|-------------------|------------------------------------|-------------------|----------------------------|
| Name of substance                           | CAS No   | End-point | Threshold level   | Protection goal, route of exposure | Used in           | Exposure time              |
| Guanidine thiocyanate                       | 593-84-0 | DNEL      | 0,31 mg/kg bw/day | human, dermal                      | worker (industry) | chronic - systemic effects |

| Relevant PNECs of components of the mixture |          |           |                 |                       |                              |                              |
|---|----------|-----------|-----------------|-----------------------|------------------------------|------------------------------|
| Name of substance                           | CAS No   | End-point | Threshold level | Organism              | Environmental compartment    | Exposure time                |
| Guanidine thiocyanate                       | 593-84-0 | PNEC      | 42,4 µg/l       | aquatic organisms     | freshwater                   | short-term (single instance) |
| Guanidine thiocyanate                       | 593-84-0 | PNEC      | 4,24 µg/l       | aquatic organisms     | marine water                 | short-term (single instance) |
| Guanidine thiocyanate                       | 593-84-0 | PNEC      | 20 mg/l         | aquatic organisms     | sewage treatment plant (STP) | short-term (single instance) |
| Guanidine thiocyanate                       | 593-84-0 | PNEC      | 165 µg/kg       | aquatic organisms     | freshwater sediment          | short-term (single instance) |
| Guanidine thiocyanate                       | 593-84-0 | PNEC      | 16,5 µg/kg      | aquatic organisms     | marine sediment              | short-term (single instance) |
| Guanidine thiocyanate                       | 593-84-0 | PNEC      | 8,03 µg/kg      | terrestrial organisms | soil                         | short-term (single instance) |

## 8.2 Exposure controls

### Individual protection measures (personal protective equipment)

#### Eye/face protection



Use safety goggle with side protection. Wear face protection.

#### Skin protection



#### • hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

#### • type of material

NBR (Nitrile rubber)

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- **material thickness**

>0,11 mm

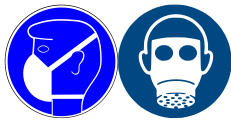
- **breakthrough times of the glove material**

>480 minutes (permeation: level 6)

- **other protection measures**

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

### Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: A (against organic gases and vapours with a boiling point of > 65 °C , colour code: Brown).

### Environmental exposure controls

Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|  |                                   |
|--|-----------------------------------|
| Physical state   | liquid                            |
| Colour   | colourless                        |
| Odour  | characteristic                    |
| Melting point/freezing point                             | not determined                    |
| Boiling point or initial boiling point and boiling range | 100 °C                            |
| Flammability   | non-combustible                   |
| Lower and upper explosion limit                          | not determined                    |
| Flash point  | not determined                    |
| Auto-ignition temperature                                | not determined                    |
| Decomposition temperature                                | not relevant                      |
| pH (value)   | not determined                    |
| Kinematic viscosity                                      | not determined                    |
| <u>Solubility(ies)</u>                                   |                                   |
| Water solubility   | miscible in any proportion        |
| <u>Partition coefficient</u>                             |                                   |
| Partition coefficient n-octanol/water (log value):       | this information is not available |
| Vapour pressure  | 23 hPa at 20 °C                   |

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## Washing Buffer WSA

article number:

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### Density and/or relative density

|                         |   |
|-------------------------|---|
| Density                 | 1,127 g/cm <sup>3</sup> at 20 °C              |
| Relative vapour density | information on this property is not available |

Particle characteristics not relevant (liquid)

### Other safety parameters

Oxidising properties none

## 9.2 Other information

Information with regard to physical hazard classes: hazard classes acc. to GHS (physical hazards): not relevant

Other safety characteristics:

Miscibility completely miscible with water

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is not reactive under normal ambient conditions.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### 10.3 Possibility of hazardous reactions

**Dangerous/dangerous reactions with:** Acids

### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

### 10.5 Incompatible materials

There is no additional information.

**Release of toxic materials with**

Acids.

### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Test data are not available for the complete mixture.

#### Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**Classification acc. to GHS**

# Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Washing Buffer WSA

article number:

### Acute toxicity

Harmful if swallowed. Harmful in contact with skin. Harmful if inhaled.

| Acute toxicity estimate (ATE) of components of the mixture |          |                       |             |
|--|----------|-----------------------|-------------|
| Name of substance  | CAS No   | Exposure route        | ATE         |
| Guanidine thiocyanate                                      | 593-84-0 | oral                  | 593 mg/kg   |
| Guanidine thiocyanate                                      | 593-84-0 | dermal                | 1.100 mg/kg |
| Guanidine thiocyanate                                      | 593-84-0 | inhalation: dust/mist | 1,5 mg/l/4h |

| Acute toxicity of components of the mixture |          |                |          |           |         |
|---|----------|----------------|----------|-----------|---------|
| Name of substance                           | CAS No   | Exposure route | Endpoint | Value     | Species |
| Guanidine thiocyanate                       | 593-84-0 | oral           | LD50     | 593 mg/kg | rat     |

### Skin corrosion/irritation

Causes severe skin burns and eye damage.

### Serious eye damage/eye irritation

Causes serious eye damage.

### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

### Carcinogenicity

Shall not be classified as carcinogenic.

### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

### Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

### Symptoms related to the physical, chemical and toxicological characteristics

#### • If swallowed

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects)

#### • If in eyes

causes burns, Causes serious eye damage, risk of blindness

#### • If inhaled

Data are not available.

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## Washing Buffer WSA

article number:

- **If on skin**

causes severe burns, causes poorly healing wounds

- **Other information**

none

### 11.2 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\geq 0,1\%$ .

### 11.3 Information on other hazards

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

Harmful to aquatic life with long lasting effects.

#### Aquatic toxicity (acute) of components of the mixture

| Name of substance     | CAS No   | Endpoint | Value     | Species               | Exposure time |
|-----------------------|----------|----------|-----------|-----------------------|---------------|
| Guanidine thiocyanate | 593-84-0 | LC50     | 89,1 mg/l | fish                  | 96 h          |
| Guanidine thiocyanate | 593-84-0 | EC50     | 42,4 mg/l | aquatic invertebrates | 48 h          |
| Guanidine thiocyanate | 593-84-0 | ErC50    | 130 mg/l  | algae                 | 72 h          |

#### Aquatic toxicity (chronic) of components of the mixture

| Name of substance     | CAS No   | Endpoint | Value     | Species        | Exposure time |
|-----------------------|----------|----------|-----------|----------------|---------------|
| Guanidine thiocyanate | 593-84-0 | EC50     | >185 mg/l | microorganisms | 28 d          |

### 12.2 Persistence and degradability

#### Degradability of components of the mixture

| Name of substance     | CAS No   | Process                   | Degradation rate | Time | Method | Source |
|-----------------------|----------|---------------------------|------------------|------|--------|--------|
| Guanidine thiocyanate | 593-84-0 | DOC removal               | 46 %             | 28 d |        | ECHA   |
| Guanidine thiocyanate | 593-84-0 | carbon dioxide generation | 32 %             | 28 d |        | ECHA   |

### 12.3 Bioaccumulative potential

Data are not available.

#### Bioaccumulative potential of components of the mixture

| Name of substance     | CAS No   | BCF | Log KOW                             | BOD5/COD |
|-----------------------|----------|-----|-------------------------------------|----------|
| Guanidine thiocyanate | 593-84-0 |     | -1,5 (pH value: $\geq 6,2$ , 20 °C) |          |

### 12.4 Mobility in soil

Data are not available.

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### 12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB. Does not contain a PBT-/vPvB-substance in a concentration of  $\geq 0,1\%$ .

### 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\geq 0,1\%$ .

### 12.7 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

#### Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

#### Properties of waste which render it hazardous

- HP 4** irritant - skin irritation and eye damage
- HP 6** acute toxicity
- HP 8** corrosive
- HP 12** release of an acute toxic gas
- HP 14** ecotoxic

### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

## SECTION 14: Transport information

### 14.1 UN number or ID number

|           |         |
|-----------|---------|
| ADRRID    | UN 1760 |
| IMDG-Code | UN 1760 |
| ICAO-TI   | UN 1760 |

### 14.2 UN proper shipping name

|  |                          |
|--|--------------------------|
| ADRRID                                 | CORROSIVE LIQUID, N.O.S. |
| IMDG-Code                              | CORROSIVE LIQUID, N.O.S. |
| ICAO-TI                                | Corrosive liquid, n.o.s. |
| Technical name (hazardous ingredients) | Guanidine thiocyanate    |

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## Washing Buffer WSA

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### 14.3 Transport hazard class(es)

|           |   |
|-----------|---|
| ADRRID    | 8 |
| IMDG-Code | 8 |
| ICAO-TI   | 8 |

### 14.4 Packing group

|           |    |
|-----------|----|
| ADRRID    | II |
| IMDG-Code | II |
| ICAO-TI   | II |

### 14.5 Environmental hazards

non-environmentally hazardous acc. to the dangerous goods regulations

### 14.6 Special precautions for user


Provisions for dangerous goods (ADR) should be complied within the premises.

### 14.7 Maritime transport in bulk according to IMO instruments


The cargo is not intended to be carried in bulk.

### 14.8 Information for each of the UN Model Regulations

#### Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) Additional information

|   |   |
|---|---|
| Proper shipping name  | CORROSIVE LIQUID, N.O.S.  |
| Particulars in the transport document   | UN1760, CORROSIVE LIQUID, N.O.S., (contains: Guanidine thiocyanate), 8, II, (E) |
| Classification code   | C9  |
| Danger label(s)   | 8   |
|  |   |
| Special provisions (SP)   | 274   |
| Excepted quantities (EQ)  | E2  |
| Limited quantities (LQ)   | 1 L   |
| Transport category (TC)   | 2   |
| Tunnel restriction code (TRC)   | E   |
| Hazard identification No  | 80  |
| <b>Emergency Action Code</b>  | 2X  |

#### Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) Additional information

|   |     |
|---|-----|
| <b>Classification code</b>  | C9  |
| <b>Danger label(s)</b>  | 8   |
|  |     |
| <b>Special provisions (SP)</b>  | 274 |

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## Washing Buffer WSA

article number:

|                                 |     |
|---------------------------------|-----|
| <b>Excepted quantities (EQ)</b> | E2  |
| <b>Limited quantities (LQ)</b>  | 1 L |
| <b>Transport category (TC)</b>  | 2   |
| <b>Hazard identification No</b> | 80  |

### International Maritime Dangerous Goods Code (IMDG) - Additional information

|  |  |
|--|--|
| Proper shipping name                     | CORROSIVE LIQUID, N.O.S.   |
| Particulars in the shipper's declaration | UN1760, CORROSIVE LIQUID, N.O.S., (contains: Guanidine thiocyanate), 8, II |
| Marine pollutant                         | -  |
| Danger label(s)                          | 8  |



|                          |          |
|--------------------------|----------|
| Special provisions (SP)  | 274      |
| Excepted quantities (EQ) | E2       |
| Limited quantities (LQ)  | 1 L      |
| EmS                      | F-A, S-B |
| Stowage category         | B        |

### International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

|  |  |
|--|--|
| Proper shipping name                     | Corrosive liquid, n.o.s.   |
| Particulars in the shipper's declaration | UN1760, Corrosive liquid, n.o.s., (contains: Guanidine thiocyanate), 8, II |
| Danger label(s)                          | 8  |



|                          |       |
|--------------------------|-------|
| Special provisions (SP)  | A3    |
| Excepted quantities (EQ) | E2    |
| Limited quantities (LQ)  | 0,5 L |

## SECTION 15: Regulatory information

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

#### Relevant provisions of the European Union (EU)

##### Seveso Directive

| 2012/18/EU (Seveso III) |                                       |   |       |
|-------------------------|---------------------------------------|---|-------|
| No                      | Dangerous substance/hazard categories | Qualifying quantity (tonnes) for the application of lower and upper-tier requirements | Notes |
|                         | not assigned                          |   |       |



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## Washing Buffer WSA

article number:

### Deco-Paint Directive

|  |       |
|--|-------|
| VOC content                                | 0 %   |
| VOC content (Water content was discounted) | 0 g/l |

### Industrial Emissions Directive (IED)

|  |       |
|--|-------|
| VOC content                                | 0 %   |
| VOC content (Water content was discounted) | 0 g/l |

### Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

### Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

### Water Framework Directive (WFD)

none of the ingredients are listed

### Regulation on the marketing and use of explosives precursors

none of the ingredients are listed

### Regulation on drug precursors

none of the ingredients are listed

### Regulation on substances that deplete the ozone layer (ODS)

none of the ingredients are listed

### Regulation concerning the export and import of hazardous chemicals (PIC)

none of the ingredients are listed

### Regulation on persistent organic pollutants (POP)

none of the ingredients are listed

### National regulations(GB)

### Restrictions according to GB REACH, Annex 17

none of the ingredients are listed

| Dangerous substances with restrictions (GB REACH, Annex 17) |  |        |    |
|---|--|--------|----|
| Name of substance   | Name acc. to inventory   | CAS No | No |
| Washing Buffer WSA  | this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC |        | 3  |

### Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

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## Washing Buffer WSA

article number:

### National inventories

| Country | Inventory  | Status                                 |
|---------|------------|--|
| AU      | AIIC       | all ingredients are listed             |
| CA      | DSL        | all ingredients are listed             |
| CN      | IECSC      | all ingredients are listed             |
| EU      | ECSI       | all ingredients are listed             |
| EU      | REACH Reg. | all ingredients are listed             |
| JP      | CSCL-ENCS  | not all ingredients are listed         |
| KR      | KECI       | not all ingredients are listed         |
| MX      | INSQ       | not all ingredients are listed         |
| NZ      | NZIoC      | all ingredients are listed             |
| PH      | PICCS      | all ingredients are listed             |
| TW      | TCSI       | all ingredients are listed             |
| US      | TSCA       | all ingredients are listed as "ACTIVE" |

#### Legend

|            |   |
|------------|---|
| AIIC       | Australian Inventory of Industrial Chemicals                            |
| CSCL-ENCS  | List of Existing and New Chemical Substances (CSCL-ENCS)                |
| DSL        | Domestic Substances List (DSL)  |
| ECSI       | EC Substance Inventory (EINECS, ELINCS, NLP)                            |
| IECSC      | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ       | National Inventory of Chemical Substances                               |
| KECI       | Korea Existing Chemicals Inventory                                      |
| NZIoC      | New Zealand Inventory of Chemicals                                      |
| PICCS      | Philippine Inventory of Chemicals and Chemical Substances (PICCS)       |
| REACH Reg. | REACH registered substances   |
| TCSI       | Taiwan Chemical Substance Inventory                                     |
| TSCA       | Toxic Substance Control Act   |

## 15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

| Section | Former entry (text/value)  | Actual entry (text/value)  | Safety-relevant |
|---------|--|--|-----------------|
| 2.3     | Results of PBT and vPvB assessment:<br>This mixture does not contain any substances that are assessed to be a PBT or a vPvB. | Results of PBT and vPvB assessment:<br>Does not contain a PBT-/vPvB-substance in a concentration of $\geq 0,1\%$ .     | yes             |
| 2.3     |  | Endocrine disrupting properties:<br>Does not contain an endocrine disruptor (EDC) in a concentration of $\geq 0,1\%$ . | yes             |
| 15.1    |  | VOC content (Water content was discounted):<br>0 <sup>9</sup> / <sub>1</sub>   | yes             |
| 15.1    |  | VOC content (Water content was discounted):<br>0 <sup>9</sup> / <sub>1</sub>   | yes             |

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## Washing Buffer WSA

article number:

### Abbreviations and acronyms

| Abbr.           | Descriptions of used abbreviations  |
|-----------------|---|
| Acute Tox.      | Acute toxicity  |
| ADR             | Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)                     |
| Aquatic Chronic | Hazardous to the aquatic environment - chronic hazard   |
| ATE             | Acute Toxicity Estimate   |
| BCF             | Bioconcentration factor   |
| BOD             | Biochemical Oxygen Demand   |
| CAS             | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)  |
| COD             | Chemical oxygen demand  |
| DGR             | Dangerous Goods Regulations (see IATA/DGR)  |
| DNEL            | Derived No-Effect Level   |
| EC50            | Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval  |
| EC No           | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union) |
| EINECS          | European Inventory of Existing Commercial Chemical Substances   |
| ELINCS          | European List of Notified Chemical Substances   |
| EmS             | Emergency Schedule  |
| ErC50           | ≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control            |
| Eye Dam.        | Seriously damaging to the eye   |
| Eye Irrit.      | Irritant to the eye   |
| GB REACH        | The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)  |
| GHS             | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations   |
| IATA            | International Air Transport Association   |
| IATA/DGR        | Dangerous Goods Regulations (DGR) for the air transport (IATA)  |
| ICAO            | International Civil Aviation Organization   |
| ICAO-TI         | Technical instructions for the safe transport of dangerous goods by air   |
| IMDG            | International Maritime Dangerous Goods Code   |
| IMDG-Code       | International Maritime Dangerous Goods Code   |
| index No        | The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008  |
| LC50            | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval                                 |
| LD50            | Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval  |
| log KOW         | n-Octanol/water   |
| NLP             | No-Longer Polymer   |

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article number:

| Abbr.       | Descriptions of used abbreviations  |
|-------------|---|
| PBT         | Persistent, Bioaccumulative and Toxic   |
| PNEC        | Predicted No-Effect Concentration   |
| REACH       | Registration, Evaluation, Authorisation and Restriction of Chemicals  |
| RID         | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail) |
| Skin Corr.  | Corrosive to skin   |
| Skin Irrit. | Irritant to skin  |
| VOC         | Volatile Organic Compounds  |
| vPvB        | Very Persistent and very Bioaccumulative  |

### Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### Classification procedure

Physical and chemical properties. The classification is based on tested mixture. Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

### List of relevant phrases (code and full text as stated in section 2 and 3)

| Code | Text   |
|------|--|
| H302 | Harmful if swallowed.                              |
| H312 | Harmful in contact with skin.                      |
| H314 | Causes severe skin burns and eye damage.           |
| H318 | Causes serious eye damage.                         |
| H332 | Harmful if inhaled.                                |
| H412 | Harmful to aquatic life with long lasting effects. |

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

# Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Washing Solution WSL

article number:  
Version: **3.0 en**  
Replaces version of: 2021-12-22  
Version: (2)

date of compilation: 2015-10-27  
Revision: 2023-01-27

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

### 1.1 Product identifier

Identification of the substance

**Washing Solution WSL**

Article number

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

Relevant identified uses:

Laboratory chemical  
Laboratory and analytical use

Uses advised against:

Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

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

Carl Roth GmbH + Co KG  
Schoemperlenstr. 3-5  
D-76185 Karlsruhe  
Germany

**Telephone:**+49 (0) 721 - 56 06 0

**Telefax:** +49 (0) 721 - 56 06 149

**e-mail:** sicherheit@carlroth.de

**Website:** www.carlroth.de

Competent person responsible for the safety data sheet: :Department Health, Safety and Environment

**e-mail (competent person):**

**sicherheit@carlroth.de**

### 1.4 Emergency telephone number

| Name  | Street    | Postal code/city     | Telephone    | Website |
|---|-----------|----------------------|--------------|---------|
| National Poisons Information Service<br>City Hospital | Dudley Rd | B187QH<br>Birmingham | 844 892 0111 |         |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification acc. to GHS**

This mixture does not meet the criteria for classification.

### 2.2 Label elements

**Labelling**

not required

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### 2.3 Other hazards

#### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

not relevant (mixture)

### 3.2 Mixtures

#### Description of the mixture

This product does not meet the criteria for classification in any hazard class according to GHS

## SECTION 4: First aid measures

### 4.1 Description of first aid measures



#### General notes

No special measures are necessary.

#### Following inhalation

Provide fresh air.

#### Following skin contact

Rinse skin with water/shower.

#### Following eye contact

Rinse cautiously with water for several minutes.

#### Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

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

Symptoms and effects are not known to date.

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

none

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media



#### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings  
water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO<sub>2</sub>)

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### Unsuitable extinguishing media

water jet

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

Non-combustible.

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

## SECTION 6: Accidental release measures

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



#### For non-emergency personnel

No special measures are necessary.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

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

#### Advice on how to contain a spill

Covering of drains.

#### Other information relating to spills and releases

Place in appropriate containers for disposal.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

No special measures are necessary.

#### Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs.

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

Keep container tightly closed.

#### Incompatible substances or mixtures

Observe hints for combined storage.

#### Consideration of other advice:

#### Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

### 7.3 Specific end use(s)

No information available.

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## Washing Solution WSL

article number:

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

##### National limit values

##### Occupational exposure limit values (Workplace Exposure Limits)

This information is not available.

#### 8.2 Exposure controls

##### Individual protection measures (personal protective equipment)

##### Eye/face protection



Use safety goggle with side protection.

##### Skin protection



- **hand protection**

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

- **type of material**

NBR (Nitrile rubber)

- **material thickness**

>0,11 mm

- **breakthrough times of the glove material**

>480 minutes (permeation: level 6)

- **other protection measures**

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

##### Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Usually no personal respiratory protection necessary.

##### Environmental exposure controls

Keep away from drains, surface and ground water.



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## Washing Solution WSL

article number:

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

|  |   |
|--|---|
| Physical state   | liquid  |
| Colour   | colourless  |
| Odour  | odourless   |
| Melting point/freezing point                             | not determined  |
| Boiling point or initial boiling point and boiling range | ~100 °C   |
| Flammability   | non-combustible   |
| Lower and upper explosion limit                          | not determined  |
| Flash point  | not determined  |
| Auto-ignition temperature                                | not determined  |
| Decomposition temperature                                | not relevant  |
| pH (value)   | not determined  |
| Kinematic viscosity                                      | not determined  |
| <u>Solubility(ies)</u>                                   |   |
| Water solubility   | miscible in any proportion                                  |
| <u>Partition coefficient</u>                             |   |
| Partition coefficient n-octanol/water (log value):       | not relevant (inorganic)                                    |
| Vapour pressure  | 23 hPa at 20 °C   |
| <u>Density and/or relative density</u>                   |   |
| Density  | ~1 g/cm <sup>3</sup> at 20 °C                               |
| Relative vapour density                                  | information on this property is not available               |
| Particle characteristics                                 | not relevant (liquid)                                       |
| <u>Other safety parameters</u>                           |   |
| Oxidising properties                                     | none  |
| <b>9.2 Other information</b>                             |   |
| Information with regard to physical hazard classes:      | hazard classes acc. to GHS (physical hazards): not relevant |
| Other safety characteristics:                            |   |
| Miscibility  | completely miscible with water                              |

# Safety data sheet

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## Washing Solution WSL

article number:

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

This material is not reactive under normal ambient conditions.

#### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

#### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

#### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

#### 10.5 Incompatible materials

There is no additional information.

#### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

Test data are not available for the complete mixture.

##### Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

##### Classification acc. to GHS

This mixture does not meet the criteria for classification.

##### Acute toxicity

Shall not be classified as acutely toxic.

##### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

##### Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

##### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

##### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

##### Carcinogenicity

Shall not be classified as carcinogenic.

##### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

##### Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

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### **Specific target organ toxicity - repeated exposure**

Shall not be classified as a specific target organ toxicant (repeated exposure).

### **Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

### **Symptoms related to the physical, chemical and toxicological characteristics**

#### **• If swallowed**

Data are not available.

#### **• If in eyes**

Data are not available.

#### **• If inhaled**

Data are not available.

#### **• If on skin**

Data are not available.

#### **• Other information**

Health effects are not known.

### **11.2 Endocrine disrupting properties**

None of the ingredients are listed.

### **11.3 Information on other hazards**

There is no additional information.

## **SECTION 12: Ecological information**

### **12.1 Toxicity**

Shall not be classified as hazardous to the aquatic environment.

### **12.2 Persistence and degradability**

Data are not available.

### **12.3 Bioaccumulative potential**

Data are not available.

### **12.4 Mobility in soil**

Data are not available.

### **12.5 Results of PBT and vPvB assessment**

Data are not available.

### **12.6 Endocrine disrupting properties**

None of the ingredients are listed.

### **12.7 Other adverse effects**

Data are not available.

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### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods



Consult the appropriate local waste disposal expert about waste disposal.

##### **Sewage disposal-relevant information**

Do not empty into drains.

#### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

#### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

### SECTION 14: Transport information

- |   |   |
|---|---|
| 14.1 UN number or ID number   | not subject to transport regulations                                  |
| 14.2 UN proper shipping name  | not assigned  |
| 14.3 Transport hazard class(es)   | none  |
| 14.4 Packing group  | not assigned  |
| 14.5 Environmental hazards  | non-environmentally hazardous acc. to the dangerous goods regulations |
| 14.6 Special precautions for user   | There is no additional information.                                   |
| 14.7 Maritime transport in bulk according to IMO instruments                              | The cargo is not intended to be carried in bulk.                      |
| 14.8 <u>Information for each of the UN Model Regulations</u>                              |   |
| <b>International Maritime Dangerous Goods Code (IMDG) - Additional information</b>        | Not subject to IMDG.  |
| <b>International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information</b> | Not subject to ICAO-IATA.   |

### SECTION 15: Regulatory information

- 15.1 **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
**Relevant provisions of the European Union (EU)**

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### Seveso Directive

| 2012/18/EU (Seveso III) |                                       |   |       |
|-------------------------|---------------------------------------|---|-------|
| No                      | Dangerous substance/hazard categories | Qualifying quantity (tonnes) for the application of lower and upper-tier requirements | Notes |
|                         | not assigned                          |   |       |

### Deco-Paint Directive

|             |              |
|-------------|--------------|
| VOC content | 0 %<br>0 g/l |
|-------------|--------------|

### Industrial Emissions Directive (IED)

|  |       |
|--|-------|
| VOC content                                | 0 %   |
| VOC content (Water content was discounted) | 0 g/l |

### Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

### Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

### Regulation on the marketing and use of explosives precursors

none of the ingredients are listed

### Regulation on drug precursors

none of the ingredients are listed

### Regulation on substances that deplete the ozone layer (ODS)

none of the ingredients are listed

### Regulation concerning the export and import of hazardous chemicals (PIC)

none of the ingredients are listed

### Regulation on persistent organic pollutants (POP)

none of the ingredients are listed

### National regulations(GB)

### List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

none of the ingredients are listed

### Restrictions according to GB REACH, Annex 17

none of the ingredients are listed

### Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

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### National inventories

| Country | Inventory  | Status                                 |
|---------|------------|--|
| AU      | AIIC       | all ingredients are listed             |
| CA      | DSL        | all ingredients are listed             |
| CN      | IECSC      | all ingredients are listed             |
| EU      | ECSI       | all ingredients are listed             |
| EU      | REACH Reg. | all ingredients are listed             |
| JP      | CSCL-ENCS  | all ingredients are listed             |
| JP      | ISHA-ENCS  | not all ingredients are listed         |
| KR      | KECI       | all ingredients are listed             |
| MX      | INSQ       | all ingredients are listed             |
| NZ      | NZIoC      | all ingredients are listed             |
| PH      | PICCS      | all ingredients are listed             |
| TR      | CICR       | not all ingredients are listed         |
| TW      | TCSI       | all ingredients are listed             |
| US      | TSCA       | all ingredients are listed as "ACTIVE" |

#### Legend

|            |   |
|------------|---|
| AIIC       | Australian Inventory of Industrial Chemicals                            |
| CICR       | Chemical Inventory and Control Regulation                               |
| CSCL-ENCS  | List of Existing and New Chemical Substances (CSCL-ENCS)                |
| DSL        | Domestic Substances List (DSL)  |
| ECSI       | EC Substance Inventory (EINECS, ELINCS, NLP)                            |
| IECSC      | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ       | National Inventory of Chemical Substances                               |
| ISHA-ENCS  | Inventory of Existing and New Chemical Substances (ISHA-ENCS)           |
| KECI       | Korea Existing Chemicals Inventory                                      |
| NZIoC      | New Zealand Inventory of Chemicals                                      |
| PICCS      | Philippine Inventory of Chemicals and Chemical Substances (PICCS)       |
| REACH Reg. | REACH registered substances   |
| TCSI       | Taiwan Chemical Substance Inventory                                     |
| TSCA       | Toxic Substance Control Act   |

## 15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

| Section | Former entry (text/value)  | Actual entry (text/value)  | Safety-relevant |
|---------|--|--|-----------------|
| 2.1     | Classification according to Regulation (EC) No 1272/2008 (CLP):<br>This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC. | Classification acc. to GHS:<br>This mixture does not meet the criteria for classification. | yes             |
| 14.8    | Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - Additional information:<br>Not subject to ADR, RID and ADN.                                   |  | yes             |

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article number:

| Section | Former entry (text/value)   | Actual entry (text/value)  | Safety-relevant |
|---------|---|--|-----------------|
| 15.1    | Restrictions according to REACH, Annex XVII: none of the ingredients are listed   |  | yes             |
| 15.1    | List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list: None of the ingredients are listed. |  | yes             |
| 15.1    | VOC content:<br>0 %   | VOC content:<br>0 %<br>0 <sup>9</sup> /l   | yes             |
| 15.1    |   | VOC content (Water content was discounted):<br>0 <sup>9</sup> /l   | yes             |
| 15.1    |   | National regulations(GB)   | yes             |
| 15.1    |   | List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list: none of the ingredients are listed | yes             |
| 15.1    |   | Restrictions according to GB REACH, Annex 17: none of the ingredients are listed   | yes             |
| 15.1    |   | National inventories:<br>change in the listing (table)   | yes             |

## Abbreviations and acronyms

| Abbr.    | Descriptions of used abbreviations  |
|----------|---|
| ADR      | Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)           |
| DGR      | Dangerous Goods Regulations (see IATA/DGR)  |
| EINECS   | European Inventory of Existing Commercial Chemical Substances   |
| ELINCS   | European List of Notified Chemical Substances   |
| GB REACH | The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)  |
| GHS      | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations   |
| IATA     | International Air Transport Association   |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA)  |
| ICAO     | International Civil Aviation Organization   |
| IMDG     | International Maritime Dangerous Goods Code   |
| NLP      | No-Longer Polymer   |
| PBT      | Persistent, Bioaccumulative and Toxic   |
| REACH    | Registration, Evaluation, Authorisation and Restriction of Chemicals  |
| RID      | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail) |
| VOC      | Volatile Organic Compounds  |
| vPvB     | Very Persistent and very Bioaccumulative  |

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### **Key literature references and sources for data**

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### **Classification procedure**

Physical and chemical properties. The classification is based on tested mixture. Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

### **Disclaimer**

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.