

# Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 744750.1	NucleoMag Plasmid (1x96)	Page: 1/21
Printing date: 15.05.2024	Date of issue: 07.05.2024	Version: 3.14.2.1

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

### 1.1 Product identifier

REF	744750.1	
Product name	NucleoMag Plasmid (1x96)	
REACH Registration number(s):	see SECTION 3.1/3.2 or	
A registration number for the substance(s) does not exist because the annual tonnage does not require registration or the substance or its use is excluded from registration.		
1 x 30 mL AE		
1 x 25 mL S3		
1 x 15 mL A1		
1 x 15 mL A2 (with LyseControl)		UFI: W24W-23R9-3206-XR1C
2 x 25 mL AQ		
2 x 125 mL ERB		UFI: E4FW-93GQ-X203-AP6W
2 x 35 mL PAB		UFI: YPKW-432S-520A-DS3A
2 x 1 mL M-Beads		
1 x 12 mg RNase A		UFI: WWJV-U3PV-U207-MFGF

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

**Relevant identified uses**

Product for analytical use.

Exposure Scenario Classification according REACH, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0  
The exposure scenario is integrated into sections 1-16.

**Uses advised against**

not described

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

**Manufactured by:**

MACHEREY-NAGEL GmbH & Co. KG  
Valenciener Str. 11, 52355 Düren, Germany  
Phone: +49 2421 969 0

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

### 1.4 Emergency telephone number

Outside Germany (DE): Call your regional Poisons Information Service or call local Life Saving Service.

DE: Gemeinsames Giftinformationszentrum (GGIZ)

99089 Erfurt tel. +49 361 730 730, <<https://www.ggiz-erfurt.de>>

You find our current versions of SDS in Internet:

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

## SECTION 2: Hazard identification

### 2.0 Classification of the complete product according to Regulation (EC) 1272/2008



GHS02 GHS05 GHS07 GHS08

Signal word DANGER

Hazard identification	Hazard classes/categories
H225	Flam. Liq. 2
H314	Skin Corr. 1 B
H334	Resp. Sens. 1
H336	resp. irrit. STOT SE 3

### 2.1 Classification of the substance or mixture according to Regulation (EC) 1272/2008

125 mL ERB



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GHS02



GHS07

Signal word **WARNING**

Hazard identification	Hazard classes/categories
H226	Flam. Liq. 3
H319	Eye Irrit. 2
H336	resp. irrit. STOT SE 3

### 15 mL A2 (with LyseControl)



GHS07

Signal word **WARNING**

Hazard identification	Hazard classes/categories
H315	Skin Irrit. 2
H319	Eye Irrit. 2

### 35 mL PAB



GHS02



GHS05



GHS07

Signal word **DANGER**

Hazard identification	Hazard classes/categories
H225	Flam. Liq. 2
H314	Skin Corr. 1 B
H319	Eye Irrit. 2
H336	resp. irrit. STOT SE 3

### 12 mg RNase A



GHS08

Signal word **DANGER**

Hazard identification	Hazard classes/categories
H334	Resp. Sens. 1

### 25 mL AQ

Signal word Do not need labelling as hazardous  
-

No hazard class



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### 30 mL AE

Signal word Do not need labelling as hazardous  
-  
No hazard class

### 15 mL A1

Signal word Do not need labelling as hazardous  
-  
No hazard class

### 25 mL S3

Signal word Do not need labelling as hazardous  
-  
No hazard class

### 1 mL M-Beads

Signal word Do not need labelling as hazardous  
-  
No hazard class

List of H phrases: see section 16.2

## 2.2 Label elements according regulation (EC) 1272/2008

According **CLP directive** inner packages must be only labelled with GHS symbol(s) and product identifier(s) (EU 1272/2008 Annex I - 1.5.1.2). Harmful chemicals/mixtures with signal word: **WARNING** and highly flammable chemicals/mixtures must not be labelled with H and P phrases **until 125 mL** (EU 1272/2008 Annex I - 1.5.2). This labelling exemption is NOT valid for sensibilizing substances.

### 125 mL ERB



Signal word: WARNING

### 15 mL A2 (with LyseControl)



Signal word: WARNING

### 35 mL PAB



Signal word: DANGER  
H314  
Causes severe skin burns and eye damage.  
P260sh, P264, P280sh, P303+361+353, P305+351+338, P310, P405, P501



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Do not breathe dust/vapours. Wash hands thoroughly after handling. Wear protective gloves/eye protection. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Store locked up. Dispose of contents/container to regulated waste treatment.

## 12 mg RNase A



GHS08

Signal word: DANGER

H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

P261sh, P284, P342+311, P501

Avoid breathing dust/vapours. [In case of inadequate ventilation] wear respiratory protection. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. Dispose of contents/container to regulated waste treatment.

## 25 mL AQ

Do not need labelling as hazardous

Signal word: -

## 30 mL AE

Do not need labelling as hazardous

Signal word: -

## 15 mL A1

Do not need labelling as hazardous

Signal word: -

## 25 mL S3

Do not need labelling as hazardous

Signal word: -

## 1 mL M-Beads

Do not need labelling as hazardous

Signal word: -

## Label elements of the complete product



GHS02



GHS05



GHS08

Signal word: DANGER

H314, H334

Causes severe skin burns and eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

P260sh, P264, P280sh, P284, P303+361+353, P305+351+338, P310, P405, P501

Do not breathe dust/vapours. Wash hands thoroughly after handling. Wear protective gloves/eye protection. [In case of inadequate ventilation] wear respiratory protection. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Store locked up. Dispose of contents/container to regulated waste treatment.

## 2.3 Other hazards

### Possible hazards from physicochemical properties

Generally in the case of pH values are less than 2 or higher than 11.5 then it is corrosive. Flammable properties. For guanidine thiocyanate CAS 593-84-0: The properties H314, H332 "Causes severe skin burns and eye damage. Harmful if inhaled." are not relevant, because the mixture solution is buffered to pH 4-9 (see GHS Directive 1272/2008/EC Annex I, chapter 3.2.3.1.2.).

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

Causes varying degrees of acid burns on the skin, to the eyes and to the mucous membranes and wounds which do not heal quickly depending on the concentration, temperature and the exposure time. Vapours especially which steam from hot liquids and mist can have a severe irritant effect upon the eyes and the respiratory organs.

Cause after impairments of health when ingested in small quantities.

Kit contains small amounts of enzymes: May cause allergy or asthma symptoms or breathing difficulties if inhaled.



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**Information pertaining to particular risks to the environment**

Should not be released into the environment.

**PBT:** not applicable

**vPvB:** not applicable

**Possible endocrine disrupting effects**

no data available

## SECTION 3: Composition / information on ingredients

### 3.1 Substances or 3.2 Mixtures

**125 mL ERB**

Substance name: *triethanolamine*  
CAS No.: 102-71-6

Substance rating: H315, Skin Irrit. 2, H319, Eye Irrit. 2  
Formula:  $C_6H_{15}NO_3$   
Pseudonym (de): 2,2',2''-Nitrioltriethanol, TEA, Tris(2-hydroxyethyl)amin  
REACH Reg. No.: 01-2119486482-31-xxxx  
**Dual-use:** The application of this chemical is exempt from the regulation 2017/2268/EU (see IC350 remark 4).  
EC No.: 203-049-8  
Concentration: 1 - <10 %  
acc. CLP (GHS): The criteria for classification are not fulfilled.

Substance name: *2-propanol*  
CAS No.: 67-63-0

Substance rating: H225, Flam. Liq. 2, H319, Eye Irrit. 2, H336, resp. irrit. STOT SE 3  
Formula:  $C_3H_8O$   
Pseudonym (de): Isopropanol, IPA, Propan-2-ol  
REACH Reg. No.: 01-2119457558-25-XXXX  
EC No.: 200-661-7  
Concentration: 35 - <50 %  
acc. CLP (GHS): H226, Flam. Liq. 3, H319, Eye Irrit. 2, H336, resp. irrit. STOT SE 3  
Index No.: 603-117-00-0

**15 mL A2 (with LyseControl)**

Substance name: *sodium hydroxide solution*  
CAS No.: 1310-73-2

Substance rating: H314, Skin Corr. 1 A  
Formula:  $NaOH \cdot H_2O$   
Pseudonym (de): verdünnte Natronlauge  
REACH Reg. No.: 01-2119457892-27-xxxx  
EC No.: 215-185-5  
Specific concentration limit: Eye Irrit. 2; H319: 0,5 % ≤ C < 2 % - Skin Corr. 1A; H314: C ≥ 5 % - Skin Corr. 1B;  
H314: 2 % ≤ C < 5 % - Skin Irrit. 2; H315: 0,5 % ≤ C < 2 %  
Concentration: 0,5 - <1 %  
acc. CLP (GHS): H315, Skin Irrit. 2, H319, Eye Irrit. 2  
Index No.: 011-002-00-6

Substance name: *dodecyl sulfate, sodium salt*  
CAS No.: 151-21-3

Substance rating: H228, Flam. Sol. 1, H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H318, Eye Dam. 1, H332, Acute Tox. 4 inh., H335, resp. irrit. STOT SE 3, H412, Aquatic Chronic 3  
Formula:  $C_{12}H_{25}NaO_4S$   
Pseudonym (de): Natriumlaurylsulfat  
REACH Reg. No.: 01-2119489461-32-xxxx  
EC No.: 205-788-1  
Concentration: 0,1 - <1 %  
acc. CLP (GHS): The criteria for classification are not fulfilled.



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Substance name: *indicator dye(s)*  
 CAS No.: -  
 Substance rating: No criteria for classification or naming of chemical not required.  
 Concentration: 0 - <0,1 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

**35 mL PAB**

Substance name: *guanidinium thiocyanate*  
 CAS No.: 593-84-0  
 Substance rating: H302, Acute Tox. 4 oral, H312, Acute Tox. 4 derm., H314, Skin Corr. 1 B, H332, Acute Tox. 4 inh., H412, Aquatic Chronic 3  
 Formula:  $C_2H_6N_4S$   
 Pseudonym (de): Guanidiniumrhodanid  
 REACH Reg. No.: 01-2120735072-65-0001  
 EC No.: 209-812-1  
 Concentration: 10 - <15 %  
 acc. CLP (GHS): H314, Skin Corr. 1 B  
 Index No.: 615-004-00-3

Substance name: *2-propanol*  
 CAS No.: 67-63-0  
 Substance rating: H225, Flam. Liq. 2, H319, Eye Irrit. 2, H336, resp. irrit. STOT SE 3  
 Formula:  $C_3H_8O$   
 Pseudonym (de): Isopropanol, IPA, Propan-2-ol  
 REACH Reg. No.: 01-2119457558-25-XXXX  
 EC No.: 200-661-7  
 Concentration: 50 - <65 %  
 acc. CLP (GHS): H225, Flam. Liq. 2, H319, Eye Irrit. 2, H336, resp. irrit. STOT SE 3  
 Index No.: 603-117-00-0

Substance name: *Tergitol 15-S-7*  
 CAS No.: 84133-50-6  
 Substance rating: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H318, Eye Dam. 1, H332, Acute Tox. 4 inh.  
 Formula:  $C_{12}H_{25}O_2[CH_2CH_2O]_xH$   
 EC No.: 617-534-0  
 Concentration: 0,1 - <1 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Substance name: *chemicals/mixture until 1%*  
 CAS No.: -  
 Substance rating: No criteria for classification or naming of chemical not required.  
 Concentration: 0,1 - <1 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

**12 mg RNase A**

Substance name: *RNase*  
 CAS No.: 9001-99-4  
 Substance rating: H334, Resp. Sens. 1  
 Formula: Enzyme C. No. 3.1.27.5, origin: bovine pancreas (controlled population)  
 Pseudonym (de): RNase A  
 EC No.: 232-646-6  
 Concentration: 90 - <100 %  
 acc. CLP (GHS): H334, Resp. Sens. 1

**25 mL AQ**



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Substance name: *inorganic salts, declaration not necessary*  
CAS No.: -

Substance rating: No criteria for classification or naming of chemical not required.  
Pseudonym (de): kein Gefahrstoff  
Concentration: 1 - <3 %  
acc. CLP (GHS): The criteria for classification are not fulfilled.

### 30 mL AE

Substance name: *chemicals/mixture until 1%*  
CAS No.: -

Substance rating: No criteria for classification or naming of chemical not required.  
Concentration: 0,1 - <1 %  
acc. CLP (GHS): The criteria for classification are not fulfilled.

### 15 mL A1

Substance name: *chemicals/mixture until 1%*  
CAS No.: -

Substance rating: No criteria for classification or naming of chemical not required.  
Concentration: 0,1 - <1 %  
acc. CLP (GHS): The criteria for classification are not fulfilled.

### 25 mL S3

Substance name: *acetate buffer solution*  
CAS No.: -

Substance rating: No criteria for classification or naming of chemical not required.  
Formula:  $\text{CH}_3\text{COOH}/\text{K}/\text{Na}\cdot\text{H}_2\text{O}$   
Concentration: 25 - <45 %  
acc. CLP (GHS): The criteria for classification are not fulfilled.

### 1 mL M-Beads

Substance name: *magnetic particles, suspended in water*  
CAS No.: -

Substance rating: No criteria for classification or naming of chemical not required.  
Pseudonym (de): magnetic beads  
Concentration: 1 - <15 %  
acc. CLP (GHS): The criteria for classification are not fulfilled.

## 3.3 Remarks

When not listed, mixtures are added with water [CAS No. 7732-18-5] to 100%. List of H and P phrases: see section 16.2.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Place insured person out of danger zone to fresh air immediately. Ensure quiet, warmth, and provide resuscitation if necessary. If necessary contact medical advice. Remove contaminated clothing. Show product package, packing insert and this material safety data sheet to the doctor. Take to a doctor, in a raised position if there are breathing difficulties.

#### 4.1.1 After SKIN Contact

Remove contaminated clothing immediately. Rinse the affected skin or mucous membrane thoroughly for min. 15 minutes under running water. (If possible) use soap. Avoid neutralisation. Then apply a loose bandage.

#### 4.1.2 After EYE Contact

After contact with the eyes rinse thoroughly under running water with the eyelid wide open for min. 10 minutes with eye washing bottle, eye douche or running water (protect intact eye). Before (if possible) apply eye drops Proxymetacaine 0.5%, if the opening the eyelid convulsion is painful. Further treatment to be carried out by an eye specialist.



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- 4.1.3 After INHALATION of vapours**  
After inhalation of foam or vapour fresh air should be inhaled. Keep airways free. If vomiting and if insensible place patient in recovery position and keep airways free. Administer a Dexamethasone spray as soon as possible. Ensure quiet, warmth, and provide resuscitation if necessary. In the event of respiratory distress ensure that the patient inhales oxygen. Secure the breathing, heart and circulatory function. ---
- 4.1.4 After ORAL Intake**  
After oral intake lots of water with activated charcoal supplement should be drunk after it has been ingested. Do not induce vomiting under any circumstances. Do not make any efforts to neutralise it. Contact medical advice for possible consequences.
- 4.2 Most important symptoms and effects, both acute and delayed**  
May cause allergy or asthma symptoms or breathing difficulties if inhaled. Chronic effects: Repeated contact, even in small amounts, can lead to sensitization. Rapid penetration and destruction of the skin. Especially in the heated form. Causes severe skin burns and eye damage.
- 4.3 Indication of any immediate medical attention and special treatment needed**  
CORROSIVE DAMAGE: After SKIN CONTACT rinse with water for a long time. Efforts to neutralise the substance can frequently make matters worse. Apply glucocorticosteroides following inflammatory reactions. After EYE CONTACT rinse immediately with plenty of water for a long time. Eyelid convulsion measures. Name the corrosive chemical. Further treatment must to be carried out by an eye specialist. After INTAKE administer aluminium oxide drug suspensions. Administer a prophylaxis to counter pulmonary oedema following the INGESTION of corrosive aerosols. In the event of RESPIRATORY DISTRESS ensure that the patient inhales oxygen. Inform patient respectively further measures and the possibility of long-term damages. ---

## SECTION 5: Firefighting measures

- 5.1 Extinguishing media**
- 5.1.1 Suitable extinguishing media**  
Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.
- 5.1.2 Unsuitable extinguishing media**  
no data available
- 5.2 Special hazards arising from the substance or mixture**  
DANGER: Highly flammable (GHS regulation). Forms explosive vapour-air mixtures. Formation of hazardous and caustic vapour-air mixtures possible.
- 5.3 Advice for firefighters**  
No, for listed product. Product package burns like paper or plastic. Spray any vapours released with water. Retent fire water. Use only acid-resistant safety equipment.  
For great amount - if necessary - protective breathing apparatus which is independent of the ambient air (isolated equipment), and sealed protective clothing is necessary in the event of a large-scale formation of toxic substances.
- 5.4 Additional information**  
Danger for environment **only in the event of a large-scale leakage** or formation of hazardous substances.

## SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures**  
Do not breathe vapours. Wear suitable protective gloves (see 8.2.2). Wear eye protection, respectively face protection. Regular staff training is necessary, indicating hazards and precautions on the basis of operating instructions. Restrictions on activity must be observed.
- 6.2 Environmental precautions**  
Should not be released into the environment.  
PBT: not applicable  
vPvB: not applicable
- 6.3 Methods and material for containment and cleaning up**  
Bind any escaping liquid with inert absorbent. And dispose in accordance to local regulations for the disposal of hazardous chemicals. Clean any contaminated equipment and floors with plenty of water. Collect small amounts of leaked liquid and flush with water into drains.
- 6.4 Reference to other sections**  
see information in section 5.4,7,8 and 13



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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Handling in accordance with the test instruction, that comes with the product. Use only in well-ventilated working areas.

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

Safe storage is guaranteed in the original packaging from MACHEREY-NAGEL. Storage class (German chemical industry): see chapter 12.1

Storage class (VCI): 3

Water hazard class (DE): 3

### 7.2.1 Requirements for stock rooms and containers

Keep original product packages tightly closed during handling and storage. Use inbreakable container for transport of glass bottles.

### 7.3 Specific end use(s)

Product for analytical use.

## SECTION 8: Exposure controls /personal protection

### 8.1 Control parameters

#### 12 mg RNase A

Chemical: *RNase* CAS No.: 9001-99-4

#### 15 mL A2 (with LyseControl)

Chemical: *indicator dye(s)* CAS No.: -

Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2

Chemical: *dodecyl sulfate, sodium salt* CAS No.: 151-21-3

NIOSH: not listed

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

OSHA: not listed

#### 15 mL A1

Chemical: *chemicals/mixture until 1%* CAS No.: -

#### 30 mL AE

Chemical: *chemicals/mixture until 1%* CAS No.: -

#### 35 mL PAB

Chemical: *chemicals/mixture until 1%* CAS No.: -

Chemical: *2-propanol* CAS No.: 67-63-0

DNEL: [inh] 500 mg/m<sup>3</sup>

DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 140.9 mg/L

PNEC = Predicted No Effect Concentration

TRGS 900 (DE): 200 ppm / 500 mg/m<sup>3</sup>

E/e respirable

Short-term exposure factor: 2 (II), Y

skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 200 ppm / 500 mg/m<sup>3</sup>

TRGS 903 (DE): [Aceton B/b, U/b] 25 mg/L

B blood, U urine, a no limitation, b end of exposition or shift

NIOSH: [TWA] 400 ppm / 980 mg/m<sup>3</sup>

NIOSH STEL: 500 ppm / 1225 mg/m<sup>3</sup>

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

OSHA: [TWA] 400 ppm / 980 mg/m<sup>3</sup>

Chemical: *Tergitol 15-S-7* CAS No.: 84133-50-6

Chemical: *guanidinium thiocyanate* CAS No.: 593-84-0

DNEL: [inh] 1092 µg/m<sup>3</sup>

DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 42.4 µg/L

PNEC = Predicted No Effect Concentration

NIOSH: not listed



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[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period  
 OSHA: not listed

**25 mL S3**

Chemical: *acetate buffer solution* CAS No.: -

**1 mL M-Beads**

Chemical: *magnetic particles, suspended in water* CAS No.: -

**125 mL ERB**

Chemical: *triethanolamine* CAS No.: 102-71-6

DNEL: [derm] 6.3; [inh] 5 mg/m<sup>3</sup>  
 DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 0.32 mg/L  
 PNEC = Predicted No Effect Concentration

TRGS 900 (DE): - DFG: 5 E mg/m<sup>3</sup>  
 E/e respirable

Short-term exposure factor: 1, (2)  
 skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: [MAK] 5 e/[STEL] 10 e mg/m<sup>3</sup>

NIOSH: not listed

[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period  
 OSHA: not listed

Chemical: *2-propanol* CAS No.: 67-63-0

DNEL: [inh] 500 mg/m<sup>3</sup>  
 DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 140.9 mg/L  
 PNEC = Predicted No Effect Concentration

TRGS 900 (DE): 200 ppm / 500 mg/m<sup>3</sup>  
 E/e respirable

Short-term exposure factor: 2 (II), Y  
 skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 200 ppm / 500 mg/m<sup>3</sup>

TRGS 903 (DE): [Aceton B/b, U/b] 25 mg/L  
 B blood, U urine, a no limitation, b end of exposition or shift

NIOSH: [TWA] 400 ppm / 980 mg/m<sup>3</sup>

NIOSH STEL: 500 ppm / 1225 mg/m<sup>3</sup>

[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period  
 OSHA: [TWA] 400 ppm / 980 mg/m<sup>3</sup>

**25 mL AQ**

Chemical: *inorganic salts, declaration not necessary* CAS No.: -

## 8.2 Exposure controls

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

### 8.2.1 Respiratory protection

Use for open access of these substances for example a protection filter, class A/AX. No additional recommendations.

### 8.2.2 Skin protection / Hand protection

Yes, gloves according EN 374 (permeation time >30 min - level 2), consist of PVC, natural latex, Neopren, or Nitril (f.ex. from Ansell or KCL). Use for short times chemical resistant latex gloves with code EN 374-3 level 1.

### 8.2.3 Eye / Face Protection

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

### 8.2.4 Skin protection

Recommended to avoid clothing damage, and to avoid contamination with these hazards.

### 8.2.5 Personal hygiene

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



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**8.2.6 Thermal hazards**  
no data available

**8.3 Limitation and monitoring of environmental exposure**  
Do not release product into environment.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**12 mg RNase A**

- |                                                |                     |
|------------------------------------------------|---------------------|
| a) State of aggregation:                       | solid (lyophilized) |
| b) Colour:                                     | colourless          |
| c) Odor:                                       | odorless            |
| d) Melting point:                              | no data available   |
| e) Boiling point:                              | no data available   |
| f) Flammability:                               | no data available   |
| g) Explosive limits (lower / upper):           | no data available   |
| h) Flash point:                                | no data available   |
| i) Flashing temperature:                       | no data available   |
| j) Decomposition temperature:                  | no data available   |
| k) pH value:                                   | no data available   |
| l) Kinematic viscosity:                        | no data available   |
| m) Solubility in water:                        | 0-100 %             |
| n) Dispersion coefficient (K <sub>o/w</sub> ): | no data available   |
| o) Vapour pressure (20°C):                     | no data available   |
| p) Specific gravity:                           | no data available   |
| q) Relative vapour density (air=1):            | no data available   |
| r) Particle size:                              | no data available   |

**15 mL A2 (with LyseControl)**

- |                                                |                         |
|------------------------------------------------|-------------------------|
| a) State of aggregation:                       | liquid                  |
| b) Colour:                                     | blue                    |
| c) Odor:                                       | odorless                |
| d) Melting point:                              | no data available       |
| e) Boiling point:                              | no data available       |
| f) Flammability:                               | no data available       |
| g) Explosive limits (lower / upper):           | no data available       |
| h) Flash point:                                | no data available       |
| i) Flashing temperature:                       | no data available       |
| j) Decomposition temperature:                  | no data available       |
| k) pH value:                                   | 13                      |
| l) Kinematic viscosity:                        | no data available       |
| m) Solubility in water:                        | no data available       |
| n) Dispersion coefficient (K <sub>o/w</sub> ): | no data available       |
| o) Vapour pressure (20°C):                     | no data available       |
| p) Specific gravity:                           | 1.008 g/cm <sup>3</sup> |
| q) Relative vapour density (air=1):            | no data available       |
| r) Particle size:                              | no data available       |

**15 mL A1**

- |                                                |                   |
|------------------------------------------------|-------------------|
| a) State of aggregation:                       | liquid            |
| b) Colour:                                     | colourless        |
| c) Odor:                                       | odorless          |
| d) Melting point:                              | no data available |
| e) Boiling point:                              | no data available |
| f) Flammability:                               | no data available |
| g) Explosive limits (lower / upper):           | no data available |
| h) Flash point:                                | no data available |
| i) Flashing temperature:                       | no data available |
| j) Decomposition temperature:                  | no data available |
| k) pH value:                                   | 7.5-8.5           |
| l) Kinematic viscosity:                        | no data available |
| m) Solubility in water:                        | no data available |
| n) Dispersion coefficient (K <sub>o/w</sub> ): | no data available |
| o) Vapour pressure (20°C):                     | no data available |



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p) Specific gravity: 1.00 g/cm<sup>3</sup>  
 q) Relative vapour density (air=1) : no data available  
 r) Particle size: no data available

**30 mL AE**

a) State of aggregation: liquid  
 b) Colour: colourless  
 c) Odor: odorless  
 d) Melting point: no data available  
 e) Boiling point: no data available  
 f) Flammability: no data available  
 g) Explosive limits (lower / upper): no data available  
 h) Flash point: no data available  
 i) Flashing temperature: no data available  
 j) Decomposition temperature: no data available  
 k) pH value: 8-9  
 l) Kinematic viscosity: no data available  
 m) Solubility in water: no data available  
 n) Dispersion coefficient (K<sub>o/w</sub>): no data available  
 o) Vapour pressure (20°C): no data available  
 p) Specific gravity: 1.0 g/cm<sup>3</sup>  
 q) Relative vapour density (air=1) : no data available  
 r) Particle size: no data available

**35 mL PAB**

a) State of aggregation: liquid  
 b) Colour: colourless  
 c) Odor: odorless  
 d) Melting point: no data available  
 e) Boiling point: no data available  
 f) Flammability: no data available  
 g) Explosive limits (lower / upper): no data available  
 h) Flash point: 21 °C  
 i) Flashing temperature: no data available  
 j) Decomposition temperature: no data available  
 k) pH value: 6.2-7.8  
 l) Kinematic viscosity: no data available  
 m) Solubility in water: no data available  
 n) Dispersion coefficient (K<sub>o/w</sub>): no data available  
 o) Vapour pressure (20°C): no data available  
 p) Specific gravity: 0.89 g/cm<sup>3</sup>  
 q) Relative vapour density (air=1) : no data available  
 r) Particle size: no data available

**25 mL S3**

a) State of aggregation: liquid  
 b) Colour: colourless  
 c) Odor: acetic  
 d) Melting point: no data available  
 e) Boiling point: no data available  
 f) Flammability: no data available  
 g) Explosive limits (lower / upper): no data available  
 h) Flash point: no data available  
 i) Flashing temperature: no data available  
 j) Decomposition temperature: no data available  
 k) pH value: 5- 5.5  
 l) Kinematic viscosity: no data available  
 m) Solubility in water: no data available  
 n) Dispersion coefficient (K<sub>o/w</sub>): no data available  
 o) Vapour pressure (20°C): no data available  
 p) Specific gravity: 1.14 g/mL  
 q) Relative vapour density (air=1) : no data available  
 r) Particle size: no data available



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### 1 mL M-Beads

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	odorless
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	no data available
l) Kinematic viscosity:	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient (K <sub>o/w</sub> ):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	no data available
q) Relative vapour density (air=1):	no data available
r) Particle size:	no data available

### 125 mL ERB

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	alcoholic
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	24 °C
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	5.5-6.5
l) Kinematic viscosity:	no data available
m) Solubility in water:	0-100 %
n) Dispersion coefficient (K <sub>o/w</sub> ):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	0.94 g/cm <sup>3</sup>
q) Relative vapour density (air=1):	no data available
r) Particle size:	no data available

### 25 mL AQ

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	odorless
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	7.5-8
l) Kinematic viscosity:	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient (K <sub>o/w</sub> ):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	1.01 g/cm <sup>3</sup>
q) Relative vapour density (air=1):	no data available
r) Particle size:	no data available



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## 9.2 Other information

### 9.2.1 Information on physical hazard classes

no data available

### 9.2.2 Other safety-related parameters

No data is available for the other parameters for the mixtures, since no registration and no chemical safety report is required.

☐☐

Substances are highly volatile and form flammable gas-air mixtures. Substances are highly corrosive.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no further data available.

### 10.2 Chemical stability

no known instability.

### 10.3 Possibility of hazardous reactions

Can react violently with organic material. Note: Can form very reactive substances with oxidizing agents. Possible: &H:EUH031& No further data available.

### 10.4 Conditions to avoid

No more required.

### 10.5 Incompatible materials

no additional data available

### 10.6 Hazardous decomposition products

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

## SECTION 11: Toxicological information

### 11.1 Information on the hazard classes according regulation (EC) 1272/2008

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

#### 12 mg RNase A

Chemical: *RNase*

CAS No.: 9001-99-4

TSCA Inventory: listed

Japan CSCL/PRTR: not listed

Japan ISHL: not listed

Korea Exist.Chem.Inventory: KE-30341

Acute Effects: Cause after impairments of health when ingested in small quantities.

Chronic Effects: May cause sensitization by skin contact, also in repeated contact of small amounts. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

#### 15 mL A2 (with LyseControl)

Chemical: *indicator dye(s)*

CAS No.: -

TSCA Inventory: all listed, <1%

Chemical: *sodium hydroxide solution*

CAS No.: 1310-73-2

TSCA Inventory: listed California Proposition 65 List: not listed

Exposure Routes: inhalation, ingestion, skin and/or eye contact

Target Organs: Eyes, skin, respiratory system

Symptoms: -

Japan CSCL/PRTR: not listed, Japan PDSCL: not listed

Japan ISHL: listed ≥1,0%/≥1,0% SDS required

Korea Exist.Chem.Inventory: KE-31487

LD50 orl rat : [ $< 1\%$ ] > 50000 mg/kg

LD50 orl mus : [ $< 1\%$ ] > 4000 mg/kg



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Chemical: *dodecyl sulfate, sodium salt* CAS No.: 151-21-3  
 TSCA Inventory: listed California Proposition 65 List: not listed  
 Australia NICNAS: not listed Canada CEPA 1999: DSL yes  
 Japan CSCL/PRTR: PRTR - Class I Designated Chemical Substance, Japan PDSCL: not listed  
 Japan ISHL: not listed  
 South Korea TCCA: not listed  
 Korea Exist.Chem.Inventory: KE-21884  
 LD50 orl rat : 1288 mg/kg  
 LC50 ihl rat : 3,900 mg/L/1H

### 15 mL A1

Chemical: *chemicals/mixture until 1%* CAS No.: -  
 TSCA Inventory: all listed, <1%  
 Korea Exist.Chem.Inventory: listed

### 30 mL AE

Chemical: *chemicals/mixture until 1%* CAS No.: -  
 TSCA Inventory: all listed, <1%  
 Korea Exist.Chem.Inventory: listed

### 35 mL PAB

Chemical: *chemicals/mixture until 1%* CAS No.: -  
 TSCA Inventory: all listed, <1%  
 Korea Exist.Chem.Inventory: listed

Chemical: *2-propanol* CAS No.: 67-63-0  
 TSCA Inventory: listed California Proposition 65 List: not listed  
 ACGIH: 1230 ppm  
 Exposure Routes: inhalation, ingestion, skin and/or eye contact  
 Target Organs: Eyes, skin, respiratory system  
 Symptoms: irritation eyes, nose, throat; drowsiness, dizziness, headache; dry cracking skin; in animals: narcosis  
 Australia NICNAS: Canada CEPA 1999: DSL yes  
 Japan CSCL/PRTR: PAC yes, Japan PDSCL: -  
 Japan ISHL: listed ≥1,0%/≥0,1%, Article 57-2 (SDS required)  
 South Korea TCCA:  
 Korea Exist.Chem.Inventory: KE-29363  
 LD50 orl rat : 5045 mg/kg  
 LC<sub>LoW</sub> orl hmn : 3570 mg/kg  
 LC50 ihl rat : 25 mg/L/4H

TRGS 905 (DE): R F C

Chemical: *Tergitol 15-S-7* CAS No.: 84133-50-6  
 Korea Exist.Chem.Inventory: KE-00456

Chemical: *guanidinium thiocyanate* CAS No.: 593-84-0  
 TSCA Inventory: listed California Proposition 65 List: not listed  
 Australia NICNAS: not listed Canada CEPA 1999: DSL yes  
 Japan CSCL/PRTR: not listed, Japan PDSCL: not listed  
 Japan ISHL: not listed  
 South Korea TCCA: not listed  
 Korea Exist.Chem.Inventory: not listed  
 LD50 orl rat : 593 mg/kg  
 LC50 ihl rat : 5,319 mg/L/4H

### 25 mL S3

Chemical: *acetate buffer solution* CAS No.: -  
 TSCA Inventory: all listed  
 Korea Exist.Chem.Inventory: listed





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**1 mL M-Beads**

Chemical: *magnetic particles, suspended in water* CAS No.: -  
 TSCA Inventory: listed (CAS 1309-38-2)

**125 mL ERB**

Chemical: *triethanolamine* CAS No.: 102-71-6  
 TSCA Inventory: listed California Proposition 65 List: not listed  
 Australia NICNAS: not listed Canada CEPA 1999: DSL Yes  
 Japan CSCL/PRTR: PAC Yes, Japan PDSCL: not listed  
 Japan ISHL: listed ≥0,1%/≥0,1%, Article 57-2 (SDS required)  
 South Korea TCCA: not listed  
 Korea Exist.Chem.Inventory: KE-25940  
 LD50 orl rat : > 5000 mg/kg

Chemical: *2-propanol* CAS No.: 67-63-0  
 TSCA Inventory: listed California Proposition 65 List: not listed  
 ACGIH: 1230 ppm  
 Exposure Routes: inhalation, ingestion, skin and/or eye contact  
 Target Organs: Eyes, skin, respiratory system  
 Symptoms: irritation eyes, nose, throat; drowsiness, dizziness, headache; dry cracking skin; in animals: narcosis  
 Australia NICNAS: Canada CEPA 1999: DSL yes  
 Japan CSCL/PRTR: PAC yes, Japan PDSCL: -  
 Japan ISHL: listed ≥1,0%/≥0,1%, Article 57-2 (SDS required)  
 South Korea TCCA:  
 Korea Exist.Chem.Inventory: KE-29363  
 LD50 orl rat : 5045 mg/kg  
 LC<sub>50</sub> orl hmn : 3570 mg/kg  
 LC50 ihl rat : 25 mg/L/4H  
 TRGS 905 (DE): R F C

**25 mL AQ**

Chemical: *inorganic salts, declaration not necessary* CAS No.: -  
 TSCA Inventory: all listed  
 Korea Exist.Chem.Inventory: listed

**11.2 Other hazards**

**Possible endocrine disrupting effects**  
 no data available  
**Other information**  
 no additional data available

**SECTION 12: Ecological information**

**12.1 Toxicity**

Following information is valid for pure substances.

**12 mg RNase A**

Substance name: *RNase* CAS-Nr.: 9001-99-4  
 Water hazard class (DE): 1  
 Storage class (VCI): 13

**15 mL A2 (with LyseControl)**

Substance name: *indicator dye(s)* CAS-Nr.: -  
 Storage class (VCI): 12-13

Substance name: *sodium hydroxide solution* CAS-Nr.: 1310-73-2  
 LC50 leuciscus idus/96h : 35-189 mg/L  
 LC50 fish/96h : 45.4 mg/L  
 EC50 daphnia/48h : >100 mg/L  
 Water hazard class (DE): nwg WGK No.: 0142  
 Storage class (VCI): 12-13



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Substance name: *dodecyl sulfate, sodium salt* CAS-Nr.: 151-21-3  
 LC50 daphnia magna/48h : 6.3 mg/L  
 LC50 fish/96h : 1.31-22.5 mg/L  
 Water hazard class (DE): 2  
 Storage class (VCI): 12-13

**15 mL A1**

Substance name: *chemicals/mixture until 1%* CAS-Nr.: -  
 Water hazard class (DE): 1  
 Storage class (VCI): 12-13

**30 mL AE**

Substance name: *chemicals/mixture until 1%* CAS-Nr.: -  
 Water hazard class (DE): 1  
 Storage class (VCI): 12-13

**35 mL PAB**

Substance name: *chemicals/mixture until 1%* CAS-Nr.: -  
 Water hazard class (DE): 1  
 Storage class (VCI): 12-13

Substance name: *2-propanol* CAS-Nr.: 67-63-0  
 PNEC (fresh water) : 140.9 mg/L  
 PNEC = Predicted No Effected Concentration = concentration at which no effect on the environment is expected  
 LC50 fish/96h : 1400 mg/L  
 EC50 daphnia/48h : 13.3 g/L  
 IC50 scenedesmus quadricauda/72h : >1000 mg/L  
 EC10 pseudomonas putita/16h : EC5: 1050 mg/L  
 Water hazard class (DE): 1 WGK No.: 0135  
 Storage class (VCI): 3

Substance name: *Tergitol 15-S-7* CAS-Nr.: 84133-50-6  
 LC50 fish/96h : 3,2-3,6 mg/L  
 EC50 daphnia/48h : 7,3 mg/L  
 EC10 pseudomonas putita/16h : EC50: >1000 mg/L

Substance name: *guanidinium thiocyanate* CAS-Nr.: 593-84-0  
 Do not release into the environment.  
 PNEC (fresh water) : 42.4 µg/L  
 PNEC = Predicted No Effected Concentration = concentration at which no effect on the environment is expected  
 LC50 fish/96h : [4d] 89.1 mg/L  
 EC50 daphnia/48h : 42.4 mg/L  
 IC50 scenedesmus quadricauda/72h : 130 mg/L  
 EC10 pseudomonas putita/16h : [10d] 200 mg/L  
 Water hazard class (DE): 3  
 Storage class (VCI): 12

**25 mL S3**

Substance name: *acetate buffer solution* CAS-Nr.: -  
 Storage class (VCI): 12

**1 mL M-Beads**

Substance name: *magnetic particles, suspended in water* CAS-Nr.: -  
 Storage class (VCI): 12

**125 mL ERB**

Substance name: *triethanolamine* CAS-Nr.: 102-71-6  
 PNEC (fresh water) : 0.32 mg/L  
 PNEC = Predicted No Effected Concentration = concentration at which no effect on the environment is expected  
 LC50 fish/96h : >1000 mg/L  
 EC50 daphnia/48h : >1000 24h mg/L  
 Water hazard class (DE): 1 WGK No.: 0201  
 Storage class (VCI): 12



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Substance name: *2-propanol* CAS-Nr.: 67-63-0  
 PNEC (fresh water): 140.9 mg/L  
 PNEC = Predicted No Effect Concentration = concentration at which no effect on the environment is expected  
 LC50 fish/96h: 1400 mg/L  
 EC50 daphnia/48h: 13.3 g/L  
 IC50 *scenedesmus quadricauda*/72h: >1000 mg/L  
 EC10 *pseudomonas putida*/16h: EC5: 1050 mg/L  
 Water hazard class (DE): 1 WGK No.: 0135  
 Storage class (VCI): 3

**25 mL AQ**  
 Substance name: *inorganic salts, declaration not necessary* CAS-Nr.: -  
 Water hazard class (DE): 1  
 Storage class (VCI): 12-13

## 12.2 Persistence and degradability

## 12.3 Bioaccumulative potential

Substance name: *dodecyl sulfate, sodium salt* CAS-Nr.: 151-21-3  
 Dispersion coefficient (K<sub>o/w</sub>): 1,6  
 Substance name: *2-propanol* CAS-Nr.: 67-63-0  
 Dispersion coefficient (K<sub>o/w</sub>): 0,05  
 Substance name: *Tergitol 15-S-7* CAS-Nr.: 84133-50-6  
 Dispersion coefficient (K<sub>o/w</sub>): 2,72  
 Substance name: *guanidinium thiocyanate* CAS-Nr.: 593-84-0  
 Dispersion coefficient (K<sub>o/w</sub>): -1,11 pH 5.1

**125 mL ERB**  
 Substance name: *triethanolamine* CAS-Nr.: 102-71-6  
 Dispersion coefficient (K<sub>o/w</sub>): -2,3  
 Substance name: *2-propanol* CAS-Nr.: 67-63-0  
 Dispersion coefficient (K<sub>o/w</sub>): 0,05

## 12.4 Mobility in soil

## 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## 12.6 Endocrine disrupting properties

no data available

## 12.7 Other adverse effects

no additional data available

## SECTION 13: Disposal considerations

Do not collect in acidic waste. May form toxic gases.  
 Please observe local regulations for collection and disposal of hazardous waste and contact waste disposal company, where you will obtain information on laboratory waste disposal (waste code number 16 05 06).

### 13.1 Waste treatment methods

Normally it is possible to empty small amounts (diluted!) into drains. Empty containers of corrosive reagents prior to disposal, rinse with water.

## SECTION 14: Transport information

- 14.1 UN number: 1993
- 14.2 UN proper shipping name: Flammable liquid, n.o.s. (2-propanol mixture)
- 14.3 Class: 3
- 14.4 Packing group: II  
 Road transport ADR  
 Classification code: F1



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# Safety Data Sheet

according to Regulations REACH 1907/2006/EC

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Limited Quantity: 1 L Tunnel restriction code: E  
 Excepted Quantity: E 2  
 Special instructions: 640C

*Air transport IATA DGR*

Limited Quantity: PAX: 353 max. quantity PAX: 5 L  
 CAO: 364 max. quantity CAO: 60 L  
 Excepted Quantity: E 2

*Maritime transport IMDG*

EmS: F-E, S-E Staukategorie: B  
 Special instructions: 274

**14.5 Environmental hazards**

none, contains only small quantities of hazardous substances

**14.6 Special precautions for user**

not necessary

**14.7 Carriage in bulk by sea in accordance with IMO instruments**

Not applicable.

## SECTION 15: Regulatory information

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

Dangerous Substances Protection Act (DE: Chemikaliengesetz - ChemG), Aug 2013, Stand: Okt 2020  
 Ordinance on protection against dangerous substances (E: Gefahrstoffverordnung - GefStoffV), Nov 2010, Stand: Mrz 2017  
 TRGS 201, Classification and labeling of activities involving hazardous substances, Feb 2017  
 TRGS 220, National aspects when preparing safety data sheets, Jan 2017  
 TRGS 400, Risk assessment for activities involving hazardous substances, Jul 2017  
 TRGS 401, Skin contact hazard - identification, assessment, action, Jun 2008, status: Feb 2011  
 BekGS 408, Application of the GefStoffV and the TRGS with the entry into force of the CLP regulation, December 2009, status: Jan 2012  
 TRGS 500, Protective measures, Mai 2008  
 TRGS 510, Storage of hazardous substances in portable containers from March 2013, status: Oct 2015  
 Wasserhaushaltsgesetz - WHG, Section 3 Handling substances hazardous to water, Jul 2009, status: Aug 2016  
 MN leaflet/instructions for use, also at [www.mn-net.com](http://www.mn-net.com)  
 If necessary, observe other country-specific regulations.

**15.2 Chemical safety assessment**

not necessary for these small amounts

## SECTION 16: Other information

**16.1 Changes compared to the last version**

Between versions 3.14.2.1 and 2.2.2.2 following changes were applied: -0 product data corrected - 12 product component data corrected

**16.2 List of H and P phrases**

**16.2.1 List of relevant H phrases**

H Between versions 3.14.2.1 and 2.2.2.2 following changes were applied: -0 product data corrected - 12 product component data corrected  
 H225 Highly flammable liquid and vapour.  
 H226 Flammable liquid and vapour.  
 H314 Causes severe skin burns and eye damage.  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H336 May cause drowsiness or dizziness.

**16.2.2 List of relevant P phrases**

P260sh Do not breathe dust/vapours.  
 P264 Wash hands thoroughly after handling.



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P280sh	Wear protective gloves/eye protection.
P284	[In case of inadequate ventilation] wear respiratory protection.
P303+361+353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P405	Store locked up.
P501	Dispose of contents/container to regulated waste treatment.

### 16.3 Recommended restriction on use

Only for professional user.  
 Look about employee restrictions for young people (f. ex. 94/33/EC or DE § 22 JArbSchG)!  
 Look about employee restrictions for pregnant women and nursing women (f.ex. 92/85/EEC or for DE §§ 11-13 MuSchG 2017)!  
 An individual package of this product or test kit has a moderate hazardous potential.

### 16.4 Sources of key data

KÜHN, BIRETT, Leaflets on hazardous materials, 2021  
 Directive 1999/92/EG Minimum requirements to improve the safety and health protection of workers at risk from potentially explosive atmospheres  
 SUVA .CH, limit values in the air at work 2009, revised on 01/2009  
 Regulation 790/2009/EU, adaptation of Regulation 1272/2008/EU to technical and scientific progress (1st ATP)  
 Regulation 453/2010/EU, adaptation of the REACH regulation 1907/2006/EG  
 TRGS 907, German technical rules for listing substances and causes of sensitization, updated November 2011  
 Regulation 487/2013/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (4th ATP)  
 Regulation 1221/2015/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (7th ATP)  
 Regulation 776/2017/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (10th ATP)  
  
 Regulation 669/2018/EU, adaptation of Regulation 1272/2008/EC to technical and scientific progressText (11th ATP)  
 Regulation 1480/2018/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (13th ATP)  
 Regulation 521/2019/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (12th ATP)  
 TRGS 900, German rules of technology on limit values in the air at work, as of 03/2019  
 Regulation 217/2020/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (14th ATP)  
 Regulation 878/2020/EU, adaptation of Annex II of the REACH regulation 1907/2006/EG  
 Regulation 1182/2020/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (15th ATP)  
 Regulation 643/2021/EU, adaptation of Annex VI, Part 1, of Regulation 1272/2008/EC to technical and scientific progress (16th ATP)  
 Regulation 849/2021/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (17th ATP)  
 Regulation 692/2022/EU, adaptation of Annex VI, Part 1, of Regulation 1272/2008/EC to technical and scientific progress (18th ATP)

#### revisions/updates

Reason for revision: 2014-02 Corrected structure of the sections according to Regulation 453/2010/EU, if necessary  
 2014-04 adjustment according Regulation 487/2013/EU  
 2016-03 adjustment according Regulation 1221/2015/EU  
  
 2017-11 adjustment according the ECHA registration dossier  
 2022-11 adjustment according Regulation 878/2020/EU

### 16.5 Further information

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### 16.6 Legend / Abbreviations

acc:	according
ADR:	Convention concerning the International Carriage of Dangerous Goods by Road
Act:	acute
BAT:	biological workplace tolerance value
CAO:	Cargo Aircraft Only
Carc:	carcinogen
CAS:	Chemical Abstracts Service
CLP:	Classification, Labelling and Packaging regulation
CMR:	carcinogen, mutagen, reproduction toxic
Corr:	corrosive
COD:	chemical oxigen demand
CSSL:	Chemical Substance Control Law (Jp)



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Dam:	damage
DNEL:	Derived No-Effect Level (for workers)
derm:	dermal
dog:	dog
EC10:	Concentration causing a toxic effect in 10% of the test organisms
EC:	European Community
EC-Nr:	Substance number of the EC substance inventory
EmS:	Guide to accident management measures on ships
EU:	European Union
fish:	fish (not specified)
GHS:	Global Harmonized System of Classification and Labeling of Chemicals
gpg:	guinea pig
ICAO:	International Civil Aviation Organization
ihl:	inhaled
IMDG:	International Maritime Dangerous Goods Code
intrav:	intravenous
ipt:	intraperitoneal
ISHL:	Industrial Safety and Health Law (Jp)
LC50:	letale concentration 50%
LD50:	letale dosis 50%
leuciscus idus:	fisch, ide, orfe
MAK:	maximum workplace concentration
Met:	Metall
mus:	mouse
Muta:	mutagen
NIOSH:	National Institute for Occupational Safety and Health (US)
NRD:	Non-rapidly degradable
onchorhynchus mykiss:	fish, rainbow trout
orl:	oral
OSHA:	Occupational Safety and Health Administration
PAX:	transport on passenger planes allowed
PBT:	persistent, bioaccumulating, toxic substance
pH:	pH value
pimephales promelas:	fish, fathead minnow
PNEC:	Predicted No Effect Concentration
PROC 15:	Process category 'for laboratory use'
PRTR:	Law for PRTR and Promotion of Chemical Management (Jp)
PVC:	polyvinyl chloride
quail:	bird, quail
rat:	rat
rbt:	rabbit
RD:	rapidly degradable
RE:	repeated
REACH:	Registration, Evaluation, Authorisation and Restriction of Chemicals
REF:	item number, reference number
Reg.No.:	rRegistration number
Repr:	harmful to reproduction
Resp:	respiratory
RIP:	REACH Implementations Projects
scu:	sub cutan
SDS:	safety data sheet
Sens:	sensitisation
STEL:	short term exposure limit
STOT:	Specific Target Organ Toxicity
SVHC:	Substance of Very High Concern
t/a:	tons per year
TCCA:	Toxic Chemicals Control Act (S. Korea)
Tox:	toxic
TSCA:	The Toxic Substances Control Act (US)
TWA:	time weighted average
TRGS:	technical regulations (DE)
vPvB:	very persistent, very bioaccumulating substance

## 16.7 Training advice

Regular safety training. Multiple safety training of staffs about danger and protection by using hazards in working area. Additionally training and introduction of staffs for using these products.



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