

# Safety Data Sheet

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

REF: 931010

VISOCOLOR ECO Ammonium 15

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Printing date: 01.10.2019

Date of issue: 15.03.2019

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

### 1.1 Product identifier

REF 931010  
 Product name VISOCOLOR ECO Ammonium 15

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 NH<sub>4</sub> -1  
 1 x 2,5 g NH<sub>4</sub> -2  
 1 x 6 mL NH<sub>4</sub> -3

### 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  
 Neumann-Neander-Str. 6-8, 52355 Dueren, GERMANY  
 Tel.: +49 2421 969 0

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

### 1.4 Emergency telephone number

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

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

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

## SECTION 2: Hazard identification

### 2.0 Classification of the complete product



GHS02 GHS05

Signal word DANGER

| Hazard identification | Hazard classes/categories |
|-----------------------|---------------------------|
| H226                  | Flam. Liq. 3              |
| H290                  | Met. Corr. 1              |
| H314                  | Skin Corr. 1A             |
| H412                  | Aquatic Chronic 3         |

### 2.1 Classification of the substance or mixture

30 mL NH<sub>4</sub> -1



GHS05

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|                                |                                    |
|--------------------------------|------------------------------------|
| Signal word                    | DANGER                             |
| <b>Hazard identification</b>   | <b>Hazard classes/categories</b>   |
| H290<br>H314                   | Met. Corr. 1<br>Skin Corr. 1A      |
| <b>2,5 g NH<sub>4</sub> -2</b> |                                    |
| Signal word                    | Do not need labelling as hazardous |
| No hazard class                | -                                  |

**6 mL NH<sub>4</sub> -3**



GHS02 GHS05

|                              |  |
|------------------------------|--|
| Signal word                  | DANGER   |
| <b>Hazard identification</b> | <b>Hazard classes/categories</b>                   |
| H226<br>H314<br>H412         | Flam. Liq. 3<br>Skin Corr. 1B<br>Aquatic Chronic 3 |

## 2.2 Label elements

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

Harmful chemicals/mixtures with signal word: **WARNING** 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).

Metal corrosive solutions **do not have to** be labelled with GHS symbol, signal word, H and P phrases **until 125 mL** (EU 1272/2008 Annex I - 1.5.2.1.3).

**30 mL NH<sub>4</sub> -1**



GHS05

Signal word: DANGER

H314

Causes severe skin burns and eye damage.

P260sh, P280sh, P303+361+353, P305+351+338, P310

Do not breathe dust/vapours. 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.

**2,5 g NH<sub>4</sub> -2**

Do not need labelling as hazardous

Signal word: -

**6 mL NH<sub>4</sub> -3**



GHS02 GHS05

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Signal word: DANGER

H314

Causes severe skin burns and eye damage.

P260sh, P280sh, P303+361+353, P305+351+338, P310

Do not breathe dust/vapours. 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.

## 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. H290 "May be corrosive to metals." has only relevance for higher concentrations and larger amounts. The labelling GHS05 would be creating an "OVERLABELLING" (see GHS Directive 1272/2008/EC Annex I, chapter 1.5.2.1.3., until 125 mL no labelling necessary). ---

### 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.

-

### Information pertaining to particular risks to the environment

Avoid contact of substance/mixture to environment.

PBT: not applicable

vPvB: not applicable

### Other hazards

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances or 3.2 Mixtures

#### 30 mL NH<sub>4</sub>-1

|                 |   |             |              |
|-----------------|---|-------------|--------------|
| Chemical:       | <i>sodium hydroxide solution</i>        | CAS No.:    | 1310-73-2    |
| Classification: | H290, Met. Corr. 1, H314, Skin Corr. 1B |             |              |
| Formula:        | NaOH•H <sub>2</sub> O                   |             |              |
| Pseudonym:      | soda lye                                |             |              |
| TSCA Inventory: | listed                                  |             |              |
| REACH Reg. No.: | 01-2119457892-27-xxxx                   | Indice No.: | 011-002-00-6 |
| EC No.:         | 215-185-5                               |             |              |
| RTECS:          | WB4900000                               |             |              |
| KE No.:         | KE-31487                                |             |              |
| Concentration:  | 5 - <10 %                               |             |              |
| acc. CLP (GHS): | H290, Met. Corr. 1, H314, Skin Corr. 1B |             |              |

|                 |   |          |           |
|-----------------|---|----------|-----------|
| Chemical:       | <i>tri-sodium citrate</i>   | CAS No.: | 6132-04-3 |
| Classification: | No criteria for classification or naming of chemical not required.              |          |           |
| Formula:        | C <sub>6</sub> H <sub>5</sub> Na <sub>3</sub> O <sub>7</sub> •2H <sub>2</sub> O |          |           |
| TSCA Inventory: | listed (CAS 68-04-2)  |          |           |
| REACH Reg. No.: | 01-2119457027-40-xxxx   |          |           |
| EC No.:         | 200-675-3   |          |           |
| RTECS:          | GE8300000   |          |           |
| KE No.:         | KE-20843  |          |           |
| Concentration:  | 10 - <20 %  |          |           |
| acc. CLP (GHS): | The criteria for classification are not fulfilled.                              |          |           |

#### 2,5 g NH<sub>4</sub>-2

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Chemical: *dichloroisocyanuric acid, Na salt* CAS No.: 2893-78-9  
 Classification: H272, Ox. Liq. 2, H302, Acute Tox. 4 oral, H319, Eye Irrit. 2, H335, STOT SE 3, H410, Aquatic  
 Chronic 1, EUH031, 031 not defined  
 Formula:  $C_3Cl_2N_3NaO_3$   
 Pseudonym: troclosene sodium, sodium 3,5-dichloro-2,4,6-trioxo-1,3,5-triazinan-1-ide  
 TSCA Inventory: listed  
 REACH Reg. No.: 01-2119489371-33-xxxx  
 EC No.: 220-767-7 Indice No.: 613-030-01-7  
 RTECS: XZ1900000 MFCD: 00006036  
 KE No.: KE-10215, >25% Toxic 2014-1-688  
 Concentration: 3 - <10 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Chemical: *sodium chloride* CAS No.: 7647-14-5  
 Classification: No criteria for classification or naming of chemical not required.  
 Formula: NaCl  
 Pseudonym: salt  
 TSCA Inventory: listed  
 REACH Reg. No.: exempt, Annex V  
 EC No.: 231-598-3  
 RTECS: VZ4725000  
 KE No.: KE-31387  
 Concentration: 80 - <100 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

### 6 mL NH<sub>4</sub>-3

Chemical: *sodium nitroprusside* CAS No.: 13755-38-9  
 Classification: H301, Acute Tox. 3 oral  
 Formula:  $Na_2[Fe(CN)_5NO]_2 \cdot 2H_2O$   
 Pseudonym: disodium pentacyanonitrosylferrate  
 TSCA Inventory: listed (CAS 14402-89-2)  
 EC No.: 238-373-9  
 RTECS: LJ89250000  
 KE No.: not listed  
 Concentration: 1 - <5 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Chemical: *ethanol* CAS No.: 64-17-5  
 (denatured with 1%IPA/1%MEK, acc.2016/1867/EU)  
 Classification: H225, Flam. Liq. 2  
 Formula:  $C_2H_6O$ ;  $C_2H_5OH$   
 Pseudonym: ethyl alcohol, methylated spirit  
 TSCA Inventory: listed  
 REACH Reg. No.: 01-2119457610-43-xxxx  
 EC No.: 200-578-6 Indice No.: 603-002-00-5  
 RTECS: KQ6300000 MFCD: 00003568  
 KE No.: KE-13217  
 Concentration: 35 - <55 %  
 acc. CLP (GHS): H226, Flam. Liq. 3

Chemical: *thymol* CAS No.: 89-83-8  
 Classification: H302, Acute Tox. 4 oral, H314, Skin Corr. 1B, H411, Aquatic Chronic 2  
 Formula:  $C_{10}H_{14}O$   
 Pseudonym: 5-methyl-2-(1-methylethyl)-phenol  
 TSCA Inventory: listed  
 REACH Reg. No.: 01-2119511177-46-xxxx  
 EC No.: 201-944-8 Indice No.: 604-032-00-1  
 RTECS: XP2275000 MFCD: 00002309  
 KE No.: KE-24420  
 Concentration: 5 - <10 %  
 acc. CLP (GHS): H314, Skin Corr. 1B, H412, Aquatic Chronic 3

### 3.3 Remarks

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

List of H and P phrases: see section 16.1

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## 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.

#### 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.

#### 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. ---

#### 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

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### 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 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 DISTRESSES ensure that the patient inhales oxygen. ---

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

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

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

WARNING: Flammable (GHS regulation). May form 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

not necessary, contains only small amounts of these substances

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

Bind any escaping liquid with inert absorbent. 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.

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**6.4 Reference to other sections**  
see information in section 5.4 ---

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

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

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

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

Storage class (VCI): 3  
Water hazard class (DE): 3

### 7.2.1 Requirements for stock rooms and containers

Keep original product packages tightly closed during handling and storage. 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

#### 30 mL NH<sub>4</sub> -1

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

DNEL: [inh] 1 mg/m<sup>3</sup>  
DNEL = Derived No-Effect Level (for workers)

TRGS 900 (DE): 2 mg/m<sup>3</sup>  
E/e respirable

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

SUVA(CH) MAK value: 2 e mg/m<sup>3</sup>

NIOSH: 2 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] 2 mg/m<sup>3</sup>

Chemical: *tri-sodium citrate* CAS No.: 6132-04-3

#### 2,5 g NH<sub>4</sub> -2

Chemical: *dichloroisocyanuric acid, Na salt* CAS No.: 2893-78-9

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: *sodium chloride* CAS No.: 7647-14-5

#### 6 mL NH<sub>4</sub> -3

Chemical: *sodium nitroprusside* CAS No.: 13755-38-9

Chemical: *ethanol* CAS No.: 64-17-5

DNEL: [derm] 343 mg/kg; [inh] 950 mg/m<sup>3</sup>  
DNEL = Derived No-Effect Level (for workers)

PNEC<sub>(fresh water)</sub>: 0.96 mg/L  
PNEC = Predicted No Effect Concentration

TRGS 900 (DE): 200 mL/m<sup>3</sup> / 380 mg/m<sup>3</sup>  
E/e respirable

Short-term exposure factor: 4 (II), Y  
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 500 ppm / 960 mg/m<sup>3</sup>

NIOSH: [TWA] 1000 ppm / 1900 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] 1000 ppm / 1900 mg/m<sup>3</sup>

Chemical: *thymol* CAS No.: 89-83-8

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## 8.2 Exposure controls

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

### 8.2.1 Respiratory protection

No additional recommendations.

### 8.2.2 Hand protection

Yes, gloves according EN 374 (permeation time >30 min - level 2), consist of PVC, 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 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.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### 30 mL NH<sub>4</sub> -1

Appearance: liquid  
pH:

Colour: colourless  
11,5-12,5

Odor: odorless

#### 2,5 g NH<sub>4</sub> -2

Appearance: powder (solid)  
pH:

Colour: colourless  
5-7

Odor: chloric

#### 6 mL NH<sub>4</sub> -3

Appearance: liquid  
pH:  
Flash point:  
Specific gravity:

Colour: rose  
6-8  
23 °C  
0,9 g/cm<sup>3</sup>

Odor: organic

### 9.2 Other information

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

#### Relevant Properties of Substance Group

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no further data available.

### 10.2 Chemical stability

No known instability.

### 10.3 Possibility of hazardous reactions

Can react violently with organic material. No further data available.

### 10.4 Conditions to avoid

Not necessary. ---

### 10.5 Incompatible materials

Avoid contact with strong acids or alkalines.

### 10.6 Hazardous decomposition products

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

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

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

#### 30 mL NH<sub>4</sub> -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: irritation eyes, skin, mucous membrane; pneumonitis; eye, skin burns; temporary loss of hair  
 Australia NICNAS: not listed Canada CEPA 1999: DSL Yes  
 Japan CSCL/PRTR: not listed, Japan PDSCL: not listed  
 Japan ISHL: listed ≥1,0%/≥1,0%, Article 57-2 (SDS required)  
 South Korea TCCA: not listed  
 Korea Exist.Chem.Inventory: KE-31487  
 LD50<sub>orl rat</sub>: [40%] 1250 / [<25%] >2000 mg/kg  
 LD50<sub>orl mus</sub>: 40 mg/kg

Chemical: *tri-sodium citrate* CAS No.: 6132-04-3  
 TSCA Inventory: listed (CAS 68-04-2)  
 Korea Exist.Chem.Inventory: KE-20843  
 LD50<sub>orl rat</sub>: >8000 mg/kg

#### 2,5 g NH<sub>4</sub> -2

Chemical: *dichloroisocyanuric acid, Na salt* CAS No.: 2893-78-9  
 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: KE-10215, >25% Toxic 2014-1-688  
 LD50<sub>orl rat</sub>: 550-1600 mg/kg  
 LC<sub>LoWorl hmn</sub>: 3570 mg/kg  
 LD50<sub>drm rbt</sub>: >5000 mg/kg

Chemical: *sodium chloride* CAS No.: 7647-14-5  
 TSCA Inventory: listed  
 Korea Exist.Chem.Inventory: KE-31387  
 LD50<sub>orl rat</sub>: 3000 mg/kg  
 LD50<sub>drm rbt</sub>: 10 g/kg

#### 6 mL NH<sub>4</sub> -3

Chemical: *sodium nitroprusside* CAS No.: 13755-38-9  
 TSCA Inventory: listed (CAS 14402-89-2)  
 Korea Exist.Chem.Inventory: not listed  
 LD50<sub>orl rat</sub>: 99 mg/kg  
 LC<sub>LoWorl rat</sub>: 20 mg/kg

Chemical: *ethanol* CAS No.: 64-17-5  
 TSCA Inventory: listed California Proposition 65 List: not listed  
 ACGIH: 1000 ppm  
 Exposure Routes: inhalation, ingestion, skin and/or eye contact  
 Target Organs: Eyes, skin, respiratory system, central nervous system, liver, blood, reproductive system  
 Symptoms: irritation eyes, skin, nose; headache, drowsiness, lassitude (weakness, exhaustion), narcosis; cough; liver damage; anemia; reproductive, teratogenic  
 Australia NICNAS: not listed Canada CEPA 1999: DSL yes  
 Japan CSCL/PRTR: not listed, 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-13217  
 LD50<sub>orl rat</sub>: 6200 mg/kg  
 LC<sub>LoWorl hmn</sub>: 21.9 g/m<sup>3</sup>



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LC<sub>50</sub>LowOrl hmn : 1400 mg/kg  
 LC50<sub>ihl</sub> mouse : [4h] 39 g/m<sup>3</sup>  
 LC50<sub>ihl</sub> rat : [10h] 20 g/m<sup>3</sup>  
 LD50<sub>drm</sub> rbt : 20 000 mg/kg  
 LD50<sub>oral</sub> mouse : 3450 mg/kg

TRGS 905 (DE): K5, M5, R<sub>F</sub> C

Chemical: *thymol*  
 TSCA Inventory: listed  
 Korea Exist.Chem.Inventory: KE-24420  
 LD50<sub>orl</sub> rat : 980 mg/kg  
 LD50<sub>drm</sub> rat : > 2000 mg/kg

CAS No.: 89-83-8

## SECTION 12: Ecological information

### 12.1 Toxicity

Following information is valid for pure substances.

#### 30 mL NH<sub>4</sub> -1

Chemical: *sodium hydroxide solution*  
 Avoid contact of substance/mixture to environment.  
 LC50<sub>leuciscus idus/96h</sub> : 35-189 mg/L  
 LC50<sub>fish/96h</sub> : 45.4 mg/L  
 EC50<sub>daphnia/48h</sub> : >100 mg/L  
 Water hazard class (DE): 1 WGK No.: 142  
 Storage class (VCI): 8 B

CAS No.: 1310-73-2

Chemical: *tri-sodium citrate*  
 LC50<sub>fish/96h</sub> : 18-32 g/L  
 EC50<sub>daphnia/48h</sub> : 5.6-10 g/L  
 EC50<sub>chlorella vulgaris/5d</sub> : >18-32 g/L  
 EC10<sub>pseudomonas putita/16h</sub> : EC50<sub>ps. fluorescens/8h</sub> : >1.8-3.2 g/L  
 Water hazard class (DE): 1  
 Storage class (VCI): 12-13

CAS No.: 6132-04-3

#### 2,5 g NH<sub>4</sub> -2

Chemical: *dichloroisocyanuric acid, Na salt*  
 Water hazard class (DE): 3  
 Storage class (VCI): 13

CAS No.: 2893-78-9

Chemical: *sodium chloride*  
 Water hazard class (DE): 1  
 Storage class (VCI): 12-13

CAS No.: 7647-14-5

#### 6 mL NH<sub>4</sub> -3

Chemical: *sodium nitroprusside*  
 Water hazard class (DE): 3  
 Storage class (VCI): 6.1 B

CAS No.: 13755-38-9

Chemical: *ethanol*  
 PNEC(fresh water) : 0.96 mg/L  
 PNEC = Predicted No Effect Concentration  
 LC50<sub>daphnia magna/48h</sub> : >100 mg/L  
 LC50<sub>pimephales promelas/96h</sub> : 13400 - 15100 mg/L  
 LC50<sub>leuciscus idus/96h</sub> : [48h] 8140 mg/L  
 LC50<sub>fish/96h</sub> : 13 g/L  
 EC50<sub>daphnia/48h</sub> : 9.3-14.2 g/L  
 IC50<sub>scenedesmus quadricauda/72h</sub> : [7d] 5000 mg/L  
 EC10<sub>pseudomonas putita/16h</sub> : [EC5] 6500 mg/L  
 Water hazard class (DE): 1 WGK No.: 0096  
 Dispersion coefficient(octanol-water) : -0.31  
 Storage class (VCI): 3

CAS No.: 64-17-5

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Chemical: *thymol* CAS No.: 89-83-8  
 Harmful to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment.  
 Environmental hazards must not be labelled with P phrases until 125 mL (EU 1272/2008 Annex I - 1.5.2).  
 LC50<sub>pimephales promelas/96h</sub>: 3.2 mg/L  
 EC50<sub>daphnia/48h</sub>: 3.2 mg/L  
 Water hazard class (DE): 2 WGK No.: 1220  
 Storage class (VCI): 8 A

## 12.2 Persistence and degradability

not necessary

## 12.3 Bioaccumulative potential

not necessary

## 12.4 Mobility in soil

not necessary

## 12.5 Results of PBT and vPvB assessment

no data available

## 12.6 Other adverse effects

no additional data available

## SECTION 13: Disposal considerations

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: 3316** **14.2. UN proper shipping name: Chemical Kit**  
**14.3. Class: 9** **14.4. Packing group: II**

Road transport

Classification code: M11 Tunnel restriction code: E  
 Limited Quantity: acc. ADR 3.3.1/251: see LQ in Alternative declaration for transportation

Air transport

PAX: 960 max. weight PAX: 10 KG  
 CAO: 960 max. weight CAO: 10 KG

Maritime transport

EmS: F-A, S-P Storage category: A

Or use **Alternative declaration for transportation:**

UN No.: (see below) UN 1993 class 3 III, **Excepted Quantities** ( $\leq 30$  mL/ $\Sigma \leq 1$  L) = ADR/ IATA E1  
 class 8 II, **Excepted Quantities** ( $\leq 30$  mL/ $\Sigma \leq 500$  mL) = ADR/ IATA E2

or

**14.1 UN number: 1993** **14.2 UN proper shipping name: Flammable liquid, n.o.s. (ethanol mixture)**  
**14.3 Class: 3** **14.4 Packing group: III**

Road transport

Classification code: F1 Tunnel restriction code: E  
 Limited Quantity: 5 L Special instructions: 640E  
 Excepted Quantity: E 1

Air transport

PAX: 355 max. weight PAX: 60 L  
 CAO: 366 max. weight CAO: 220 L

Maritime transport

EmS: F-E, S-E Storage category: A

**14.1 UN number: 3266** **14.2 UN proper shipping name: Corrosive liquid, basic, inorganic, n.o.s. (sodium hydroxide solution)**  
**14.3 Class: 8** **14.4 Packing group: II**

Road transport

Classification code: C5 Tunnel restriction code: E  
 Limited Quantity: 1 L  
 Excepted Quantity: E 2

Air transport

PAX: 851 max. weight PAX: 1 L

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CAO: 855 max. weight CAO: 30 L  
*Maritime transport*  
 EmS: F-A, S-B Storage category: B

**14.5 Environmental hazards**

none, contains only small quantities of hazardous substances, contains only small amounts of these substances

**14.6 Special precautions for user**

not necessary

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

not applicable

## SECTION 15: Regulatory information

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

German act governing protection from hazardous substances (Chemicals Act / Chemikaliengesetz- ChemG), revised on August 2013  
 German order governing protection from hazardous substances (Ordinance on Hazardous Substances / Gefahrstoffverordnung - GefStoffV), revised on November 2010, according to Directive 98/24/EC  
 TRGS 200, German engineering rules governing the classification and labelling of hazardous substances, preparations and products, updated October 2011  
 MN Leaflet/User manual, also see [www.mn-net.com](http://www.mn-net.com)  
 Look for your country-specific regulations.

**15.2 Chemical safety assessment**

not necessary for these small amounts ---

## SECTION 16: Other information

**16.1 List of H and P phrases**

**16.1.1 List of relevant H phrases**

H226 Flammable liquid and vapour.  
 H290 May be corrosive to metals.  
 H314 Causes severe skin burns and eye damage.  
 H412 Harmful to aquatic life with long lasting effects.

**16.1.2 List of relevant P phrases**

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
 P260sh Do not breathe dust/vapours.  
 P273 Avoid release to the environment.  
 P280sh Wear protective gloves/eye 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.  
 P390 Absorb spillage to prevent material damage.

**16.2 Training advice**

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.

**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 Further information**

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## 16.5 Sources of key data

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

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

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

TRGS 900, German engineering rules governing limits in air at work, updated 03/2018

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

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

### Revisions/Updates

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

*2017-08 Adaption of new ethanol denaturation 2016/1867/EU*