

# Safety Data Sheet

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

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

### 1.1 Product identifier

REF 985003  
 Product name NANOCOLOR Ammonium 3

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.

20 x 4 mL Ammonium 3 (R0)  
 1 x 5 mL Blank (NULL)  
 1 x 20x 14 mg NANOFIX Ammonium R2

### 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



GHS07

Signal word WARNING

Hazard identification	Hazard classes/categories
H302	Acute Tox. 4 oral

### 2.1 Classification of the substance or mixture

#### 4 mL Ammonium 3 (R0)

Signal word Do not need labelling as hazardous  
 -

No hazard class

#### 5 mL Blank (NULL)

Do not need labelling as hazardous

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Signal word -

No hazard class

**20x 14 mg NANOFIX Ammonium R2**



GHS07

Signal word WARNING

Hazard identification	Hazard classes/categories
H302	Acute Tox. 4 oral

## 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). Inner packages up to 10 mL need max. 2 symbols (Annex I - 1.5.2.4.1 / 2).

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

### 4 mL Ammonium 3 (R0)

Do not need labelling as hazardous  
Signal word: -

### 5 mL Blank (NULL)

Do not need labelling as hazardous  
Signal word: -

### 20x 14 mg NANOFIX Ammonium R2



GHS07

Signal word: WARNING

## 2.3 Other hazards

**Possible hazards from physicochemical properties**

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

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

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

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**Other hazards**

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances or 3.2 Mixtures

**4 mL Ammonium 3 (R0)**

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Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2  
 Classification: No criteria for classification or naming of chemical not required.  
 Formula: NaOH•H<sub>2</sub>O  
 Pseudonym: soda lye  
 TSCA Inventory: listed  
 REACH Reg. No.: 01-2119457892-27-xxxx  
 EC No.: 215-185-5 Indice No.: 011-002-00-6  
 RTECS: WB4900000  
 KE No.: KE-31487  
 Concentration: < 0.50 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Chemical: *tri-sodium citrate* 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: 1 - <10 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

**5 mL Blank (NULL)**

Chemical: *water* CAS No.: 7732-18-5  
 Classification: No criteria for classification or naming of chemical not required.  
 Formula: H<sub>2</sub>O  
 TSCA Inventory: listed  
 REACH Reg. No.: exempt, Annex IV  
 EC No.: 231-791-2  
 RTECS: ZC0110000  
 KE No.: KE-35400  
 Concentration: 90 - <100 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

**20x 14 mg NANOFIX Ammonium R2**

Chemical: *sodium nitroprusside* CAS No.: 13755-38-9  
 Classification: H301, Acute Tox. 3 oral  
 Formula: Na<sub>2</sub> [Fe(CN)<sub>5</sub> NO]•2 H<sub>2</sub> O  
 Pseudonym: disodium pentacyanonitrosylferrate  
 TSCA Inventory: listed (CAS 14402-89-2)  
 EC No.: 238-373-9  
 RTECS: LJ89250000  
 KE No.: not listed  
 Concentration: 15 - <33 %  
 acc. CLP (GHS): H302, Acute Tox. 4 oral

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<sub>3</sub> Cl<sub>2</sub> N<sub>3</sub> NaO<sub>3</sub>  
 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.

**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.

#### 4.1.1 After SKIN Contact

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

#### 4.1.2 After EYE Contact

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

#### 4.1.3 After INHALATION of vapours

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

#### 4.1.4 After ORAL Intake

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

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

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

No additionally recommendations. ---

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

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

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

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

### 5.3 Advice for firefighters

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

### 5.4 Additional information

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## SECTION 6: Accidental release measures

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

Do not breathe vapours. Regular staff training is necessary.

### 6.2 Environmental precautions

not necessary

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

Bind any escaping liquid with inert absorbent.  
Collect small amounts of leaked liquid and flush with water into drains.

### 6.4 Reference to other sections

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Handling in accordance with the test instruction, that comes with the product. Use a safety bottle when shaking test tubes.

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

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

Storage class (VCI): 8B  
Water hazard class (DE): 3

#### 7.2.1 Requirements for stock rooms and containers

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Keep original product packages tightly closed during handling and storage.

## 7.3 Specific end use(s)

Product for analytical use.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### 4 mL Ammonium 3 (R0)

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

#### 5 mL Blank (NULL)

Chemical: *water*

CAS No.: 7732-18-5

#### 20x 14 mg NANOFIX Ammonium R2

Chemical: *sodium nitroprusside*

CAS No.: 13755-38-9

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

### 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.

#### 8.2.4 Skin protection

Not necessary.

#### 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

#### 4 mL Ammonium 3 (R0)

Appearance: liquid

Colour: colourless

Odor: odorless

pH:

12-13

Solubility in water:

0-100 %

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## 5 mL Blank (NULL)

Appearance: liquid

Colour: colourless

Odor: odorless

pH:

6-8

Specific gravity:

1,00 g/cm<sup>3</sup>

## 20x 14 mg NANOFIX Ammonium R2

Appearance: powder (solid)

Colour: rose

Odor: chloric

pH:

5-7

## 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

No further data available.

### 10.4 Conditions to avoid

Observe labeled storage temperature. ---

### 10.5 Incompatible materials

Avoid contact with strong acids or alkalines.

### 10.6 Hazardous decomposition products

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

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

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

#### 4 mL Ammonium 3 (R0)

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  $\geq 1,0\%$  /  $\geq 1,0\%$ , 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/kgLD50<sub>orl mus</sub>: 40 mg/kgChemical: *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

#### 5 mL Blank (NULL)

Chemical: *water*

CAS No.: 7732-18-5

TSCA Inventory: listed

Korea Exist.Chem.Inventory: KE-35400

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## 20x 14 mg NANOFIX Ammonium R2

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

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

## SECTION 12: Ecological information

### 12.1 Toxicity

Following information is valid for pure substances.

#### 4 mL Ammonium 3 (R0)

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

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

#### 5 mL Blank (NULL)

Chemical: *water* CAS No.: 7732-18-5

#### 20x 14 mg NANOFIX Ammonium R2

Chemical: *sodium nitroprusside* CAS No.: 13755-38-9  
 Water hazard class (DE): 3  
 Storage class (VCI): 6.1 B

Chemical: *dichloroisocyanuric acid, Na salt* CAS No.: 2893-78-9  
 Water hazard class (DE): 3  
 Storage class (VCI): 13

### 12.2 Persistence and degradability

not necessary

### 12.3 Bioaccumulative potential

not necessary

### 12.4 Mobility in soil

not necessary

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**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**

## SECTION 14: Transport information

14.1 - 14.4: No dangerous goods according the transport regulations

**14.5 Environmental hazards**

none, contains only small quantities of hazardous substances

**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  
 Look for your country-specific regulations.

**15.2 Chemical safety assessment**

not necessary for these small amounts ---

## SECTION 16: Other information

**16.1 List of H and P phrases**

**16.1.1 List of relevant H phrases**

H302 Harmful if swallowed.

**16.1.2 List of relevant P phrases**

P264W Wash with water thoroughly after handling.  
 P301+312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
 P330 Rinse mouth.

**16.2 Training advice**

Regular safety training.

**16.3 Recommended restriction on use**

Only for professional user.  
 An individual package of this product or test kit has a moderate hazardous potential.

**16.4 Further information**

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

Regulation 453/2010/EU REACH - REQUIREMENTS FOR THE COMPILATION OF SAFETY DATA SHEETS  
Regulation 487/2013/EU, 4<sup>th</sup> adaptation of CLP regulation to technical and scientific progress  
Regulation 669/2018/EU, 4<sup>th</sup> adaptation of CLP regulation to technical and scientific progress  
Regulation 1480/2018/EU, 4<sup>th</sup> adaptation of CLP regulation to technical and scientific progress  
TRGS 900, German engineering rules governing limits in air at work, updated 03/2019  
SUVA .CH, Limits in air at work 2009, revised on 01.2009  
KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)

### Revisions/Updates

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