

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 985006
 Product name NANOCOLOR Ammonium 200

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 20 x 18 mg NANOFIX Ammonium (R2)
 20 x 8 mL Ammonium 10-200 (R0)
 1 x 5 mL Blank (NULL)

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
H315	Skin Irrit. 2
H319	Eye Irrit. 2

2.1 Classification of the substance or mixture

20 x 18 mg NANOFIX Ammonium (R2)



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Signal word WARNING

Hazard identification	Hazard classes/categories
H302	Acute Tox. 4 oral
H315	Skin Irrit. 2
H319	Eye Irrit. 2

8 mL Ammonium 10-200 (R0)

Signal word

Do not need labelling as hazardous

No hazard class

5 mL Blank (NULL)

Signal word

Do not need labelling as hazardous

No hazard class

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).

20 x 18 mg NANOFIX Ammonium (R2)



GHS07

Signal word: WARNING

8 mL Ammonium 10-200 (R0)

Do not need labelling as hazardous

Signal word: -

5 mL Blank (NULL)

Do not need labelling as hazardous

Signal word: -

2.3 Other hazards

Possible hazards from physicochemical properties

In the case of pH values are less than 5 or higher than 9 then it is irritant. ---

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

Other hazards

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SECTION 3: Composition/information on ingredients

3.1 Substances or 3.2 Mixtures

20 x 18 mg NANOFIX Ammonium (R2)

Chemical: *sodium nitroprusside* CAS No.: 13755-38-9
 Classification: H301, Acute Tox. 3 oral
 Formula: $\text{Na}_2[\text{Fe}(\text{CN})_5\text{NO}]_2 \cdot 2\text{H}_2\text{O}$
 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: $\text{C}_3\text{Cl}_2\text{N}_3\text{NaO}_3$
 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
 RTECS: XZ1900000
 KE No.: KE-10215, >25% Toxic 2014-1-688
 Concentration: 10 - <20 %
 acc. CLP (GHS): H315, Skin Irrit. 2, H319, Eye Irrit. 2
 Indice No.: 613-030-01-7
 MFCD: 00006036

8 mL Ammonium 10-200 (R0)

Chemical: *sodium hydroxide solution (diluted < 2 %)* CAS No.: 1310-73-2d
 Classification: H314, Skin Corr. 1B
 Formula: $\text{NaOH} \cdot \text{H}_2\text{O}$
 Pseudonym: diluted soda lye
 TSCA Inventory: listed
 REACH Reg. No.: 01-2119457892-27-xxxx
 EC No.: 215-185-5
 RTECS: WB4900000
 KE No.: KE-31487
 Concentration: 0.1 - <0.5 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.
 Indice No.: 011-002-00-6

Chemical: *tri-sodium citrate* CAS No.: 6132-04-3
 Classification: No criteria for classification or naming of chemical not required.
 Formula: $\text{C}_6\text{H}_5\text{Na}_3\text{O}_7 \cdot 2\text{H}_2\text{O}$
 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: < 1.00 %
 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_2O
 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.

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3.3 Remarks

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

List of H and P phrases: see section 16.1

SECTION 4: First aid measures

4.1 Description of first aid measures

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

4.1.1 After SKIN Contact

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

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

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

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.

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7.2 Conditions for safe storage, including any incompatibilities

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

Storage class (VCI): 6.1B
 Water hazard class (DE): 3

7.2.1 Requirements for stock rooms and containers

Keep original product packages tightly closed during handling and storage.

7.3 Specific end use(s)

Product for analytical use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

20 x 18 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 mL Ammonium 10-200 (R0)

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

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

5 mL Blank (NULL)

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

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

20 x 18 mg NANOFIX Ammonium (R2)

Appearance: powder (solid) Colour: rose Odor: chloric
 pH: 5-7

8 mL Ammonium 10-200 (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/cm³

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

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.

20 x 18 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_{orl rat}: 99 mg/kgLC_{LoWorl rat}: 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_{orl rat}: 550-1600 mg/kgLC_{LoWorl hmn}: 3570 mg/kgLD50_{drm rbt}: >5000 mg/kg

8 mL Ammonium 10-200 (R0)

Chemical: *sodium hydroxide solution*

CAS No.: 1310-73-2d

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%] > 50 g/kgLD50_{orl mus}: [< 1%] > 4 g/kg

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Chemical: *tri-sodium citrate*
 TSCA Inventory: listed (CAS 68-04-2)
 Korea Exist.Chem.Inventory: KE-20843
 LD50_{orl rat}: >8000 mg/kg

CAS No.: 6132-04-3

5 mL Blank (NULL)

Chemical: *water*
 TSCA Inventory: listed
 Korea Exist.Chem.Inventory: KE-35400

CAS No.: 7732-18-5

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

20 x 18 mg NANOFIX Ammonium (R2)

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

CAS No.: 13755-38-9

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

CAS No.: 2893-78-9

8 mL Ammonium 10-200 (R0)

Chemical: *sodium hydroxide solution*
 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

CAS No.: 1310-73-2d

Chemical: *tri-sodium citrate*
 LC50_{fish/96h}: 18-32 g/L
 EC50_{daphnia/48h}: 5.6-10 g/L
 EC50_{chlorella vulgaris/5d}: >18-32 g/L
 EC10_{pseudomonas putita/16h}: EC50_{ps. fluorescens/8h}: >1.8-3.2 g/L
 Water hazard class (DE): 1
 Storage class (VCI): 12-13

CAS No.: 6132-04-3

5 mL Blank (NULL)

Chemical: *water*

CAS No.: 7732-18-5

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

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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.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.

16.1.2 List of relevant P phrases

P264W Wash with water thoroughly after handling.
 P280sh Wear protective gloves/eye protection.
 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, 4th adaptation of CLP regulation to technical and scientific progress

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

Regulation 1480/2018/EU, 4th 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