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

1.1 Product identifier

REF 985605
Product name NANOCOLOR Ammonium 50, Robot

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 8 mL Ammonium 50 reagent A (R0)
1 x 20x 14 mg NANOFIX Ammonium R2
20 x Test tube, empty

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

8 mL Ammonium 50 reagent A (R0)

Do not need labelling as hazardous
Signal word -

No hazard class

20x 14 mg NANOFIX Ammonium R2

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MACHEREY-NAGEL ISO 9001 CERTIFIED
Version: M V 4.12.0

GHS07

Signal word WARNING

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

Test tube, empty

Do not need labelling as hazardous

Signal word -

No hazard class

2.2 Label elements

According **CLP directive** inner packages must be only labelled with GHS symbol(s) and product identificator(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).

8 mL Ammonium 50 reagent A (R0)

Do not need labelling as hazardous
Signal word: -

20x 14 mg NANOFIX Ammonium R2

GHS07

Signal word: WARNING

Test tube, empty

Do not need labelling as hazardous
Signal word: -

2.3 Other hazards

Possible hazards from physicochemical properties

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

SECTION 3: Composition/information on ingredients

3.1 Substances or 3.2 Mixtures

8 mL Ammonium 50 reagent A (R0)

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Chemical: *sodium hydroxide solution* (diluted < 2 %) CAS No.: 1310-73-2d
Classification: H314, Skin Corr. 1B
Formula: $NaOH \cdot H_2O$
Pseudonym: diluted 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: 0.1 - <0.5 %
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: $C_6H_5Na_3O_7 \cdot 2H_2O$
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.

20x 14 mg NANOFIX Ammonium R2

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: 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: $C_3Cl_2N_3NaO_3$
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.

Test tube, empty

Chemical: *Packaging - no content* CAS No.: -
Classification: No criteria for classification or naming of chemical not required.
Concentration: 99 - <100 %
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

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.

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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.

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.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8 mL Ammonium 50 reagent A (R0)
Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2d

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

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

Test tube, empty
Chemical: *Packaging - no content* 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
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

8 mL Ammonium 50 reagent A (R0)
Appearance: liquid | Colour: colourless | Odor: odorless
pH: 12-13
Solubility in water: 0-100 %

20x 14 mg NANOFIX Ammonium R2
Appearance: powder (solid) | Colour: rose | Odor: chloric
pH: 5-7

Test tube, empty
Appearance: solid | Colour: colourless | Odor: odorless

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.

8 mL Ammonium 50 reagent A (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/kg
$LD50_{drm\ rbt}$: not applicable
$LD50_{orl\ mus}$: [< 1%] > 4 g/kg

Chemical: *tri-sodium citrate* CAS No.: 6132-04-3
TSCA Inventory: listed (CAS 68-04-2)
Korea Exist.Chem.Inventory: KE-20843
$LD50_{orl\ rat}$: >8000 mg/kg

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
$LD50_{orl\ rat}$: 99 mg/kg
$LC\_Low_{orl\ rat}$: 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/kg
$LC\_Low_{orl\ hmn}$: 3570 mg/kg
$LD50_{drm\ rbt}$: >5000 mg/kg

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Test tube, empty
Chemical: *Packaging - no content* CAS No.: -

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

8 mL Ammonium 50 reagent A (R0)
Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2d
$LC50_{leuciscus\ idus/96h}$: 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

Chemical: *tri-sodium citrate* CAS No.: 6132-04-3
$LC50_{fish/96h}$: 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

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

Test tube, empty
Chemical: *Packaging - no content* CAS No.: -

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

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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, 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

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