

Safety Data Sheet

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

REF: 925703

NANOCONTROL NANOCHECK 2.0

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Printing date: 14.02.2020

Date of issue: 14.09.2018

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

1.1 Product identifier

REF 925703
Product name NANOCONTROL NANOCHECK 2.0

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 5 mL Blank (NULL)
1 x 5 mL Prüflösung 1
1 x 5 mL Prüflösung 2
1 x 5 mL Prüflösung 3
1 x 5 mL Prüflösung 4
1 x 5 mL Prüflösung 5
1 x 5 mL Prüflösung 6

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 Düren, 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



GHS07



GHS08



GHS09

Signal word

DANGER

Hazard identification

H225
H317
H334
H341
H350i
H360
H410

Hazard classes/categories

Flam. Liq. 2
Skin Sens. 1
Resp. Sens. 1
Muta. 2
Carc. 1A
Repr. 1B
Aquatic Chronic 1

2.1 Classification of the substance or mixture

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5 mL Blank (NULL)

Signal word

Do not need labelling as hazardous

No hazard class

5 mL Prüflösung 1



GHS02

Signal word

DANGER

Hazard identification

H225

Hazard classes/categories

Flam. Liq. 2

5 mL Prüflösung 2



GHS02

Signal word

DANGER

Hazard identification

H225

Hazard classes/categories

Flam. Liq. 2

5 mL Prüflösung 3



GHS02

Signal word

DANGER

Hazard identification

H225

Hazard classes/categories

Flam. Liq. 2

5 mL Prüflösung 4



GHS07



GHS08



GHS09

Signal word

DANGER

Hazard identification

H317

H334

H341

H350i

H360

H410

Hazard classes/categories

Skin Sens. 1

Resp. Sens. 1

Muta. 2

Carc. 1A

Repr. 1B

Aquatic Chronic 1

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5 mL Prüflösung 5



GHS07 GHS08 GHS09

Signal word

DANGER

Hazard identification

Hazard classes/categories

H317	Skin Sens. 1
H334	Resp. Sens. 1
H341	Muta. 2
H350i	Carc. 1A
H360	Repr. 1B
H410	Aquatic Chronic 1

5 mL Prüflösung 6



GHS07 GHS08 GHS09

Signal word

DANGER

Hazard identification

Hazard classes/categories

H317	Skin Sens. 1
H334	Resp. Sens. 1
H341	Muta. 2
H350i	Carc. 1A
H360	Repr. 1B
H410	Aquatic Chronic 1

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). This labelling exemption is NOT valid for sensiblizing substances.

5 mL Blank (NULL)

Do not need labelling as hazardous

Signal word: -

5 mL Prüflösung 1



GHS02

Signal word: DANGER

5 mL Prüflösung 2



GHS02

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Signal word: DANGER

5 mL Prüflösung 3



GHS02

Signal word: DANGER

5 mL Prüflösung 4



GHS07



GHS08



GHS09

Signal word: DANGER

H317, H334, H341, H350i, H360, H410

May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Suspected of causing genetic defects. May cause cancer if inhaled. May damage fertility or the unborn child. Very toxic to aquatic life with long lasting effects.

P261sh, P280sh, P342+311, P391, P405

Avoid breathing dust/vapours. Wear protective gloves/eye protection. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. Collect spillage. Store locked up.

5 mL Prüflösung 5



GHS07



GHS08



GHS09

Signal word: DANGER

H317, H334, H341, H350i, H360, H410

May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Suspected of causing genetic defects. May cause cancer if inhaled. May damage fertility or the unborn child. Very toxic to aquatic life with long lasting effects.

P261sh, P280sh, P342+311, P391, P405

Avoid breathing dust/vapours. Wear protective gloves/eye protection. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. Collect spillage. Store locked up.

5 mL Prüflösung 6



GHS07



GHS08



GHS09

Signal word: DANGER

H317, H334, H341, H350i, H360, H410

May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Suspected of causing genetic defects. May cause cancer if inhaled. May damage fertility or the unborn child. Very toxic to aquatic life with long lasting effects.

P261sh, P280sh, P342+311, P391, P405

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Avoid breathing dust/vapours. Wear protective gloves/eye protection. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. Collect spillage. Store locked up.

2.3 Other hazards

Possible hazards from physicochemical properties

Flammable properties. ---

Information pertaining to particular risks to human and possible symptoms

Cause after skin contact, impairments of health when ingested in small quantities. May cause sensitization by skin contact, also in repeated contact of small amounts. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Suspected of causing genetic defects. May cause cancer. May cause cancer if inhaled. May damage fertility or the unborn child. -

Information pertaining to particular risks to the environment

Very toxic to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment.

PBT: not applicable

vPvB: not applicable

Other hazards

SECTION 3: Composition/information on ingredients

3.1 Substances or 3.2 Mixtures

5 mL Blank (NULL)

Chemical: water

CAS No.: 7732-18-5

Classification:

No criteria for classification or naming of chemical not required.

Formula:

H₂O

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.

5 mL Prüflösung 1

Chemical: ethanol

CAS No.: 64-17-5

(denatured with 1%IPA/1%MEK, acc.2016/1867/EU)

Classification:

H225, Flam. Liq. 2

Formula:

C₂H₆O; C₂H₅OH

Pseudonym:

ethyl alcohol, methylated spirit

TSCA Inventory:

listed

REACH Reg. No.:

01-2119457610-43-xxxx

EC No.:

200-578-6

RTECS:

KQ6300000

KE No.:

KE-13217

Concentration:

75 - <90 %

acc. CLP (GHS):

H225, Flam. Liq. 2

Indice No.:

603-002-00-5

MFCD:

00003568

Chemical: indicator dye(s)

CAS No.: -

Classification:

No criteria for classification or naming of chemical not required.

TSCA Inventory:

all listed, <1%

Concentration:

0,01 - <0,1 %

acc. CLP (GHS):

The criteria for classification are not fulfilled.

5 mL Prüflösung 2

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Chemical: <i>ethanol</i> (denatured with 1%IPA/1%MEK, acc.2016/1867/EU) Classification: H225, Flam. Liq. 2 Formula: C ₂ H ₆ O; C ₂ H ₅ OH Pseudonym: ethyl alcohol, methylated spirit TSCA Inventory: listed REACH Reg. No.: 01-2119457610-43-xxxx EC No.: 200-578-6 RTECS: KQ6300000 KE No.: KE-13217 Concentration: 75 - <90 % acc. CLP (GHS): H225, Flam. Liq. 2	CAS No.: 64-17-5 Indice No.: 603-002-00-5 MFCD: 00003568
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Chemical: <i>indicator dye(s)</i> Classification: No criteria for classification or naming of chemical not required. TSCA Inventory: all listed, <1% Concentration: 0,01 - <0,1 % acc. CLP (GHS): The criteria for classification are not fulfilled.	CAS No.: -
---	-------------------

5 mL Prüflösung 3

Chemical: <i>ethanol</i> (denatured with 1%IPA/1%MEK, acc.2016/1867/EU) Classification: H225, Flam. Liq. 2 Formula: C ₂ H ₆ O; C ₂ H ₅ OH Pseudonym: ethyl alcohol, methylated spirit TSCA Inventory: listed REACH Reg. No.: 01-2119457610-43-xxxx EC No.: 200-578-6 RTECS: KQ6300000 KE No.: KE-13217 Concentration: 75 - <90 % acc. CLP (GHS): H225, Flam. Liq. 2	CAS No.: 64-17-5 Indice No.: 603-002-00-5 MFCD: 00003568
---	---

Chemical: <i>indicator dye(s)</i> Classification: No criteria for classification or naming of chemical not required. TSCA Inventory: all listed, <1% Concentration: 0,01 - <0,1 % acc. CLP (GHS): The criteria for classification are not fulfilled.	CAS No.: -
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5 mL Prüflösung 4

Chemical: <i>nickel sulfate</i> Classification: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H317, Skin Sens. 1, H332, Acute Tox. 4 inh., H334, Resp. Sens. 1, H341, Muta. 2, H350i, Carc. 1A, H360, Repr. 1B, H372, STOT RE 1, H410, Aquatic Chronic 1 Formula: NiSO ₄ TSCA Inventory: listed REACH Reg. No.: 01-2119439361-44-xxxx EC No.: 232-104-9 RTECS: QR9600000 KE No.: KE-25867, >0.1% Toxic 2010-1-609 Concentration: 1 - <10 % acc. CLP (GHS): H317, Skin Sens. 1, H334, Resp. Sens. 1, H341, Muta. 2, H350i, Carc. 1A, H360, Repr. 1B, H410, Aquatic Chronic 1	CAS No.: 7786-81-4 Indice No.: 028-009-00-5
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5 mL Prüflösung 5

Chemical: <i>nickel sulfate</i> Classification: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H317, Skin Sens. 1, H332, Acute Tox. 4 inh., H334, Resp. Sens. 1, H341, Muta. 2, H350i, Carc. 1A, H360, Repr. 1B, H372, STOT RE 1, H410, Aquatic Chronic 1 Formula: NiSO ₄ TSCA Inventory: listed REACH Reg. No.: 01-2119439361-44-xxxx EC No.: 232-104-9 RTECS: QR9600000 KE No.: KE-25867, >0.1% Toxic 2010-1-609 Concentration: 1 - <10 % acc. CLP (GHS): H317, Skin Sens. 1, H334, Resp. Sens. 1, H341, Muta. 2, H350i, Carc. 1A, H360, Repr. 1B, H410, Aquatic Chronic 1	CAS No.: 7786-81-4 Indice No.: 028-009-00-5
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5 mL Prüflösung 6

Chemical: *nickel sulfate* CAS No.: 7786-81-4
Classification: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H317, Skin Sens. 1, H332, Acute Tox. 4 inh., H334, Resp. Sens. 1, H341, Muta. 2, H350i, Carc. 1A, H360, Repr. 1B, H372, STOT RE 1, H410, Aquatic Chronic 1
Formula: NiSO₄
TSCA Inventory: listed
REACH Reg. No.: 01-2119439361-44-xxxx
EC No.: 232-104-9 Indice No.: 028-009-00-5
RTECS: QR9600000
KE No.: KE-25867, >0.1% Toxic 2010-1-609
Concentration: 1 - <10 %
acc. CLP (GHS): H317, Skin Sens. 1, H334, Resp. Sens. 1, H341, Muta. 2, H350i, Carc. 1A, H360, Repr. 1B, H410, Aquatic Chronic 1

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. 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 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. 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 should be drunk after it has been ingested. ---

4.2 Most important symptoms and effects, both acute and delayed

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.

CMR Effects: Suspected of causing genetic defects. May cause cancer. May cause cancer if inhaled. May damage fertility or the unborn child. ---

4.3 Indication of any immediate medical attention and special treatment needed

After SKIN CONTACT rinse with water for a long time. Apply glucocorticosteroides following inflammatory reactions. Inform patient respectively further measures and the possibility of long-term damages. ---

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

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.

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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. 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.

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. Use only in well-ventilated working areas.

7.2 Conditions for safe storage, including any incompatibilities

The original product package of MACHEREY-NAGEL allows a safe storage. Products containing also toxic substances should be kept locked up.

Storage class (VCI): 3

Water hazard class (DE): 2

7.2.1 Requirements for stock rooms and containers

Keep original product packages tightly closed during handling and storage, so that they are not immediately accessible to outside parties.

7.3 Specific end use(s)

Product for analytical use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

5 mL Blank (NULL)

Chemical: *water*

CAS No.: 7732-18-5

5 mL Prüflösung 1

Chemical: *ethanol*

CAS No.: 64-17-5

DNEL: [derm] 343 mg/kg; [inh] 950 mg/m³

DNEL = Derived No-Effect Level (for workers)

PNEC(fresh water): 0.96 mg/L

PNEC = Predicted No Effect Concentration

TRGS 900 (DE): 200 mL/m³ / 380 mg/m³

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/m³

NIOSH: [TWA] 1000 ppm / 1900 mg/m³

[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/m³

Chemical: *indicator dye(s)*

CAS No.: -

5 mL Prüflösung 2

Chemical: *ethanol*

CAS No.: 64-17-5

DNEL: [derm] 343 mg/kg; [inh] 950 mg/m³

DNEL = Derived No-Effect Level (for workers)

PNEC(fresh water): 0.96 mg/L

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PNEC = Predicted No Effect Concentration

TRGS 900 (DE): 200 mL/m³ / 380 mg/m³
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/m³

NIOSH: [TWA] 1000 ppm / 1900 mg/m³
[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/m³

Chemical: indicator dye(s)

CAS No.: -

5 mL Prüflösung 3

Chemical: ethanol

CAS No.: 64-17-5

DNEL: [derm] 343 mg/kg; [inh] 950 mg/m³
DNEL = Derived No-Effect Level (for workers)

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

TRGS 900 (DE): 200 mL/m³ / 380 mg/m³
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/m³

NIOSH: [TWA] 1000 ppm / 1900 mg/m³
[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/m³

Chemical: indicator dye(s)

CAS No.: -

5 mL Prüflösung 4

Chemical: nickel sulfate

CAS No.: 7786-81-4

TRGS 900 (DE): [Ni] 0,005A; [NOAEC] 0,027A mg/m³
E/e respirable

Short-term exposure factor: 8 (II), Y
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 0,05 e mg/m³

SUVA(CH) BAT value: U/c,b 45 µg/L

NIOSH: Ca TWA 0.015 mg/m³
[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: TWA 1 mg/m³

5 mL Prüflösung 5

Chemical: nickel sulfate

CAS No.: 7786-81-4

TRGS 900 (DE): [Ni] 0,005A; [NOAEC] 0,027A mg/m³
E/e respirable

Short-term exposure factor: 8 (II), Y
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 0,05 e mg/m³

SUVA(CH) BAT value: U/c,b 45 µg/L

NIOSH: Ca TWA 0.015 mg/m³
[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: TWA 1 mg/m³

5 mL Prüflösung 6

Chemical: nickel sulfate

CAS No.: 7786-81-4

TRGS 900 (DE): [Ni] 0,005A; [NOAEC] 0,027A mg/m³
E/e respirable

Short-term exposure factor: 8 (II), Y
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 0,05 e mg/m³

SUVA(CH) BAT value: U/c,b 45 µg/L

NIOSH: Ca TWA 0.015 mg/m³
[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: TWA 1 mg/m³

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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

Use for open access of these substances for example a protection filter, class A/AX. 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

Recommended 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

5 mL Blank (NULL)

Appearance: liquid

Colour: colourless

Odor: odorless

pH:

6-8

Specific gravity:

1,00 g/cm³

5 mL Prüflösung 1

Appearance: -

Colour: -

Odor: -

5 mL Prüflösung 2

Appearance: -

Colour: -

Odor: -

5 mL Prüflösung 3

Appearance: -

Colour: -

Odor: -

5 mL Prüflösung 4

Appearance: -

Colour: -

Odor: -

5 mL Prüflösung 5

Appearance: -

Colour: -

Odor: -

5 mL Prüflösung 6

Appearance: -

Colour: -

Odor: -

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

Substances are very volatile and form flammable vapour-air mixtures. ---

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.

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10.4 Conditions to avoid

Not necessary. 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.

5 mL Blank (NULL)

Chemical: water

CAS No.: 7732-18-5

TSCA Inventory: listed

Korea Exist.Chem.Inventory: KE-35400

5 mL Prüflösung 1

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 $\geq 0,1\%/\geq 0,1\%$, Article 57-2 (SDS required)

South Korea TCCA: not listed

Korea Exist.Chem.Inventory: KE-13217

LD50_{orl rat}: 6200 mg/kg

LC₅₀_{ihl gpg}: 21.9 g/m³

LC₅₀_{ihl hmn}: 1400 mg/kg

LC50_{ihl mouse}: [4h] 39 g/m³

LC50_{ihl rat}: [10h] 20 g/m³

LD50_{drm rbt}: 20 000 mg/kg

LD50_{oral mouse}: 3450 mg/kg

TRGS 905 (DE): K5, M5, R_F C

Chemical: indicator dye(s)

CAS No.: -

TSCA Inventory: all listed, <1%

5 mL Prüflösung 2

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 $\geq 0,1\%/\geq 0,1\%$, Article 57-2 (SDS required)

South Korea TCCA: not listed

Korea Exist.Chem.Inventory: KE-13217

LD50_{orl rat}: 6200 mg/kg

LC₅₀_{ihl gpg}: 21.9 g/m³

LC₅₀_{ihl hmn}: 1400 mg/kg

LC50_{ihl mouse}: [4h] 39 g/m³

LC50_{ihl rat}: [10h] 20 g/m³

LD50_{drm rbt}: 20 000 mg/kg

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LD50_{oral mouse} : 3450 mg/kg

TRGS 905 (DE): K5, M5, R_F C

Chemical: *indicator dye(s)*
TSCA Inventory: all listed, <1%

CAS No.: -

5 mL Prüflösung 3

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_{oral rat} : 6200 mg/kg
LC₅₀_{ihl gpg} : 21.9 g/m³
LC₅₀_{ihl hmn} : 1400 mg/kg
LC50_{ihl mouse} : [4h] 39 g/m³
LC50_{ihl rat} : [10h] 20 g/m³
LD50_{drm rbt} : 20 000 mg/kg
LD50_{oral mouse} : 3450 mg/kg

TRGS 905 (DE): K5, M5, R_F C

Chemical: *indicator dye(s)*
TSCA Inventory: all listed, <1%

CAS No.: -

5 mL Prüflösung 4

Chemical: *nickel sulfate* CAS No.: 7786-81-4
TSCA Inventory: listed California Proposition 65 List: listed cancer
Exposure Routes: inhalation, ingestion, skin and/or eye contact
Target Organs: Nasal cavities, lungs, skin; [lung and nasal cancer]
Symptoms: sensitization dermatitis, allergic asthma, pneumonitis; [potential occupational carcinogen]
Japan CSCL/PRTR: PRTR: ≥0,1% specific class I, Japan PDSCL: not listed
Japan ISHL: listed ≥0,1%/≥0,1%
Korea Exist.Chem.Inventory: KE-25867, >0.1% Toxic 2010-1-609
LD50_{oral rat} : 264 mg/kg
Exposure Risk Relationship (ERR) for respirable dust :
Tolerance concentration: [Ni] 0,006A mg/m³
Acceptance concentration: [Ni] 0,001A ppm
Acute Effects: Cause after skin contact, 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.
Carcinogenic Effects: Suspected of causing genetic defects. May cause cancer. May cause cancer if inhaled. May damage fertility or the unborn child.
EU carcinogen: Carcinogenicity cat. 1A, Germ Cell Mutagenicity cat. 2, Reproductive Toxicity cat. 1B
TRGS 905 (DE): K 1
TRGS 907 (DE): Sah

5 mL Prüflösung 5

Chemical: *nickel sulfate* CAS No.: 7786-81-4
TSCA Inventory: listed California Proposition 65 List: listed cancer
Exposure Routes: inhalation, ingestion, skin and/or eye contact
Target Organs: Nasal cavities, lungs, skin; [lung and nasal cancer]
Symptoms: sensitization dermatitis, allergic asthma, pneumonitis; [potential occupational carcinogen]
Japan CSCL/PRTR: PRTR: ≥0,1% specific class I, Japan PDSCL: not listed
Japan ISHL: listed ≥0,1%/≥0,1%
Korea Exist.Chem.Inventory: KE-25867, >0.1% Toxic 2010-1-609

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LD50_{orl rat}: 264 mg/kg

Exposure Risk Relationship (ERR) for respirable dust:

Tolerance concentration: [Ni] 0,006A mg/m³

Acceptance concentration: [Ni] 0,001A ppm

Acute Effects: Cause after skin contact, 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.

Carcinogenic Effects: Suspected of causing genetic defects. May cause cancer. May cause cancer if inhaled. May damage fertility or the unborn child.

EU carcinogen: Carcinogenicity cat. 1A, Germ Cell Mutagenicity cat. 2, Reproductive Toxicity cat. 1B

TRGS 905 (DE): K 1

TRGS 907 (DE): Sah

5 mL Prüflösung 6

Chemical: *nickel sulfate*

CAS No.: 7786-81-4

TSCA Inventory: listed California Proposition 65 List: listed cancer

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

Target Organs: Nasal cavities, lungs, skin; [lung and nasal cancer]

Symptoms: sensitization dermatitis, allergic asthma, pneumonitis; [potential occupational carcinogen]

Japan CSCL/PRTR: PRTR: ≥0,1% specific class I, Japan PDSCL: not listed

Japan ISHL: listed ≥0,1%/≥0,1%

Korea Exist.Chem.Inventory: KE-25867, >0.1% Toxic 2010-1-609

LD50_{orl rat}: 264 mg/kg

Exposure Risk Relationship (ERR) for respirable dust:

Tolerance concentration: [Ni] 0,006A mg/m³

Acceptance concentration: [Ni] 0,001A ppm

Acute Effects: Cause after skin contact, 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.

Carcinogenic Effects: Suspected of causing genetic defects. May cause cancer. May cause cancer if inhaled. May damage fertility or the unborn child.

EU carcinogen: Carcinogenicity cat. 1A, Germ Cell Mutagenicity cat. 2, Reproductive Toxicity cat. 1B

TRGS 905 (DE): K 1

TRGS 907 (DE): Sah

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

5 mL Blank (NULL)

Chemical: *water*

CAS No.: 7732-18-5

5 mL Prüflösung 1

Chemical: *ethanol*

CAS No.: 64-17-5

PNEC(fresh water): 0.96 mg/L

PNEC = Predicted No Effect Concentration

LC50_{daphnia magna/48h}: >100 mg/L

LC50_{pimephales promelas/96h}: 13400 - 15100 mg/L

LC50_{leuciscus idus/96h}: [48h] 8140 mg/L

LC50_{fish/96h}: 13 g/L

EC50_{daphnia/48h}: 9.3-14.2 g/L

IC50_{scenedesmus quadricauda/72h}: [7d] 5000 mg/L

EC10_{pseudomonas putida/16h}: [EC5] 6500 mg/L

Water hazard class (DE): 1 WGK No.: 0096

Dispersion coefficient_(octanol-water): -0.31

Storage class (VCI): 3

Chemical: *indicator dye(s)*

CAS No.: -

Storage class (VCI): 12-13

5 mL Prüflösung 2

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Chemical: *ethanol*
PNEC(fresh water) : 0.96 mg/L
PNEC = Predicted No Effect Concentration
LC50daphnia magna/48h : >100 mg/L
LC50pimephales promelas/96h : 13400 - 15100 mg/L
LC50leuciscus idus/96h : [48h] 8140 mg/L
LC50fish/96h : 13 g/L
EC50daphnia/48h : 9.3-14.2 g/L
IC50scenedesmus quadricauda/72h : [7d] 5000 mg/L
EC10pseudomonas putida/16h : [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

Chemical: *indicator dye(s)*
Storage class (VCI): 12-13

CAS No.: -

5 mL Prüflösung 3

Chemical: *ethanol*
PNEC(fresh water) : 0.96 mg/L
PNEC = Predicted No Effect Concentration
LC50daphnia magna/48h : >100 mg/L
LC50pimephales promelas/96h : 13400 - 15100 mg/L
LC50leuciscus idus/96h : [48h] 8140 mg/L
LC50fish/96h : 13 g/L
EC50daphnia/48h : 9.3-14.2 g/L
IC50scenedesmus quadricauda/72h : [7d] 5000 mg/L
EC10pseudomonas putida/16h : [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

Chemical: *indicator dye(s)*
Storage class (VCI): 12-13

CAS No.: -

5 mL Prüflösung 4

Chemical: *nickel sulfate*
Very toxic to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment.
Environmental hazards must not be labelled with H and P phrases until 125 mL (EU 1272/2008 Annex I - 1.5.2).
Water hazard class (DE): 2
Storage class (VCI): 6.1 D

CAS No.: 7786-81-4

5 mL Prüflösung 5

Chemical: *nickel sulfate*
Very toxic to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment.
Environmental hazards must not be labelled with H and P phrases until 125 mL (EU 1272/2008 Annex I - 1.5.2).
Water hazard class (DE): 2
Storage class (VCI): 6.1 D

CAS No.: 7786-81-4

5 mL Prüflösung 6

Chemical: *nickel sulfate*
Very toxic to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment.
Environmental hazards must not be labelled with H and P phrases until 125 mL (EU 1272/2008 Annex I - 1.5.2).
Water hazard class (DE): 2
Storage class (VCI): 6.1 D

CAS No.: 7786-81-4

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). Close container tightly.

13.1 Waste treatment methods

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 1993 class 3 II, **Excepted Quantities** ($\leq 30 \text{ mL} / \sum \leq 500 \text{ mL}$) = 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: II

Road transport

Classification code: F1 Tunnel restriction code: E

Limited Quantity: 1 L Special instructions: 640C

Excepted Quantity: E 2

Air transport

PAX: 353 max. weight PAX: 5 L

CAO: 364 max. weight CAO: 60 L

Maritime transport

EmS: F-E, S-E 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

Look for your country-specific regulations.

15.2 Chemical safety assessment

not necessary for these small amounts ---

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SECTION 16: Other information

16.1 List of H and P phrases

16.1.1 List of relevant H phrases

H225	Highly flammable liquid and vapour.
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H350i	May cause cancer if inhaled.
H360	May damage fertility or the unborn child.
H410	Very toxic to aquatic life with long lasting effects.

16.1.2 List of relevant P phrases

P201	Obtain special instructions before use.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P261sh	Avoid breathing dust/vapours.
P273	Avoid release to the environment.
P280sh	Wear protective gloves/eye protection.
P304+340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+313	IF exposed or concerned: Get medical advice/attention.
P342+311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P391	Collect spillage.
P405	Store locked up.

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 ArbSchG)!

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, 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

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work

TRGS 905, German engineering rules governing carcinogens and mutagens, updated 03/18

TRGS 907, German engineering rules governing listing of substances and causes of sensitizations, updated November 2011

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