Safety Data Sheet

according to Regulations REACh 1907/2006/EC

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

1.1 Product identifier

REF 925002
Product name NANOCONTROL Interlaboratory trial metals

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 Nanocontrol Interlaboratory Trial Metals solution A
1 x 30 mL Nanocontrol Interlaboratory Trial Metals solution B
1 x 30 mL Nanocontrol Interlaboratory Trial Metals Solution C UFI: S9FW-93VH-J203-NCD1

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
Valencienner Str. 11, 52355 Düren, Germany
Phone: +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, **<https://www.ggiz-erfurt.de>**

You find our current versions of SDS in Internet: **<https://www.mn-net.com/SDS>**

SECTION 2: Hazard identification

2.0 Classification of the complete product according to Regulation (EC) 1272/2008



GHS07

Signal word WARNING

Hazard identification	Hazard classes/categories
H317	Skin Sens. 1

2.1 Classification of the substance or mixture according to Regulation (EC) 1272/2008

30 mL Nanocontrol Interlaboratory Trial Metals Solution C



GHS07

Signal word WARNING

Hazard identification	Hazard classes/categories
H317	Skin Sens. 1

30 mL Nanocontrol Interlaboratory Trial Metals solution A

Do not need labelling as hazardous

Signal word -

No hazard class

30 mL Nanocontrol Interlaboratory Trial Metals solution B

Do not need labelling as hazardous

Signal word -

No hazard class

List of H phrases: see section 16.2

2.2 Label elements according regulation (EC) 1272/2008

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

30 mL Nanocontrol Interlaboratory Trial Metals Solution C



GHS07

Signal word: WARNING
H317
May cause an allergic skin reaction.
P261sh, P272, P280sh, P302+352, P333+313, P362+364, P501
Avoid breathing dust/vapours.Contaminated work clothing should not be allowed out of the workplace.Wear protective gloves/eye protection.IF ON SKIN: Wash with plenty of water.If skin irritation or rash occurs: Get medical advice/attention.Take off contaminated clothing and wash it before reuse.Dispose of contents/container to regulated waste treatment.

30 mL Nanocontrol Interlaboratory Trial Metals solution A
Do not need labelling as hazardous
Signal word: -

30 mL Nanocontrol Interlaboratory Trial Metals solution B
Do not need labelling as hazardous
Signal word: -

Label elements of the complete product



GHS07

Signal word: WARNING
H317
May cause an allergic skin reaction.
P261sh, P272, P280sh, P302+352, P333+313, P362+364, P501
Avoid breathing dust/vapours.Contaminated work clothing should not be allowed out of the workplace.Wear protective gloves/eye protection.IF ON SKIN: Wash with plenty of water.If skin irritation or rash occurs: Get medical advice/attention.Take off contaminated clothing and wash it before reuse.Dispose of contents/container to regulated waste treatment.

2.3 Other hazards

Possible hazards from physicochemical properties

no data available

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. The risk assessment of the tube tests showed no risk H331 "Toxic if inhaled." at the application.

Information pertaining to particular risks to the environment
PBT: not applicable
vPvB: not applicable

Possible endocrine disrupting effects
no data available

SECTION 3: Composition / information on ingredients

3.1 Substances or 3.2 Mixtures

30 mL Nanocontrol Interlaboratory Trial Metals Solution C

Substance name: *sulfuric acid*
CAS No.: 7664-93-9

Substance rating: H315, Skin Irrit. 2, H319, Eye Irrit. 2
Formula: $H_2SO_4 \cdot H_2O$
REACH Reg. No.: 01-2119458838-20-xxxx
EC No.: 231-639-5 Indice No.: 016-020-00-8
Concentration: 1 - <5 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

Substance name: *sulfuric acid*
CAS No.: 7664-93-9

Substance rating: H315, Skin Irrit. 2, H319, Eye Irrit. 2
Formula: $H_2SO_4 \cdot H_2O$
REACH Reg. No.: 01-2119458838-20-xxxx
EC No.: 231-639-5 Indice No.: 016-020-00-8
Concentration: 0,1 - <1 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

Substance name: *potassium dichromate*
CAS No.: 7778-50-9

Substance rating: H272, Ox. Liq. 2, H301, Acute Tox. 3 oral, H312, Acute Tox. 4 derm., H314, Skin Corr. 1 B, H317, Skin Sens. 1, H318, Eye Dam. 1, H330, Acute Tox. 2 inh., H334, Resp. Sens. 1, H335, resp. irrit. STOT SE 3, H340, Muta. 1 B, H350, Carc. 1 A, H360FD, Repr. 1 B, H372, STOT RE 1, H400, Aquatic Acute 1, H410, Aquatic Chronic 1
Formula: $K_2Cr_2O_7$
Pseudonym (de): Kaliumbichromat
REACH Reg. No.: 01-2119454792-32-0004
SVHC listed: **< exempt for formulation+use acc. Art.56(3)+Q&A1030**
EC No.: 231-906-6 Indice No.: 024-002-00-6
Specific concentration limit: STOT SE 3; H335 c ≥ 5%
Concentration: 0 - <0,1 % Correlation factor: x 0.79 (= $\%CrO_4$)
The classification refers to the weight percentage of the metal (according to CLP regulation 2008/1272/EG Annex VI, 1.1.3.2 Note 1)
acc. CLP (GHS): H317, Skin Sens. 1

30 mL Nanocontrol Interlaboratory Trial Metals solution A

Substance name: *nitric acid*
CAS No.: 7697-37-2

Substance rating: H272, Ox. Liq. 2, H314, Skin Corr. 1 A, H331, Acute Tox. 3 inh., EUH071, not defined
Formula: $HNO_3 \cdot H_2O$
Pseudonym (de): Hydrogennitrat, Scheidewasser
REACH Reg. No.: 01-2119487297-23-xxxx
EC No.: 231-714-2 Indice No.: 007-030-00-3
Concentration: 0,1 - <1 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

Substance name: *test chemical(s) (ppm)*
CAS No.: -

Substance rating: No criteria for classification or naming of chemical not required.
Concentration: 0,1 - <1 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

30 mL Nanocontrol Interlaboratory Trial Metals solution B

Substance name: *nitric acid*
CAS No.: 7697-37-2

Substance rating: H272, Ox. Liq. 2, H314, Skin Corr. 1 A, H331, Acute Tox. 3 inh., EUH071, not defined
Formula: $HNO_3 \cdot H_2O$
Pseudonym (de): Hydrogennitrat, Scheidewasser
REACH Reg. No.: 01-2119487297-23-xxxx
EC No.: 231-714-2 Indice No.: 007-030-00-3
Concentration: 0,1 - <1 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

Substance name: *test chemical(s) (ppm)*
CAS No.: -

Substance rating: No criteria for classification or naming of chemical not required.
Concentration: 0,1 - <1 %
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 16.2.

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
Causing allergies. 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. ---

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: Potassium dichromate: Repeated contact, even in small amounts, can lead to sensitization.

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

5.1.1 Suitable 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.

5.1.2 Unsuitable extinguishing media

no data available

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. 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. 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

PBT: not applicable
vPvB: not applicable

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 5.4,7,8 and 13

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

Safe storage is guaranteed in the original packaging from MACHEREY-NAGEL. Storage class (German chemical industry): see chapter 12.1

Storage class (VCI): 8B
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

30 mL Nanocontrol Interlaboratory Trial Metals solution A

Chemical: *test chemical(s) (ppm)* CAS No.: -

Chemical: *nitric acid* CAS No.: 7697-37-2

DNEL: [inh] (1.3) mg/m³
DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water) : no hazard identified
PNEC = Predicted No Effected Concentration

EU value: 1 ppm / 2.6 mg/m³
TRGS 900 (DE): 1 ppm / 2,6 mg/m³
E/e respirable

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

SUVA(CH) MAK value: 2 ppm / 5 mg/m³
NIOSH: [TWA] 2 ppm / 5 mg/m³
NIOSH STEL: 4 ppm / 10 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: List of highly hazardous chemicals, toxics and reactives Yes (TQ = 500 lbs) n/a; [TWA] 2 ppm / 5 mg/m³

30 mL Nanocontrol Interlaboratory Trial Metals solution B

Chemical: *test chemical(s) (ppm)* CAS No.: -

Chemical: *nitric acid* CAS No.: 7697-37-2

DNEL: [inh] (1.3) mg/m³
DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water) : no hazard identified
PNEC = Predicted No Effected Concentration

EU value: 1 ppm / 2.6 mg/m³
TRGS 900 (DE): 1 ppm / 2,6 mg/m³
E/e respirable

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

SUVA(CH) MAK value: 2 ppm / 5 mg/m³
NIOSH: [TWA] 2 ppm / 5 mg/m³
NIOSH STEL: 4 ppm / 10 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: List of highly hazardous chemicals, toxics and reactives Yes (TQ = 500 lbs) n/a; [TWA] 2 ppm / 5 mg/m³

30 mL Nanocontrol Interlaboratory Trial Metals Solution C

Chemical: *sulfuric acid* CAS No.: 7664-93-9

DNEL: 50 µg/m³
DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water) : 2.5 µg/Lno hazard identified
PNEC = Predicted No Effected Concentration

TRGS 900 (DE): 0.1 E mg/m³
E/e respirable

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

SUVA(CH) MAK value: 0,1 e mg/m³
NIOSH: NTP Report on Carcinogens (RoC) List Yes (Known to be a human carcinogen); TWA 1 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

Chemical: *potassium dichromate* CAS No.: 7778-50-9

DNEL: [inh] 0.01 mg/m³
DNEL = Derived No-Effect Level (for workers)

TRGS 900 (DE): [CrVI] (0,05 E ausgesetzt) mg/m³
E/e respirable

Short-term exposure factor: (4), H
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/b] 20 µg/L
NIOSH: NTP Report on Carcinogens (RoC) List Yes (Chromium VI - Known to be a human carcinogen); TWA

8h 0.0002 CrO_3 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: [CrO3][TWA] 0.005 mg/m³

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 Skin protection / 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 / Face 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.

8.2.6 Thermal hazards
no data available

8.3 Limitation and monitoring of environmental exposure

Do not release product into environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

30 mL Nanocontrol Interlaboratory Trial Metals solution A

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	odorless
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	2-3
l) Kinematic viscosity:	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient ($K_{o/w}$):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	no data available
q) Relative vapour density $_{(air=1)}$:	no data available
r) Particle size:	no data available

30 mL Nanocontrol Interlaboratory Trial Metals solution B

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	odorless
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	2-3
l) Kinematic viscosity:	no data available

m) Solubility in water:	no data available
n) Dispersion coefficient ($K_{o/w}$):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	no data available
q) Relative vapour density $_{(air=1)}$:	no data available
r) Particle size:	no data available

30 mL Nanocontrol Interlaboratory Trial Metals Solution C

a) State of aggregation:	liquid
b) Colour:	yellow
c) Odor:	odorless
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	3-5
l) Kinematic viscosity:	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient ($K_{o/w}$):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	1,0 g/cm³
q) Relative vapour density $_{(air=1)}$:	no data available
r) Particle size:	no data available

9.2 Other information

9.2.1 Information on physical hazard classes

no data available

9.2.2 Other safety-related parameters

No data is available for the other parameters for the mixtures, since no registration and no chemical safety report is required.

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 the storage temperature printed on it. No more required.

10.5 Incompatible materials

no additional data available

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 the hazard classes according regulation (EC) 1272/2008

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

30 mL Nanocontrol Interlaboratory Trial Metals solution A

Chemical: *test chemical(s) (ppm)* CAS No.: -
TSCA Inventory: all <0.1%

Chemical: *nitric acid* CAS No.: 7697-37-2
TSCA Inventory: listed California Proposition 65 List: not listed
Exposure Routes: inhalation, ingestion, skin and/or eye contact
Target Organs: Eyes, skin, respiratory system, teeth
Symptoms: irritation eyes, skin, mucous membrane; delayed pulmonary edema, pneumonitis, bronchitis; dental erosion
Australia NICNAS: not listed Canada CEPA 1999: DSL Yes
Japan CSCL/PRTR: not listed, Japan PDSCL: Deleterious Substance
Japan ISHL: listed ≥1,0%/≥1,0%, Article 57-2 (SDS required)
South Korea TCCA: Accident Precaution Chemical Yes
Korea Exist.Chem.Inventory: KE-25911, >10% Toxic 97-1-246, Acc. Precaution Chem.
LC_Low $_{orl\ hmn}$: 1500 mg/kg/NOAEC
LC50 $_{ihl\ rat}$: 2,65 mg/L/4H

TRGS 905 (DE): R $_{F}$ D

30 mL Nanocontrol Interlaboratory Trial Metals solution B

Chemical: *test chemical(s) (ppm)* CAS No.: -
TSCA Inventory: all <0.1%

Chemical: *nitric acid* CAS No.: 7697-37-2
TSCA Inventory: listed California Proposition 65 List: not listed
Exposure Routes: inhalation, ingestion, skin and/or eye contact
Target Organs: Eyes, skin, respiratory system, teeth
Symptoms: irritation eyes, skin, mucous membrane; delayed pulmonary edema, pneumonitis, bronchitis; dental erosion
Australia NICNAS: not listed Canada CEPA 1999: DSL Yes
Japan CSCL/PRTR: not listed, Japan PDSCL: Deleterious Substance
Japan ISHL: listed ≥1,0%/≥1,0%, Article 57-2 (SDS required)
South Korea TCCA: Accident Precaution Chemical Yes
Korea Exist.Chem.Inventory: KE-25911, >10% Toxic 97-1-246, Acc. Precaution Chem.
LC_Low $_{orl\ hmn}$: 1500 mg/kg/NOAEC
LC50 $_{ihl\ rat}$: 2,65 mg/L/4H

TRGS 905 (DE): R $_{F}$ D

30 mL Nanocontrol Interlaboratory Trial Metals Solution C

Chemical: *sulfuric acid* CAS No.: 7664-93-9
TSCA Inventory: listed California Proposition 65 List: not listed
ACGIH: 1 ppm
Exposure Routes: inhalation, ingestion, skin and/or eye contact
Target Organs: Eyes, skin, respiratory system, teeth
Symptoms: irritation eyes, skin, nose
Australia NICNAS: not listed Canada CEPA 1999: DSL Yes
Japan CSCL/PRTR: not listed, Japan PDSCL: Deleterious Substance
Japan ISHL: listed ≥1,0%/≥1,0%, Article 57-2 (SDS required)
South Korea TCCA: Accident Precaution Chemical Yes
Korea Exist.Chem.Inventory: KE-32570
LD50 $_{orl\ rat}$: 2140 mg/kg
LC50 $_{ihl\ mus}$: 0,85 mg/L/4H

TRGS 905 (DE): R $_{F}$ C

Chemical: *potassium dichromate* CAS No.: 7778-50-9
TSCA Inventory: listed California Proposition 65 List: listed cancer, developmental, female, male
ACGIH: [CrVI] 0.05 mg/m³
Exposure Routes: inhalation, ingestion, skin and/or eye contact
Target Organs: Blood, respiratory system, liver, kidneys, eyes, skin; [lung cancer]

Symptoms: irritation respiratory system; nasal septum perforation; liver, kidney damage; leukocytosis (increased blood leukocytes), leukopenia (reduced blood le
Japan CSCL/PRTR: PRTR: ≥0,1% Cr specific class I, Japan PDSCL: Deleterious substance
Japan ISHL: listed ≥0,1%/≥0,1%, Article 57-2 (SDS required)
South Korea TCCA: yes, Restricted Chemical
Korea Exist.Chem.Inventory: not listed
LD50 orl rat : 25 mg/kg
LC_Low orl gpg : 163 mg/kg
LC50 ihl rat : 0,094 mg/L/4H
Acute Effects: 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.
EU carcinogen: carc. 1B, mutag. 1B, repr. 1B
TRGS 905 (DE): K2
TRGS 907 (DE): Sh

11.2 Other hazards

Possible endocrine disrupting effects
no data available

Other information
no additional data available

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

30 mL Nanocontrol Interlaboratory Trial Metals solution A
Substance name: *test chemical(s) (ppm)* CAS-Nr.: -
Storage class (VCI): 12

Substance name: *nitric acid* CAS-Nr.: 7697-37-2
PNEC (fresh water) : no hazard identified
PNEC = Predicted No Effected Concentration = concentration at which no effect on the environment is expected
LC50 daphnia magna/48h : 180 mg/L
LC50 fish/96h : [4d] 12 g/L
Water hazard class (DE): 1 WGK No.: 0414
Storage class (VCI): 8 B

30 mL Nanocontrol Interlaboratory Trial Metals solution B
Substance name: *test chemical(s) (ppm)* CAS-Nr.: -
Storage class (VCI): 12

Substance name: *nitric acid* CAS-Nr.: 7697-37-2
PNEC (fresh water) : no hazard identified
PNEC = Predicted No Effected Concentration = concentration at which no effect on the environment is expected
LC50 daphnia magna/48h : 180 mg/L
LC50 fish/96h : [4d] 12 g/L
Water hazard class (DE): 1 WGK No.: 0414
Storage class (VCI): 8 B

30 mL Nanocontrol Interlaboratory Trial Metals Solution C
Substance name: *sulfuric acid* CAS-Nr.: 7664-93-9
PNEC (fresh water) : 2.5 µg/Lno hazard identified
PNEC = Predicted No Effected Concentration = concentration at which no effect on the environment is expected
LC50 fish/96h : [NOEC, 65d] 25 µg/L
EC50 daphnia/48h : 100 mg/L
EC10 pseudomonas putita/16h : [72h] 100 mg/L
Water hazard class (DE): 1 WGK No.: 0182
Storage class (VCI): 8 B

Substance name: *potassium dichromate* CAS-Nr.: 7778-50-9
LC50 fish/96h : 26.13 mg/L
EC50 daphnia/48h : 0.77 mg/L
Water hazard class (DE): 3 WGK No.: 339
Storage class (VCI): 6.1 B

12.2 Persistence and degradability

12.3 Bioaccumulative potential

12.4 Mobility in soil

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

no data available

12.7 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 Not necessary

14.5 Environmental hazards

none, contains only small quantities of hazardous substances

14.6 Special precautions for user

not necessary

14.7 Carriage in bulk by sea in accordance with IMO instruments

Not applicable.

SECTION 15: Regulatory information

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

Dangerous Substances Protection Act (DE: Chemikaliengesetz - ChemG), Aug 2013, Stand: Okt 2020
Ordinance on protection against dangerous substances (E: Gefahrstoffverordnung - GefStoffV), Nov 2010, Stand: Mrz 2017
TRGS 201, Classification and labeling of activities involving hazardous substances, Feb 2017
TRGS 220, National aspects when preparing safety data sheets, Jan 2017
TRGS 400, Risk assessment for activities involving hazardous substances, Jul 2017
TRGS 401, Skin contact hazard - identification, assessment, action, Jun 2008, status: Feb 2011
BekGS 408, Application of the GefStoffV and the TRGS with the entry into force of the CLP regulation, December 2009, status: Jan 2012
MN leaflet/instructions for use, also at www.mn-net.com
If necessary, observe other country-specific regulations.

15.2 Chemical safety assessment

no data available

SECTION 16: Other information

16.1 Changes compared to the last version

Between versions 2.2.2.16 and 2.2.2.2 following changes were applied: - 14 substance data corrected

16.2 List of H and P phrases

16.2.1 List of relevant H phrases

H	Between versions 2.2.2.16 and 2.2.2.2 following changes were applied: - 14 substance data corrected
H317	May cause an allergic skin reaction.

16.2.2 List of relevant P phrases

P261sh	Avoid breathing dust/vapours.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280sh	Wear protective gloves/eye protection.
P302+352	IF ON SKIN: Wash with plenty of water.
P333+313	If skin irritation or rash occurs: Get medical advice/attention.
P362+364	Take off contaminated clothing and wash it before reuse.
P501	Dispose of contents/container to regulated waste treatment.

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 Sources of key data

KÜHN, BIRETT, Leaflets on hazardous materials, 2021
Directive 1999/92/EG Minimum requirements to improve the safety and health protection of workers at risk from potentially explosive atmospheres
SUVA .CH, limit values in the air at work 2009, revised on 01/2009
Regulation 790/2009/EU, adaptation of Regulation 1272/2008/EU to technical and scientific progress (1st ATP)
Regulation 453/2010/EU, adaptation of the REACH regulation 1907/2006/EG
TRGS 907, German technical rules for listing substances and causes of sensitization, updated November 2011 Regulation 487/2013/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (4th ATP)
Regulation 1221/2015/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (7th ATP)
Regulation 776/2017/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (10th ATP)

Regulation 669/2018/EU, adaptation of Regulation 1272/2008/EC to technical and scientific progressText (11th ATP)
Regulation 1480/2018/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (13th ATP)
Regulation 521/2019/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (12th ATP)
TRGS 900, German rules of technology on limit values in the air at work, as of 03/2019
Regulation 217/2020/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (14th ATP)
Regulation 878/2020/EU, adaptation of Annex II of the REACH regulation 1907/2006/EG
Regulation 1182/2020/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (15th ATP)
Regulation 643/2021/EU, adaptation of Annex VI, Part 1, of Regulation 1272/2008/EC to technical and scientific progress (16th ATP)
Regulation 849/2021/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (17th ATP)
Regulation 692/2022/EU, adaptation of Annex VI, Part 1, of Regulation 1272/2008/EC to technical and scientific progress (18th ATP)

revisions/updates

Reason for revision: *2014-02 Corrected structure of the sections according to Regulation 453/2010/EU, if necessary*
2014-04 adjustment according Regulation 487/2013/EU
2016-03 adjustment according Regulation 1221/2015/EU

2017-11 adjustment according the ECHA registration dossier
2022-11 adjustment according Regulation 878/2020/EU

16.5 Further information

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16.6 Legend / Abbreviations

acc:	according
ADR:	Convention concerning the International Carriage of Dangerous Goods by Road
Act:	acute
BAT:	biological workplace tolerance value
CAO:	Cargo Aircraft Only
Carc:	carcinogen
CAS:	Chemical Abstracts Service
CLP:	Classification, Labelling and Packaging regulation
CMR:	carcinogen, mutagen, reproduction toxic
Corr:	corrosive
COD:	chemical oxigen demand
CSCL:	Chemical Substance Control Law (Jp)
Dam:	damage
DNEL:	Derived No-Effect Level (for workers)
derm:	dermal
dog:	dog
EC10:	Concentration causing a toxic effect in 10% of the test organisms
EC:	European Community
EC-Nr:	Substance number of the EC substance inventory
EmS:	Guide to accident management measures on ships
EU:	European Union
fish:	fish (not spezified)
GHS:	Global Harmonized System of Classification and Labeling of Chemicals
gpg:	guinea pig
ICAO:	International Civil Aviation Organization
ihl:	inhaled
IMDG:	International Maritime Dangerous Goods Code
intrav:	intravenous
ipt:	intraperitonaeal
ISHL:	Industrial Safety and Health Law (Jp)
LC50:	letale concentration 50%
LD50:	letale dosis 50%
leuciscus idus:	fisch, ide, orfe
MAK:	maximum workplace concentration
Met:	Metall
mus:	mouse
Muta:	mutagen
NIOSH:	National Institute for Occupational Safety and Health (US)
NRD:	Non-rapidly degradable
onchorhynchus mykiss:	fish, rainbow trout
orl:	oral
OSHA:	Occupational Safety and Health Administration
PAX:	transport on passenger planes allowed
PBT:	persistent, bioaccumulating, toxic substance
pH:	pH value
pimephales promelas:	fish, fathead minnow
PNEC:	Predicted No Effected Concentration
PROC 15:	Process category 'for laboratory use'
PRTR:	Law for PRTR and Promotion of Chemical Management (Jp)
PVC:	polyvinyl chloride
quail:	bird, quail
rat:	rat
rbt:	rabbit
RD:	rapidly degradable
RE:	repeated
REACh:	Registration, Evaluation, Authorisation and Restriction of Chemicals
REF:	item number, reference number
Reg.No.:	rRegistration number
Repr:	harmful to reproduction
Resp:	respiratory
RIP:	REACH Implementations Projects
scu:	sub cutan
SDS:	safety data sheet
Sens:	sensitisation
STEL:	short term exposure limit
STOT:	Specific Target Organ Toxicity
SVHC:	Substance of Very High Concern
t/a:	tons per year

TCCA:	Toxic Chemicals Control Act (S. Korea)
Tox:	toxic
TSCA:	The Toxic Substances Control Act (US)
TWA:	time weighted average
TRGS:	technical regulations (DE)
vPvB:	very persistent, very bioaccumulating substance

16.7 Training advice

Regular safety training. 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.