

Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 931301

VISOCOLOR ECO reagent case new

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Printing Date: 28.05.2020

Date of Issue: 04.12.2019

Section 1: Identification

1.1 Product Identifier / Product Name

REF	931301
Product Name	VISOCOLOR ECO reagent case new
-	1 x 7 mL CH-1
	2 x 30 mL CH-2
	1 x 8 mL GH-1
	2 x 30 mL GH-2
	2 x 24 mL pH-1
	1 x 30 mL NH ₄ -1
	1 x 2,5 g NH ₄ -2
	1 x 6 mL NH ₄ -3
	1 x 30 mL NO ₃ -1
	1 x 5 g NO ₃ -2
	1 x 30 mL NO ₂ -1
	1 x 5 g NO ₂ -2
	1 x 25 mL PO ₄ -1
	1 x 25 mL PO ₄ -2

1.2 Relevant identified Uses of the Substance or Mixture and Uses advised against

Relevant identified uses

Product for Analytical Use.

The Exposure scenario is integrated into sections 1-16.

Uses advised against

not described

1.3 Details of the Supplier and 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

For Chemical Emergency

Spill, Leak, Fire, Exposure, or Accident

Call CHEMTREC Day or Night (CCN685047)

Within USA and Canada: **1-800-424-9300**Outside USA and Canada: **+1 703-527-3887** (collect calls accepted)

You find our current versions of SDS (22 languages) in Internet:

<http://www.mn-net.com/SDS>

Section 2: Hazard(s) Identification

2.0 Classification of the complete Product



GHS02



GHS05



GHS07



GHS09

Signal Word

DANGER

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Hazard Identification	Hazard Classes/Categories
EUH031	031 not defined
H225	Flam. Liq. 2
H226	Flam. Liq. 3
H290	Met. Corr. 1
H314	Skin Corr. 1A
H315	Skin Irrit. 2
H318	Eye Dam. 1
H319	Eye Irrit. 2
H411	Aquatic Chronic 2
H412	Aquatic Chronic 3

2.1 Classification of the Substance(s) or Mixture(s)

7 mL CH-1



GHS02

Signal Word

DANGER

Hazard Identification	Hazard Classes/Categories
H225	Flam. Liq. 2

30 mL CH-2

Signal Word

Do not need labelling as hazardous

No Hazard Class

8 mL GH-1



GHS02



GHS07

Signal Word

WARNING

Hazard Identification	Hazard Classes/Categories
H226	Flam. Liq. 3
H315	Skin Irrit. 2
H319	Eye Irrit. 2

30 mL GH-2

Signal Word

Do not need labelling as hazardous

No Hazard Class

24 mL pH-1



GHS02

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30 mL NO₂ -1

Signal Word Do not need labelling as hazardous
-

Hazard Identification	Hazard Classes/Categories
H290	Met. Corr. 1

5 g NO₂ -2

Signal Word Do not need labelling as hazardous
-

No Hazard Class

25 mL PO₄ -1



Signal Word GHS07
WARNING

Hazard Identification	Hazard Classes/Categories
H315	Skin Irrit. 2
H319	Eye Irrit. 2

25 mL PO₄ -2



Signal Word GHS05
DANGER

Hazard Identification	Hazard Classes/Categories
EUH031	031 not defined
H318	Eye Dam. 1

2.2 Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

According the implementation of GHS immediate packages only must be labelled with product identifier(s), GHS symbol(s), signal word, manufacturer name and phone number (OSHA's interpretation of HCS 2012).

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) / **until 100 mL** (Canada WHMIS 2015). This labelling exemption does not apply to U.S.A.

7 mL CH-1



Signal Word: GHS02
DANGER

30 mL CH-2

Do not need labelling as hazardous

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Signal Word: -

8 mL GH-1



GHS02 GHS07

Signal Word: WARNING

30 mL GH-2

Do not need labelling as hazardous
Signal Word: -

24 mL pH-1



GHS02

Signal Word: DANGER

30 mL NH₄ -1



GHS05

Signal Word: DANGER

H314

Causes severe skin burns and eye damage.

P260sh, P280sh, P303+361+353, P305+351+338, P310

Do not breathe dust/vapors. Wear protective gloves/eye protection. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

2,5 g NH₄ -2

Do not need labelling as hazardous
Signal Word: -

6 mL NH₄ -3



GHS02 GHS05

Signal Word: DANGER

H314

Causes severe skin burns and eye damage.

P260sh, P280sh, P303+361+353, P305+351+338, P310

Do not breathe dust/vapors. Wear protective gloves/eye protection. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

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30 mL NO₃ -1

Do not need labelling as hazardous
Signal Word: -

5 g NO₃ -2



GHS09

Signal Word: WARNING

30 mL NO₂ -1

Do not need labelling as hazardous
Signal Word: -

5 g NO₂ -2

Do not need labelling as hazardous
Signal Word: -

25 mL PO₄ -1



GHS07

Signal Word: WARNING

25 mL PO₄ -2



GHS05

Signal Word: DANGER

H318

Causes serious eye damage.

P280sh, P305+351+338, P310

Wear protective gloves/eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

2.3 Other Hazards

Possible Hazards from physicochemical Properties

Generally in the case of pH values are less than 2 or higher than 11.5 then it is corrosive. In the case of pH values are less than 5 or higher than 9 then it is irritant. Flammable properties. ---

Information pertaining to particular Risks to Human and possible Symptoms

Causes varying degrees of acid burns on the skin, to the eyes and to the mucous membranes and wounds which do not heal quickly depending on the concentration, temperature and the exposure time. Vapors especially which steam from hot liquids and mist can have a severe irritant effect upon the eyes and the respiratory organs.

-

Information pertaining to particular Risks to the Environment

Avoid contact of substance/mixture to environment.

PBT: not applicable

vPvB: not applicable

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Other Hazards

Contains an odor intensive reagent. ---

Section 3: Composition/Information on Ingredients

3.1 Substances or 3.2 Mixtures

7 mL CH-1

Chemical: *methyl red (pH indicator)* CAS No.: 493-52-7
 Classification: No criteria for classification or naming of chemical is not required.
 Chemical Formula: C₁₅ H₁₅ N₃ O₂
 Synonyms: 4-(dimethylamino)-azobenzene-1,2'-carbonic acid
 TSCA Inventory: listed
 RTECS: DG8960000 MFCD: 00002425
 EC No.: 207-776-1
 Weight Percent: < 0.10 %
 acc. GHS: The criteria for classification are not fulfilled.

Chemical: *ethanol* CAS No.: 64-17-5
 (denatured with 1%IPA/1%MEK, acc.2016/1867/EU)
 Classification: H225, Flam. Liq. 2
 Chemical Formula: C₂ H₆ O; C₂ H₅ OH
 Synonyms: ethyl alcohol, methylated spirit
 TSCA Inventory: listed
 RTECS: KQ6300000 MFCD: 00003568
 EC No.: 200-578-6 Indice No.: 603-002-00-5
 Weight Percent: 55 - <75 %
 acc. GHS: H225, Flam. Liq. 2

Chemical: *indicator dye(s)* CAS No.: -
 Classification: No criteria for classification or naming of chemical is not required.
 TSCA Inventory: all listed, <1%
 Weight Percent: 0.1 - <1 %
 acc. GHS: The criteria for classification are not fulfilled.

30 mL CH-2

Chemical: *hydrochloric acid* CAS No.: 7647-01-0
 Classification: H290, Met. Corr. 1, H314, Skin Corr. 1B, H331, Acute Tox. 3 inh.
 Chemical Formula: HCl•H₂O
 Synonyms: aqueous hydrogen chloride
 TSCA Inventory: listed
 RTECS: MW4025000
 EC No.: 231-595-7 Indice No.: 017-002-01-X
 Weight Percent: 0.1 - <1 %
 acc. GHS: The criteria for classification are not fulfilled.

8 mL GH-1

Chemical: *triethanolamine* CAS No.: 102-71-6
 Classification: H315, Skin Irrit. 2, H319, Eye Irrit. 2, H335, STOT SE 3
 Chemical Formula: C₆ H₁₅ NO₃
 Synonyms: 2,2',2"-nitrioltriethanol; tris(2-hydroxyethyl)amine
 TSCA Inventory: listed
 RTECS: KL9275000
 EC No.: 203-049-8
 Weight Percent: 20 - <45 %
 acc. GHS: H315, Skin Irrit. 2, H319, Eye Irrit. 2

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Chemical:	<i>sodium disulfite</i>	CAS No.:	7681-57-4
Classification:	H302, Acute Tox. 4 oral, H318, Eye Dam. 1, EUH031, 031 not defined		
Chemical Formula:	Na ₂ O ₅ S ₂		
Synonyms:	sodium metabisulphite, sodium pyrosulfite		
TSCA Inventory:	listed		
RTECS:	UX8225000		
EC No.:	231-673-0	Indice No.:	016-063-00-2
Weight Percent:	10 - <25 %		
acc. GHS:	H318, Eye Dam. 1, EUH031, 031 not defined		

3.3 Remarks

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

List of Hazard and Precaution 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. Remove contaminated clothing. Show product package, packing insert and this material safety data sheet to the doctor.

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 for min. 10 minutes with eye washing bottle, eye douche or running water (protect intact eye). Before (if possible) apply eye drops Proxymetacaine 0.5%, if the opening the eyelid convulsion is painful. Further treatment to be carried out by an eye specialist.

4.1.3 After INHALATION of Vapors

After inhalation of foam or vapor fresh air should be inhaled. Keep airways free. If vomiting and if insensible place patient in recovery position and keep airways free.

4.1.4 After ORAL Intake

After oral intake lots of water with activated charcoal supplement should be drunk after it has been ingested. Do not induce vomiting under any circumstances. Do not make any efforts to neutralize it. Contact medical advice for possible consequences.

4.2 Most important Symptoms and Effects, both acute and delayed

4.3 Indication of any immediate Medical Attention and Special Treatment needed

CORROSIVE DAMAGE: After SKIN CONTACT rinse with water for a long time. Efforts to neutralise the substance can frequently make matters worse. Apply glucocorticosteroides following inflammatory reactions. After EYE CONTACT rinse immediately with plenty of water for a long time. Eyelid convulsion measures. Name the corrosive substance. Further treatment must to be carried out by an eye specialist. After INTAKE administer aluminium oxide drug suspensions. Administer a prophylaxis to counter pulmonary oedema following the INGESTION of corrosive aerosols. In the event of RESPIRATORY DISTRESSES ensure that the patient inhales oxygen. ---

Section 5: Fire-Fighting Measures

5.1 Extinguishable 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 WATER FOG, WATER SPRAY, alcohol-resistant FOAM, DRY CHEMICAL, CARBON DIOXIDE can be used.

5.2 Special Hazards arising from the Substance or Mixture

WARNING: Flammable. May form explosive vapor-air mixtures. DANGER: Highly flammable. Forms explosive vapor-air mixtures. Formation of hazardous and caustic vapor-air mixtures possible. ---

5.3 Advice for Firefighters

No, for listed product. Product package burns like paper or plastic. Spray any vapors 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 Procedure

Do not breathe vapors. Wear suitable protective gloves (see 8.2.2). Wear eye protection, respectively face 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 hazards. Clean any contaminated equipment and floors with plenty of water. Collect small amounts of leaked liquid and flush with water into sewer.

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.

7.2 Conditions for Safe Storage, including any Incompatibilities

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

Storage class (VCI): 3

Water hazard class (DE): 3

7.2.1 Conditions for Safe Storage, including any Incompatibilities

Keep original product packages tightly closed during handling and storage. Use inbreakable container for transport of glass bottles.

7.3 Specific End Use(s)

Product for analytical use.

Section 8: Exposure Controls/Personal Protection

8.1 Control Parameters

7 mL CH-1

Chemical: *methyl red (pH indicator)*

CAS No.: 493-52-7

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

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.: -

30 mL CH-2

Chemical: *hydrochloric acid*

CAS No.: 7647-01-0

DNEL: [inh] 8 mg/m³

DNEL = Derived No-Effect Level (for workers)

PNEC_(fresh water): 36 µg/L

PNEC = Predicted No Effect Concentration

NIOSH: [C] 5 ppm / 7 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 = 5000 lbs) n/a; TWA 5 ppm / 7 mg/m³

EU value: [TWA] 5 ppm / 8 mg/m³; [STEL] 10 ppm/ 15 mg/m³

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25 mL PO₄ -2

Chemical: *sodium disulfite*

CAS No.: 7681-57-4

DNEL: [inh] 225 mg/m³

DNEL = Derived No-Effect Level (for workers)

NIOSH: [TWA] 5 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: none

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 (permeation time >30 min - level 2), consist of PVC, Natural latex, Neopren, or Nitril. Use for short times chemical resistant Latex gloves f.ex. with code EN 374-3 level 1.

8.2.3 Eye/Face Protection

Yes, Splash Goggles or Face Protection.

8.2.4 Skin Protection

Recommended to avoid clothing damage, and to avoid contamination with these hazards.

8.2.5 Hygiene Measures

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

7 mL CH-1

a) Appearance: liquid	Color: red	b) Odor: alcoholic
c) Odor Threshold:	data not available	
d) pH:	-	
e) Melting Point:	data not available	
f) Boiling Point:	data not available	
g) Flash Point:	data not available	
h) Evaporation Rate _(ether=1) :	data not available	
i) Flammability (solid, gas):	data not available	
j) Explosive Limits:	data not available	
k) Vapor Pressure (68°F):	data not available	
l) Vapor Density _(air=1) :	data not available	
m) Specific Gravity:	0,88 g/cm ³	
n) Soluble in Water:	data not available	
o) Partition Coefficient (o-w):	data not available	
p) Autoignition Temperature:	data not available	
q) Decomposition temperature:	data not available	
r) Viscosity:	data not available	
s) Explosive properties:	data not available	
t) Oxidizing properties:	---	

30 mL CH-2

a) Appearance: liquid	Color: colorless	b) Odor: odorless
c) Odor Threshold:	data not available	
d) pH:	1-2	
e) Melting Point:	data not available	
f) Boiling Point:	data not available	
g) Flash Point:	data not available	
h) Evaporation Rate _(ether=1) :	data not available	
i) Flammability (solid, gas):	data not available	
j) Explosive Limits:	data not available	
k) Vapor Pressure (68°F):	data not available	
l) Vapor Density _(air=1) :	data not available	

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- m) Specific Gravity: 1,00 g/cm³
- n) Soluble in Water: 0-100 %
- o) Partition Coefficient (o-w): data not available
- p) Autoignition Temperature: data not available
- q) Decomposition temperature: data not available
- r) Viscosity: data not available
- s) Explosive properties: data not available
- t) Oxidizing properties: ---

8 mL GH-1

- a) Appearance: liquid Color: green b) Odor: alcoholic
- c) Odor Threshold: data not available
- d) pH: 10
- e) Melting Point: data not available
- f) Boiling Point: data not available
- g) Flash Point: 27 °C
- h) Evaporation Rate(ether=1) : data not available
- i) Flammability (solid, gas): data not available
- j) Explosive Limits: data not available
- k) Vapor Pressure (68°F): data not available
- l) Vapor Density(air=1) : data not available
- m) Specific Gravity: data not available
- n) Soluble in Water: data not available
- o) Partition Coefficient (o-w): data not available
- p) Autoignition Temperature: data not available
- q) Decomposition temperature: data not available
- r) Viscosity: data not available
- s) Explosive properties: data not available
- t) Oxidizing properties: ---

30 mL GH-2

- a) Appearance: liquid Color: colorless b) Odor: aminic
- c) Odor Threshold: data not available
- d) pH: 10,5
- e) Melting Point: data not available
- f) Boiling Point: data not available
- g) Flash Point: data not available
- h) Evaporation Rate(ether=1) : data not available
- i) Flammability (solid, gas): data not available
- j) Explosive Limits: data not available
- k) Vapor Pressure (68°F): data not available
- l) Vapor Density(air=1) : data not available
- m) Specific Gravity: data not available
- n) Soluble in Water: data not available
- o) Partition Coefficient (o-w): data not available
- p) Autoignition Temperature: data not available
- q) Decomposition temperature: data not available
- r) Viscosity: data not available
- s) Explosive properties: data not available
- t) Oxidizing properties: ---

24 mL pH-1

- a) Appearance: liquid Color: red b) Odor: alcoholic
- c) Odor Threshold: 19...93 mg/m³
- d) pH: 7
- e) Melting Point: -114 °C
- f) Boiling Point: 78 °C
- g) Flash Point: > 12 °C
- h) Evaporation Rate(ether=1) : data not available
- i) Flammability (solid, gas): data not available
- j) Explosive Limits: 3.5 ... 15 Vol%
- k) Vapor Pressure (68°F): 59 hPa
- l) Vapor Density(air=1) : 1,59
- m) Specific Gravity: 0,79-0,86 g/cm³
- n) Soluble in Water: 0-100 %
- o) Partition Coefficient (o-w): data not available
- p) Autoignition Temperature: 425 °C

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30 mL NO₃ -1

a)	Appearance: liquid	Color: rose	b) Odor: odorless
c)	Odor Threshold:	data not available	
d)	pH:	2-3	
e)	Melting Point:	data not available	
f)	Boiling Point:	data not available	
g)	Flash Point:	data not available	
h)	Evaporation Rate _(ether=1) :	data not available	
i)	Flammability (solid, gas):	data not available	
j)	Explosive Limits:	data not available	
k)	Vapor Pressure (68°F):	data not available	
l)	Vapor Density _(air=1) :	data not available	
m)	Specific Gravity:	data not available	
n)	Soluble in Water:	data not available	
o)	Partition Coefficient (o-w):	data not available	
p)	Autoignition Temperature:	data not available	
q)	Decomposition temperature:	data not available	
r)	Viscosity:	data not available	
s)	Explosive properties:	data not available	
t)	Oxidizing properties:	---	

5 g NO₃ -2

a)	Appearance: powder (solid)	Color: slightly grey	b) Odor: odorless
c)	Odor Threshold:	data not available	
d)	pH:	6,5-7,5	
e)	Melting Point:	data not available	
f)	Boiling Point:	data not available	
g)	Flash Point:	data not available	
h)	Evaporation Rate _(ether=1) :	data not available	
i)	Flammability (solid, gas):	data not available	
j)	Explosive Limits:	data not available	
k)	Vapor Pressure (68°F):	data not available	
l)	Vapor Density _(air=1) :	data not available	
m)	Specific Gravity:	data not available	
n)	Soluble in Water:	data not available	
o)	Partition Coefficient (o-w):	data not available	
p)	Autoignition Temperature:	data not available	
q)	Decomposition temperature:	data not available	
r)	Viscosity:	data not available	
s)	Explosive properties:	data not available	
t)	Oxidizing properties:	---	

30 mL NO₂ -1

a)	Appearance: liquid	Color: colorless	b) Odor: odorless
c)	Odor Threshold:	data not available	
d)	pH:	2-3	
e)	Melting Point:	data not available	
f)	Boiling Point:	data not available	
g)	Flash Point:	data not available	
h)	Evaporation Rate _(ether=1) :	data not available	
i)	Flammability (solid, gas):	data not available	
j)	Explosive Limits:	data not available	
k)	Vapor Pressure (68°F):	data not available	
l)	Vapor Density _(air=1) :	data not available	
m)	Specific Gravity:	1,04 g/cm ³	
n)	Soluble in Water:	data not available	
o)	Partition Coefficient (o-w):	data not available	
p)	Autoignition Temperature:	data not available	
q)	Decomposition temperature:	data not available	
r)	Viscosity:	data not available	
s)	Explosive properties:	data not available	
t)	Oxidizing properties:	---	



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5 g NO₂ -2

a)	Appearance: powder (solid)	Color: colorless	b) Odor: odorless
c)	Odor Threshold:	data not available	
d)	pH:	2-3	
e)	Melting Point:	data not available	
f)	Boiling Point:	data not available	
g)	Flash Point:	data not available	
h)	Evaporation Rate _(ether=1) :	data not available	
i)	Flammability (solid, gas):	data not available	
j)	Explosive Limits:	data not available	
k)	Vapor Pressure (68°F):	data not available	
l)	Vapor Density _(air=1) :	data not available	
m)	Specific Gravity:	data not available	
n)	Soluble in Water:	data not available	
o)	Partition Coefficient (o-w):	data not available	
p)	Autoignition Temperature:	data not available	
q)	Decomposition temperature:	data not available	
r)	Viscosity:	data not available	
s)	Explosive properties:	data not available	
t)	Oxidizing properties:	---	

25 mL PO₄ -1

a)	Appearance: liquid	Color: colorless	b) Odor: odorless
c)	Odor Threshold:	data not available	
d)	pH:	1-2	
e)	Melting Point:	data not available	
f)	Boiling Point:	data not available	
g)	Flash Point:	data not available	
h)	Evaporation Rate _(ether=1) :	data not available	
i)	Flammability (solid, gas):	data not available	
j)	Explosive Limits:	data not available	
k)	Vapor Pressure (68°F):	data not available	
l)	Vapor Density _(air=1) :	data not available	
m)	Specific Gravity:	1,07 g/cm ³	
n)	Soluble in Water:	data not available	
o)	Partition Coefficient (o-w):	data not available	
p)	Autoignition Temperature:	data not available	
q)	Decomposition temperature:	data not available	
r)	Viscosity:	data not available	
s)	Explosive properties:	data not available	
t)	Oxidizing properties:	---	

25 mL PO₄ -2

a)	Appearance: liquid	Color: colorless	b) Odor: sulfuric
c)	Odor Threshold:	data not available	
d)	pH:	6-7	
e)	Melting Point:	data not available	
f)	Boiling Point:	data not available	
g)	Flash Point:	data not available	
h)	Evaporation Rate _(ether=1) :	data not available	
i)	Flammability (solid, gas):	data not available	
j)	Explosive Limits:	data not available	
k)	Vapor Pressure (68°F):	data not available	
l)	Vapor Density _(air=1) :	data not available	
m)	Specific Gravity:	data not available	
n)	Soluble in Water:	data not available	
o)	Partition Coefficient (o-w):	data not available	
p)	Autoignition Temperature:	data not available	
q)	Decomposition temperature:	data not available	
r)	Viscosity:	data not available	
s)	Explosive properties:	data not available	
t)	Oxidizing properties:	---	

9.2 Other Information

Data for the other parameters of the mixtures are not available.

Relevant Properties of Substance Group

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

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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

Can react violently with organic material. No further data available.

10.4 Conditions to avoid

Not necessary. ---

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 chemicals. Quantitative data on the toxicity of this product are not available.

7 mL CH-1

Chemical: *methyl red (pH indicator)* CAS No.: 493-52-7
 TSCA Inventory: listed

Chemical: *ethanol* CAS No.: 64-17-5
 TSCA Inventory: listed California Prop. 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
 Canada CEPA 1999: DSL yes
 LD50_{orl rat}: 6200 mg/kg
 LC_{LoWihl gpg}: 21.9 g/m³
 LC_{LoWorl 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

Chemical: *indicator dye(s)* CAS No.: -
 TSCA Inventory: all listed, <1%

30 mL CH-2

Chemical: *hydrochloric acid* CAS No.: 7647-01-0
 TSCA Inventory: listed California Prop. 65 List: not listed

Exposure Routes: inhalation, ingestion (solution), skin and/or eye contact
 Target Organs: Eyes, skin, respiratory system
 Symptoms: irritation nose, throat, larynx; cough, choking; dermatitis; solution: eye, skin burns; liquid: frostbite; in
 animals: laryngeal spasm; pulmonary ede
 Canada CEPA 1999: DSL Yes
 LD50_{orl rat}: 900 mg/kg
 LC50_{drm rbt}: >5010 mg/kg

8 mL GH-1

Chemical: *triethanolamine* CAS No.: 102-71-6
 TSCA Inventory: listed California Prop. 65 List: not listed

Canada CEPA 1999: DSL Yes
 LD50_{orl rat}: > 5000 mg/kg
 LD50_{drm rbt}: > 2000 mg/kg

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Chemical: *ethanol* CAS No.: 64-17-5
 TSCA Inventory: listed California Prop. 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
 Canada CEPA 1999: DSL yes
 LD50_{orl rat}: 6200 mg/kg
 LC_{LoWi}_h gpg: 21.9 g/m³
 LC_{LoWo}_r hmh: 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

Chemical: *indicator dye(s)* CAS No.: -
 TSCA Inventory: all listed, <1%

30 mL GH-2

Chemical: *ammonia solution* CAS No.: 1336-21-6
 TSCA Inventory: listed California Prop. 65 List: not listed
 Exposure Routes: inhalation, ingestion (solution), skin and/or eye contact (solution/liquid)
 Target Organs: Eyes, skin, respiratory system
 Symptoms: irritation eyes, nose, throat; dyspnea (breathing difficulty), wheezing, chest pain; pulmonary edema;
 pink frothy sputum; skin burns, vesiculation; I
 Canada CEPA 1999: DSL yes, Toxic Substances (Schedule 1) Yes (Item 53.)
 LD50_{orl rat}: 350 mg/kg
 LC_{LoWi}_h hmh: 5000 mg/m³
 LC50_{ihl rat}: [4h] 2000 ppm
 LD50_{drm rbt}: [5min] 5000 ppm

Chemical: *ethylenedinitrilo tetraacetic acid, di Na-salt (EDTA-Na)* CAS No.: 6381-92-6
 TSCA Inventory: listed (CAS 139-33-3)
 LD50_{orl rat}: 2800 mg/kg

24 mL pH-1

Chemical: *methyl red (pH indicator)* CAS No.: 493-52-7
 TSCA Inventory: listed

Chemical: *ethanol* CAS No.: 64-17-5
 TSCA Inventory: listed California Prop. 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
 Canada CEPA 1999: DSL yes
 LD50_{orl rat}: 6200 mg/kg
 LC_{LoWi}_h gpg: 21.9 g/m³
 LC_{LoWo}_r hmh: 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

Chemical: *phenolphthalein (pH indicator)* CAS No.: 77-09-8
 TSCA Inventory: listed California Prop. 65 List: listed, cancer
 Canada CEPA 1999: DSL yes
 LD50_{orl rat}: >1000 mg/kg

EU carcinogen: Carcinogenicity cat. 2, Germ Cell Mutagenicity cat. 3, >5% Reproductive Toxicity cat. 3

Chemical: *indicator dye(s)* CAS No.: -
 TSCA Inventory: all listed, <1%



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30 mL NH₄ -1

Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2
 TSCA Inventory: listed California Prop. 65 List: not listed
 Exposure Routes: inhalation, ingestion, skin and/or eye contact
 Target Organs: Eyes, skin, respiratory system
 Symptoms: irritation eyes, skin, mucous membrane; pneumonitis; eye, skin burns; temporary loss of hair
 Canada CEPA 1999: DSL Yes
 LD50_{orl rat}: [40%] 1250 / [<25%] >2000 mg/kg
 LD50_{orl mus}: 40 mg/kg

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

2,5 g NH₄ -2

Chemical: *dichloroisocyanuric acid, Na salt* CAS No.: 2893-78-9
 TSCA Inventory: listed California Prop. 65 List: not listed
 Canada CEPA 1999: DSL Yes
 LD50_{orl rat}: 550-1600 mg/kg
 LC_{LoWorl hmn}: 3570 mg/kg
 LD50_{drm rbt}: >5000 mg/kg

Chemical: *sodium chloride* CAS No.: 7647-14-5
 TSCA Inventory: listed
 LD50_{orl rat}: 3000 mg/kg
 LD50_{drm rbt}: 10 g/kg

6 mL NH₄ -3

Chemical: *sodium nitroprusside* CAS No.: 13755-38-9
 TSCA Inventory: listed (CAS 14402-89-2)
 LD50_{orl rat}: 99 mg/kg
 LC_{LoWorl rat}: 20 mg/kg

Chemical: *ethanol* CAS No.: 64-17-5
 TSCA Inventory: listed California Prop. 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
 Canada CEPA 1999: DSL yes
 LD50_{orl rat}: 6200 mg/kg
 LC_{LoWihl gpg}: 21.9 g/m³
 LC_{LoWorl 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

Chemical: *thymol* CAS No.: 89-83-8
 TSCA Inventory: listed
 LD50_{orl rat}: 980 mg/kg
 LD50_{drm rat}: > 2000 mg/kg

30 mL NO₃ -1

Chemical: *m-phenylenediammonium dichloride* CAS No.: 541-69-5
 TSCA Inventory: listed
 LD50_{orl rat}: 280 mg/kg

EU carcinogen: mut. 3

Chemical: *citric acid* CAS No.: 77-92-9
 TSCA Inventory: listed
 LD50_{orl rat}: >3000 mg/kg
 LC50_{ihl rat}: 5800 mg/m³
 LD50_{drm rat}: >2000 mg/kg
 LD50_{orl mus}: 5400 mg/kg

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LD50_{scu rat} : 5500 mg/kg

5 g NO₃ -2

Chemical: *zinc powder (stabilized)* CAS No.: 7440-66-6
 TSCA Inventory: listed
 LD50_{orl rat} : >2000 mg/kg
 LC_{LoWinh hmn} : 124_{50min} mg/m³
 LC50_{ihl rat} : >5.4_{4h} mg/m³

30 mL NO₂ -1

Chemical: *sulfanilamide* CAS No.: 63-74-1
 TSCA Inventory: listed
 LD50_{orl rat} : 3900 mg/kg

Chemical: *o-phosphoric acid* CAS No.: 7664-38-2
 TSCA Inventory: listed California Prop. 65 List: not listed
 ACGIH: 1 ppm
 Exposure Routes: inhalation, ingestion, skin and/or eye contact
 Target Organs: Eyes, skin, respiratory system
 Symptoms: irritation eyes, skin, upper respiratory system; eye, skin, burns; dermatitis
 Canada CEPA 1999: DSL Yes
 LD50_{orl rat} : 1530 mg/kg
 LC50_{ihl rbt} : 1.689 mg/L
 LD50_{drm rbt} : 2750 mg/kg

5 g NO₂ -2

Chemical: *N-(1-naphthyl)-ethylendiamine dihydrochloride* CAS No.: 1465-25-4
 TSCA Inventory: listed

Chemical: *citric acid* CAS No.: 77-92-9
 TSCA Inventory: listed
 LD50_{orl rat} : >3000 mg/kg
 LC50_{ihl rat} : 5800 mg/m³
 LD50_{drm rat} : >2000 mg/kg
 LD50_{orl mus} : 5400 mg/kg
 LD50_{scu rat} : 5500 mg/kg

25 mL PO₄ -1

Chemical: *ammonium heptamolybdate* CAS No.: 12054-85-2
 TSCA Inventory: listed (CAS 11098-84-3)

Chemical: *sulfuric acid* CAS No.: 7664-93-9d
 TSCA Inventory: listed California Prop. 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
 Canada CEPA 1999: DSL Yes
 LD50_{orl rat} : 2140 mg/kg
 LC50_{ihl rat} : [8h] 600/ [4h] 850 mg/m³

25 mL PO₄ -2

Chemical: *sodium disulfite* CAS No.: 7681-57-4
 TSCA Inventory: listed California Prop. 65 List: not listed
 Exposure Routes: inhalation, ingestion, skin and/or eye contact
 Target Organs: Eyes, skin, respiratory system
 Symptoms: irritation eyes, skin, mucous membrane
 Canada CEPA 1999: DSL yes
 LD50_{orl rat} : 1540 mg/kg
 LD50_{drm rat} : 2000 mg/kg

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Section 12: Ecological Information

12.1 Toxicity

Following information is valid for pure chemicals.

7 mL CH-1

Chemical: *methyl red (pH indicator)* CAS No.: 493-52-7

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 putita/16h}: [EC5] 6500 mg/L
 Partition Coefficient (o-w): -0.31

Chemical: *indicator dye(s)* CAS No.: -

30 mL CH-2

Chemical: *hydrochloric acid* CAS No.: 7647-01-0

PNEC_(fresh water): 36 µg/L
 PNEC = Predicted No Effect Concentration
 LC50_{fish/96h}: 24.6 mg/L
 EC50_{daphnia/48h}: 0.492 mg/L
 EC50_{pseudokirchneriella subcapitata/72h}: 0.78 mg/L

8 mL GH-1

Chemical: *triethanolamine* CAS No.: 102-71-6

PNEC_(fresh water): 0.32 mg/L
 PNEC = Predicted No Effect Concentration
 LC50_{fish/96h}: >1000 mg/L
 EC50_{daphnia/48h}: >1000_{24h} mg/L
 Partition Coefficient (o-w): -2.3

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 putita/16h}: [EC5] 6500 mg/L
 Partition Coefficient (o-w): -0.31

Chemical: *indicator dye(s)* CAS No.: -

30 mL GH-2

Chemical: *ammonia solution* CAS No.: 1336-21-6

PNEC_(fresh water): 0.0011 mg/L
 PNEC = Predicted No Effect Concentration
 LC50_{fish/96h}: 0,89 mg/L
 EC50_{daphnia/48h}: 101 mg/L

Chemical: *ethylendinitrilo tetraacetic acid, di Na-salt (EDTA-Na)* CAS No.: 6381-92-6

PNEC_(fresh water): 2.2 mg/L
 PNEC = Predicted No Effect Concentration
 LC50_{fish/96h}: [4d] 41-1592 mg/L
 EC50_{daphnia/48h}: 140 mg/L
 IC50_{scenedesmus quadricauda/72h}: [72h] 2.77-1000 mg/L
 EC10_{pseudomonas putita/16h}: [EC10, 30h] 500 mg/L
 Partition Coefficient (o-w): -4.3

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24 mL pH-1

Chemical: *methyl red (pH indicator)* CAS No.: 493-52-7

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 putita/16h} : [EC5] 6500 mg/L
Partition Coefficient (o-w): -0.31

Chemical: *phenolphthalein (pH indicator)* CAS No.: 77-09-8
Partition Coefficient (o-w): 0.9

Chemical: *indicator dye(s)* CAS No.: -

30 mL NH₄ -1

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

Avoid contact of chemical/mixture to environment.

LC50_{leuciscus idus/96h} : 35-189 mg/L
LC50_{fish/96h} : 45.4 mg/L
EC50_{daphnia/48h} : >100 mg/L

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

2,5 g NH₄ -2

Chemical: *dichloroisocyanuric acid, Na salt* CAS No.: 2893-78-9

Chemical: *sodium chloride* CAS No.: 7647-14-5

6 mL NH₄ -3

Chemical: *sodium nitroprusside* CAS No.: 13755-38-9

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 putita/16h} : [EC5] 6500 mg/L
Partition Coefficient (o-w): -0.31

Chemical: *thymol* CAS No.: 89-83-8

Harmful to aquatic life with long lasting effects. Avoid contact of chemical/mixture to environment.
Environmental hazards must not be labelled with P phrases until 125 mL (EU-CLP 1272/2008 Annex I - 1.5.2).

LC50_{pimephales promelas/96h} : 3.2 mg/L
EC50_{daphnia/48h} : 3.2 mg/L

30 mL NO₃ -1

Chemical: *m-phenylenediammonium dichloride* CAS No.: 541-69-5

Chemical: *citric acid* CAS No.: 77-92-9

PNEC(fresh water) : 440 mg/L
PNEC = Predicted No Effect Concentration

LC50_{leuciscus idus/96h} : 440-760 mg/L
EC50_{daphnia/48h} : 1535_{24h} mg/L
IC50_{scenedesmus quadricauda/72h} : 7d: 425-640 mg/L

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EC10_{pseudomonas putita/16h} : EC0: >10 g/L
 Partition Coefficient (o-w): -1.72

5 g NO₃ -2

Chemical: *zinc powder (stabilized)* CAS No.: 7440-66-6
 Toxic to aquatic life with long lasting effects. Avoid contact of chemical/mixture to environment.
 Environmental hazards must not be labelled with H and P phrases until 125 mL (EU-CLP 1272/2008 Annex I - 1.5.2).
 LC50_{fish/96h} : 2.01 mg/L
 EC50_{daphnia/48h} : 0.131 mg/L
 EC50_{pseudokirchneriella subcapitata/72h} : IC50: 0.713 mg/L

30 mL NO₂ -1

Chemical: *sulfanilamide* CAS No.: 63-74-1
 Chemical: *o-phosphoric acid* CAS No.: 7664-38-2
 LC50_{fish/96h} : 3-3.5 mg/L

5 g NO₂ -2

Chemical: *N-(1-naphthyl)-ethylenediamine dihydrochloride* CAS No.: 1465-25-4
 Chemical: *citric acid* CAS No.: 77-92-9
 PNEC_(fresh water) : 440 mg/L
 PNEC = Predicted No Effect Concentration
 LC50_{leuciscus idus/96h} : 440-760 mg/L
 EC50_{daphnia/48h} : 1535_{24h} mg/L
 IC50_{scenedesmus quadricauda/72h} : 7d: 425-640 mg/L
 EC10_{pseudomonas putita/16h} : EC0: >10 g/L
 Partition Coefficient (o-w): -1.72

25 mL PO₄ -1

Chemical: *ammonium heptamolybdate* CAS No.: 12054-85-2
 Chemical: *sulfuric acid* CAS No.: 7664-93-9d
 PNEC_(fresh water) : 2.5 µg/L
 PNEC = Predicted No Effect Concentration
 LC50_{fish/96h} : [NOEC, 65d] 25 µg/L
 EC50_{daphnia/48h} : 100 mg/L
 EC10_{pseudomonas putita/16h} : [72h] 100 mg/L

25 mL PO₄ -2

Chemical: *sodium disulfite* CAS No.: 7681-57-4
 LC50_{fish/96h} : 150-220 mg/L
 EC50_{daphnia/48h} : 89 mg/L
 IC50_{scenedesmus quadricauda/72h} : 48 mg/L

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 (RCRA Code D002/D003, EU waste code number 16 05 06).

13.1 Waste Treatment Methods

Normally it is possible to empty small amounts (diluted!) into drains. Empty containers of corrosive reagents prior to disposal, rinse with water.

Section 14: Transport Information

14.1. UN/NA: 3316 **14.2. Proper Shipping Name: Chemical Kit**
14.3. Hazard Class: 9 **14.4. Packing Group: II**
Transportation by Road
 Classification code: M11 Tunnel Restriction Code: E
 Limited Quantity: acc. ADR 3.3.1/251: see LQ in "Alternative Declaration for Transportation"
Air Transportation
 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 the **alternative Declaration for Transportation:**

UN/NA: (see below) UN/NA 1993 Class 3 II, Class 8 II, **Excepted Quantities** ($\leq 30 \text{ mL} / \Sigma \leq 500 \text{ mL}$) = ADR/ IATA E2

or

14.1. UN/NA: 1993 **14.2. Proper Shipping Name: Flammable liquid, n.o.s. (ethanol mixture)**
14.3. Hazard Class: 3 **14.4. Packing Group: II**
Transportation by Road
 Classification code: F1
 Limited Quantity: 1 L Tunnel restriction code: E
 Excepted Quantity: E 2 Special instructions: 640C
Air Transportation
 PAX: 353 max. weight PAX: 5 L
 CAO: 364 max. weight CAO: 60 L
Maritime Transport
 EmS: F-E, S-E Storage Category: B

14.1. UN/NA: 3264 **14.2. Proper Shipping Name: Corrosive liquid, acidic, inorganic, n.o.s. (hydrochloric acid, o-phosphoric acid, sodium disulfite solution)**
14.3. Hazard Class: 8 **14.4. Packing Group: II**
Transportation by Road
 Classification code: C1
 Limited Quantity: 1 L Tunnel restriction code: E
 Excepted Quantity: E 2
Air Transportation
 PAX: 851 max. weight PAX: 1 L
 CAO: 855 max. weight CAO: 30 L
Maritime Transport
 EmS: F-A, S-B Storage Category: B

14.1. UN/NA: 3266 **14.2. Proper Shipping Name: Corrosive liquid, basic, inorganic, n.o.s. (sodium hydroxide solution, ammonia solution)**
14.3. Hazard Class: 8 **14.4. Packing Group: II**
Transportation by Road
 Classification code: C5
 Limited Quantity: 1 L Tunnel restriction code: E
 Excepted Quantity: E 2
Air Transportation
 PAX: 851 max. weight PAX: 1 L
 CAO: 855 max. weight CAO: 30 L
Maritime Transport
 EmS: F-A, S-B 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

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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

U.S. Federal Regulations

OSHA "A Guide to The Globally Harmonized System of Classification and Labelling of Chemicals (GHS)"

<https://www.osha.gov/dsg/hazcom/ghs.html>

29 CFR 1910.1200 Hazard communication.

NIOSH Pocket Guide to Chemical Hazards

NIOSH Workplace Safety & Health Topics

TSCA Inventory

U.S. State Regulations

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986

Canada

Canada CEPA 1999 - Domestic Substances List (DSL), List of Toxic Substances (Schedule 1)

MN Leaflet/User manual, also see www.mn-net.com

15.2 Chemical Safety Assessment
not necessary for these small amounts ---

Section 16: Other Information

16.1 List of Hazard and Precaution Phrases

16.1.1 List of relevant H Phrases

H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH031	Contact with acids liberates toxic gas.

16.1.2 List of relevant P Phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P260D	Do not breathe vapors.
P260sh	Do not breathe dust/vapors.
P273	Avoid release to the environment.
P280sh	Wear protective gloves/eye protection.
P303+361+353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P390	Absorb spillage to prevent material damage.

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!
Look about employee restrictions for pregnant women and nursing women!
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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Safety Data Sheet

SDS acc. Hazard Communication Standard

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product to which the information refers. Accordingly MACHEREY-NAGEL GmbH & Co. KG will not be responsible for damages resulting from use of or reliance upon this information. See terms and conditions at the end of our price lists for additional information.

16.5 Sources of Key Data

GHS: EU Regulation 1272/2008/EC on Classification, Labelling and Packaging of Substances and Mixtures, amending and repealing EU Directives 67/548/EEC and 1999/45/EC, and amending EU Regulation 1907/2006/EC

SDS: EU Regulation 453/2010/EU REACH - Requirements for the Compilation of Safety Data Sheets
KÜHN, BIRETT (German), Data Sheets of Hazardous Substances

Revisions/Updates

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

You find our current Versions of SDS in Internet:

<http://www.mn-net.com/SDS> [U.S. English]