

Safety Data Sheet

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

REF: 985034	NANOCOLOR CATIONIC SURFACTANTS 4	Page: 1/11
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

REF 985034
 Product name NANOCOLOR CATIONIC SURFACTANTS 4

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 11 mL Cationic Surfactants 4 (R2)
 20 x 6 mL Cationic Surfactants 4 (R0+R1)

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses
 Product for analytical use.
 Exposure Scenario Classification according REACH, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0
 The exposure scenario is integrated into sections 1-16.

Uses advised against
 not described

1.3 Details of the supplier of the safety data sheet

Manufactured by:
 MACHEREY-NAGEL GmbH & Co. KG
 Neumann-Neander-Str. 6-8, 52355 Dueren, GERMANY
 Tel.: +49 2421 969 0 E-mail: sds@mn-net.com (msds@mn-net.com)

1.4 Emergency telephone number

Outside Germany (DE): Call your regional Poisons Information Service or call local Life Saving Service.
 DE: Gemeinsames Giftinformationszentrum (GGIZ) 99089 Erfurt tel. +49 361 730 730

You find our current versions of SDS (22 languages) in Internet: <http://www.mn-net.com/SDS>

SECTION 2: Hazard identification

2.0 Classification of the complete product



GHS02 GHS06 GHS07 GHS08

Signal word DANGER

Hazard identification	Hazard classes/categories
H226	Flam. Liq. 3
H302	Acute Tox. 4 oral
H312	Acute Tox. 4 derm.
H315	Skin Irrit. 2
H319	Eye Irrit. 2
H331	Acute Tox. 3 inh.
H332	Acute Tox. 4 inh.
H336	STOT SE 3
H351	Carc. 2
H361	Repr. 2
H371	STOT SE 2
H373	STOT RE 2

2.1 Classification of the substance or mixture

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11 mL Cationic Surfactants 4 (R2)



GHS02

Signal word

WARNING

Hazard identification

Hazard classes/categories

H226

Flam. Liq. 3

6 mL Cationic Surfactants 4 (R0+R1)



GHS02



GHS06



GHS07



GHS08

Signal word

DANGER

Hazard identification

Hazard classes/categories

H226

Flam. Liq. 3

H302

Acute Tox. 4 oral

H312

Acute Tox. 4 derm.

H315

Skin Irrit. 2

H319

Eye Irrit. 2

H331

Acute Tox. 3 inh.

H332

Acute Tox. 4 inh.

H336

STOT SE 3

H351

Carc. 2

H361

Repr. 2

H371

STOT SE 2

H373

STOT RE 2

2.2 Label elements

According **CLP directive** inner packages must be only labelled with GHS symbol(s) and product identifier(s) (EU 1272/2008 Annex I - 1.5.1.2). Inner packages up to 10 mL need max. 2 symbols (Annex I - 1.5.2.4.1 / 2).

Harmful chemicals/mixtures with signal word: **WARNING** 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).

11 mL Cationic Surfactants 4 (R2)



GHS02

Signal word: WARNING

6 mL Cationic Surfactants 4 (R0+R1)



GHS02



GHS06



GHS07



GHS08

Signal word: DANGER

H331, H351, H361

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Toxic if inhaled. Suspected of causing cancer. Suspected of damaging fertility or the unborn child.

P261sh, P280sh, P311, P405

Avoid breathing dust/vapours. Wear protective gloves/eye protection. Call a POISON CENTER/doctor. Store locked up.

2.3 Other hazards

Possible hazards from physicochemical properties

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

Information pertaining to particular risks to human and possible symptoms

Cause severe after inhalation of vapours, impairments of health or can lead to death even when only ingested in small quantities. Cause after oral intake, inhalation of vapours/dust, impairments of health when ingested in small quantities. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. The labelling with GHS06 would indicate acute toxicity hazard which is not given by the closed cuvette system. -

Information pertaining to particular risks to the environment

PBT: not applicable

vPvB: not applicable

Other hazards

SECTION 3: Composition/information on ingredients

3.1 Substances or 3.2 Mixtures

11 mL Cationic Surfactants 4 (R2)

Chemical: *disulfineblue VN 150*

CAS No.: 129-17-9

Classification: No criteria for classification or naming of chemical not required.

Formula: $C_{27}H_{31}N_2NaO_6S_2$

Pseudonym:

N-[4-[[4-(diethylamino)phenyl](2,4-disulfophenyl)methylene]-2,5-cyclohexadien-1-ylidene]-N-ethyl-ethanaminium, inner salt, sodium salt

TSCA Inventory: listed

EC No.: 204-934-1

Concentration: < 1,00 %

acc. CLP (GHS): The criteria for classification are not fulfilled.

Chemical: *ethanol (diluted < 20 %)*

CAS No.: 64-17-5d

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

Classification: H225, Flam. Liq. 2

Formula: C_2H_6O ; C_2H_5OH

Pseudonym: ethyl alcohol, methylated spirit

TSCA Inventory: listed

REACH Reg. No.: 01-2119457610-43-xxxx

EC No.: 200-578-6

Indice No.: 603-002-00-5

RTECS: KQ6300000

MFCD: 00003568

KE No.: KE-13217

Concentration: 5 - <20 %

acc. CLP (GHS): H226, Flam. Liq. 3

6 mL Cationic Surfactants 4 (R0+R1)

Chemical: *methanol*

CAS No.: 67-56-1

Classification: H225, Flam. Liq. 2, H301, Acute Tox. 3 oral, H311, Acute Tox. 3 derm., H331, Acute Tox. 3 inh., H370, STOT SE 1

Formula: CH_4O , CH_3OH

TSCA Inventory: listed

REACH Reg. No.: 01-2119433307-44-xxxx

EC No.: 200-659-6

Indice No.: 603-001-00-X

RTECS: PC1400000

MFCD: 00004595

KE No.: KE-23193, Toxic 97-1-80

Concentration: 3 - <10 %

acc. CLP (GHS): H226, Flam. Liq. 3, H302, Acute Tox. 4 oral, H312, Acute Tox. 4 derm., H332, Acute Tox. 4 inh., H371, STOT SE 2

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Chemical: *chloroform* CAS No.: 67-66-3
Classification: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2, H331, Acute Tox. 3 inh., H336, STOT SE 3, H351, Carc. 2, H361, Repr. 2, H373, STOT RE 2
Formula: CHCl₃
Pseudonym: trichloromethane
TSCA Inventory: listed
REACH Reg. No.: 01-2119486657-20-xxxx
EC No.: 200-663-8
RTECS: FS9100000
KE No.: KE-34076, Toxic 97-1-281
Concentration: 95 - <100 %
acc. CLP (GHS): H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2, H331, Acute Tox. 3 inh., H336, STOT SE 3, H351, Carc. 2, H361, Repr. 2, H373, STOT RE 2

Indice No.: 602-006-00-4
MFCD: 00000826

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: 70 - <90 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

Chemical: *citrate buffer solution* CAS No.: -
Classification: No criteria for classification or naming of chemical not required.
TSCA Inventory: all listed
KE No.: listed
Concentration: 10 - <25 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

3.3 Remarks

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

List of H and P phrases: see section 16.1

SECTION 4: First aid measures

4.1 Description of first aid measures

Place insured person out of danger zone to fresh air immediately. Ensure quiet, warmth, and provide resuscitation if necessary. If necessary contact medical advice. Take to a doctor, in a raised position if there are breathing difficulties.

4.1.1 After SKIN Contact

Remove contaminated clothing. Rinse the affected skin or mucous membrane thoroughly under running water. (If possible) use soap.

4.1.2 After EYE Contact

After contact with the eyes rinse thoroughly under running water with the eyelid wide open with eye washing bottle, eye douche or running water (protect intact eye).

4.1.3 After INHALATION of vapours

After inhalation of foam or vapour fresh air should be inhaled. Keep airways free. 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

Carcinogenic Effects: Suspected of causing cancer. Suspected of damaging fertility or the unborn child. ---

4.3 Indication of any immediate medical attention and special treatment needed

In the event of RESPIRATORY DISTRESS ensure that the patient inhales oxygen. ---

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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

WARNING: Flammable (GHS regulation). May form 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.

5.4 Additional information

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). 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

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. Not for organic solvents (see section 13).

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handling in accordance with the test instruction, that comes with the product. Use only in well-ventilated working areas. Use a safety bottle when shaking test tubes.

7.2 Conditions for safe storage, including any incompatibilities

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

Storage class (VCI): 3

Water hazard class (DE): 3

7.2.1 Requirements for stock rooms and containers

Keep original product packages tightly closed during handling and storage, and store in a well-ventilated place at max. 25 °C, away or preferably separate from substances with which a hazardous reaction could take place, so that they are not immediately accessible to outside parties. 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

11 mL Cationic Surfactants 4 (R2)

Chemical: *disulfineblue VN 150*

CAS No.: 129-17-9

Chemical: *ethanol*

CAS No.: 64-17-5d

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 ppm / 380 mg/m³

E/e respirable

Short-term exposure factor: 4 (H), Y

skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

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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: 1000 ppm / 1900 mg/m³

6 mL Cationic Surfactants 4 (R0+R1)

Chemical: *methanol* CAS No.: 67-56-1

DNEL: [derm] 40 mg/kg bw/day; [inh] 260 mg/m³
 DNEL = Derived No-Effect Level (for workers)

PNEC_(fresh water): 20.8 mg/L
 PNEC = Predicted No Effect Concentration

EU value: [TWA] 200 ppm / 260 mg/m³

TRGS 900 (DE): 200 ppm / 270 mg/m³
 E/e respirable

Short-term exposure factor: 4 (II), H, Y
 skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 200 ppm / 260 mg/m³

SUVA(CH) BAT value: [U/c,b] 30 mg/L

TRGS 903 (DE): U/c,b 30 mg/L
 B blood, U urine, a no limitation, b end of exposition or shift

NIOSH: [TWA, skin] 200 ppm / 260 mg/m³

NIOSH STEL: 250 ppm / 325 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] 200 ppm / 260 mg/m³

Chemical: *chloroform* CAS No.: 67-66-3

DNEL: [derm] 0.94 mg/kg bw/day; [inh] 2.5 mg/m³
 DNEL = Derived No-Effect Level (for workers)

PNEC_(fresh water): 0.146 mg/L
 PNEC = Predicted No Effect Concentration

EU value: 0.5 ppm / 2.5 mg/m³

TRGS 900 (DE): 0,5 mL/m³ / 2,5 mg/m³
 E/e respirable

Short-term exposure factor: 2 (II), H, X, Y
 skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 0,5 ppm / 2,5 mg/m³

NIOSH: Ca ST 2 ppm / 9.78_{60 min} 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: 50 ppm / 240 mg/m³

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

Chemical: *citrate buffer solution* CAS No.: -

8.2 Exposure controls

Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities. The highest level of cleanliness must be maintained at the workplace.

8.2.1 Respiratory protection

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, for chlorinated carbons consist of viton (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.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

11 mL Cationic Surfactants 4 (R2)

Appearance: liquid	Colour: blue	Odor: alcoholic
pH:	6-8	
Specific gravity:	0,98 g/cm ³	

6 mL Cationic Surfactants 4 (R0+R1)

Appearance: liquid (2 phases)	Colour: colourless	Odor: like chloroform
pH:	2,0	

9.2 Other information

Data for the other parameters of the mixtures are not available, because no registration and no chemical safety report is required.
Relevant Properties of Substance Group

SECTION 10: Stability and reactivity

10.1 Reactivity

no further data available.

10.2 Chemical stability

No known instability.

10.3 Possibility of hazardous reactions

No further data available.

10.4 Conditions to avoid

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.

11 mL Cationic Surfactants 4 (R2)

Chemical:	<i>disulfineblue VN 150</i>	CAS No.:	129-17-9
TSCA Inventory:	listed		
LD50 _{orl rat} :	>5000 mg/kg		

Chemical:	<i>ethanol</i>	CAS No.:	64-17-5d
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 _{orl rat} :	6200 mg/kg		
LC _{Low} _{ihl} gpg:	21.9 g/m ³		
LC _{Low} _{orl} hmh:	1400 mg/kg		
LC50 _{ihl} mouse:	[4h] 39 g/m ³		
LC50 _{ihl} rat:	[10h] 20 g/m ³		

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LD50 _{drm rbt} :	20 000 mg/kg
LD50 _{oral mouse} :	3450 mg/kg
TRGS 905 (DE):	K5, M5, R _F C

6 mL Cationic Surfactants 4 (R0+R1)

Chemical: *methanol* CAS No.: 67-56-1
 TSCA Inventory: listed California Proposition 65 List: listed, developmental
 ACGIH: 200 ppm / 160 mg/m³
 Exposure Routes: inhalation, skin absorption, ingestion, skin and/or eye contact
 Target Organs: Eyes, skin, respiratory system, central nervous system, gastrointestinal tract
 Symptoms: irritation eyes, skin, upper respiratory system; headache, drowsiness, dizziness, nausea, vomiting;
 visual disturbance, optic nerve damage (blindness)
 Australia NICNAS: Canada CEPA 1999: DSL yes
 Japan CSCL/PRTR: PAC yes, Japan PDSCL: Deleterious Substance
 Japan ISHL: listed ≥0,3%/≥0,1%, Article 57-2 (SDS required)
 South Korea TCCA: Accident Precaution Chemical yes
 Korea Exist.Chem.Inventory: KE-23193, Toxic 97-1-80
 LD50_{orl rat} : 5628 mg/kg
 LC_{LoWhl rat} : [4h] 64000 mg/m³
 LC_{LowOrl hmh} : 143 mg/kg
 LC50_{ihl rat} : [4h] >80 mg/L
 LD50_{drm rbt} : 15800 mg/kg
 LD50_{orl mus} : 7300 mg/kg
 Acute Effects: Cause after oral intake, inhalation of vapours/dust, skin contact, impairments of health when ingested in small quantities.
 Chronic Effects:
 TRGS 905 (DE): R_F C

Chemical: *chloroform* CAS No.: 67-66-3
 TSCA Inventory: listed California Proposition 65 List: listed: cancer, developmental
 ACGIH: 10 ppm
 Exposure Routes: inhalation, skin absorption, ingestion, skin and/or eye contact
 Target Organs: Liver, kidneys, heart, eyes, skin, central nervous system
 Symptoms: irritation eyes, skin; dizziness, mental dullness, nausea, confusion; headache, lassitude (weakness, exhaustion); anesthesia; enlarged liver; [potent
 Australia NICNAS: not listed Canada CEPA 1999: DSL yes
 Japan CSCL/PRTR: PCA Yes, PRTR: ≥1,0% class I, Japan PDSCL: Deleterious Substance
 Japan ISHL: listed ≥1,0%/≥0,1%, Article 57-1+2 (Labelling&SDS required)
 South Korea TCCA: not listed
 Korea Exist.Chem.Inventory: KE-34076, Toxic 97-1-281
 LD50_{orl rat} : 908 mg/kg
 LC_{LoWhl hmh} : 25000 mg/m³
 LC_{LowOrl hum/rbt} : 140/500 mg/m³
 LC50_{ihl rat} : 47.7_{4h} g/m³
 LD50_{drm rat} : >15800 mg/kg
 LD50_{drm rbt} : > 20 g/kg
 Acute Effects: Cause severe after inhalation of vapours, impairments of health or can lead to death even when only ingested in small quantities. Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.
 Chronic Effects: May cause damage to organs through prolonged or repeated exposure.
 Carcinogenic Effects: Suspected of causing cancer. Suspected of damaging fertility or the unborn child.
 EU carcinogen: carc. 2, repr. 2
 TRGS 905 (DE): K2, M3, R_E 3

Chemical: *water* CAS No.: 7732-18-5
 TSCA Inventory: listed
 Korea Exist.Chem.Inventory: KE-35400

Chemical: *citrate buffer solution* CAS No.: -
 TSCA Inventory: all listed
 Korea Exist.Chem.Inventory: listed

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SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

11 mL Cationic Surfactants 4 (R2)

Chemical:	<i>disulfineblue VN 150</i>	CAS No.:	129-17-9
Water hazard class (DE):	2		
Chemical:	<i>ethanol</i>	CAS No.:	64-17-5d
PNEC(fresh water) :	0.96 mg/L		
PNEC = Predicted No Effect Concentration			
LC50daphnia magna/48h :	>100 g/L		
LC50pimephales promelas/96h :	13.4-15.1 g/L		
LC50leuciscus idus/96h :	[48h] 8.14 g/L		
LC50fish/96h :	13 g/L		
EC50daphnia/48h :	9.3-14.2 g/L		
IC50scenedesmus quadricauda/72h :	[7d] 5000 mg/L		
EC10pseudomonas putita/16h :	[EC5] 6500 mg/L		
Water hazard class (DE):	1	WGK No.:	0096
Dispersion coefficient(octanol-water) :	-0.31		
Storage class (VCI):	3		

6 mL Cationic Surfactants 4 (R0+R1)

Chemical:	<i>methanol</i>	CAS No.:	67-56-1
PNEC(fresh water) :	20.8 mg/L		
PNEC = Predicted No Effect Concentration			
LC50daphnia magna/48h :	[24h] 23.5 g/L		
LC50pimephales promelas/96h :	29.4 g/L		
LC50fish/96h :	15.4 g/L		
EC50daphnia/48h :	>10 g/L		
IC50scenedesmus quadricauda/72h :	[IC5 8d] 8000 mg/L		
EC10pseudomonas putita/16h :	[EC5] 6.6 g/L		
Water hazard class (DE):	1	WGK No.:	0145
Dispersion coefficient(octanol-water) :	-0.77		
Storage class (VCI):	3		

Chemical:	<i>chloroform</i>	CAS No.:	67-66-3
PNEC(fresh water) :	0.146 mg/L		
PNEC = Predicted No Effect Concentration			
LC50fish/96h :	18 mg/L		
EC50daphnia/48h :	6.3 _{21d} NOEC mg/L		
Water hazard class (DE):	3	WGK No.:	0054
Dispersion coefficient(octanol-water) :	1.97		
Storage class (VCI):	12		

Chemical:	<i>water</i>	CAS No.:	7732-18-5
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Chemical:	<i>citrate buffer solution</i>	CAS No.:	-
Water hazard class (DE):	0		
Storage class (VCI):	12		

12.2 Persistence and degradability

not necessary

12.3 Bioaccumulative potential

not necessary

12.4 Mobility in soil

not necessary

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

no additional data available

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SECTION 13: Disposal considerations

Please observe local regulations for collection and disposal of hazardous waste and contact waste disposal company, where you will obtain information on laboratory waste disposal (waste code number 16 05 06). Or collect in solvent waste (waste code number 07 07 04). 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:**

14.1 UN number: 1888 **14.2 UN proper shipping name:** Chloroform
14.3 Class: 6.1 **14.4 Packing group:** III
Road transport
 Classification code: T1
 Limited Quantity: 5 L Tunnel restriction code: E
 Excepted Quantity: E 1
Air transport
 PAX: 680 max. weight PAX: 60 L
 CAO: 680 max. weight CAO: 220 L
Maritime transport
 EmS: F-A, S-A Storage category: A

14.1 UN number: 1992 **14.2 UN proper shipping name:** Flammable liquid, toxic, n.o.s. (methanol solution)
14.3 Class: 3 **Additionally class:** 6.1 **14.4 Packing group:** III
Road transport
 Classification code: FT1
 Limited Quantity: 5 L Tunnel restriction code: E
 Excepted Quantity: E 1 Special instructions: 274
Air transport
 PAX: 355 max. weight PAX: 60 L
 CAO: 366 max. weight CAO: 220 L
Maritime transport
 EmS: F-E, S-D Storage category: A

14.5 Environmental hazards

none, contains only small quantities of hazardous substances

14.6 Special precautions for user

not necessary

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

not applicable

SECTION 15: Regulatory information

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

German act governing protection from hazardous substances (Chemicals Act / Chemikaliengesetz- ChemG), revised on August 2013
 German order governing protection from hazardous substances (Ordinance on Hazardous Substances / Gefahrstoffverordnung - GefStoffV), revised on November 2010, according to Directive 98/24/EC
 TRGS 200, German engineering rules governing the classification and labelling of hazardous substances, preparations and products, updated October 2011
 MN Leaflet/User manual, also see www.mn-net.com
 Look for your country-specific regulations.

Safety Data Sheet

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

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15.2 Chemical safety assessment
not necessary for these small amounts ---

SECTION 16: Other information

16.1 List of H and P phrases

16.1.1 List of relevant H phrases

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H361	Suspected of damaging fertility or the unborn child.
H371	May cause damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.

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.
P260D	Do not breathe vapours.
P260sh	Do not breathe dust/vapours.
P261sh	Avoid breathing dust/vapours.
P264W	Wash with water thoroughly after handling.
P280sh	Wear protective gloves/eye protection.
P301+312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P302+352	IF ON SKIN: Wash with plenty of water.
P304+340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P311	Call a POISON CENTER/doctor.
P330	Rinse mouth.
P403+233	Store in a well-ventilated place. Keep container tightly closed.
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 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 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
TRGS 900, German engineering rules governing limits in air at work, updated 03/2018
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
KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)

Revisions/Updates

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

