

Safety Data Sheet

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

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

1.1 Product identifier

REF 985032
 Product name NANOCOLOR Anionic 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.

20 x 6 mL Anionic Surfactants 4 (R0) UFI: 2K3U-M389-320X-C6TD
 1 x 11 mL Anionic Surfactants 4 (R2)

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

*Lieferant / Supplier
 Carl Roth GmbH + Co KG
 Schoemperlenstr. 3-5
 76185 Karlsruhe, Germany
 +49 721 5606 0
 sicherheit@carlroth.de*

SECTION 2: Hazard identification

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



GHS06 GHS07 GHS08

Signal word DANGER

| Hazard identification | Hazard classes/categories |
|-----------------------|---------------------------|
| 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 |
| H371 | STOT SE 2 |
| H372 | STOT RE 1 |

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

11 mL Anionic Surfactants 4 (R2)

Do not need labelling as hazardous



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Signal word -

No hazard class

6 mL Anionic Surfactants 4 (R0)



GHS06 GHS07 GHS08

Signal word DANGER

| Hazard identification | Hazard classes/categories |
|-----------------------|---------------------------|
| 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 |
| H371 | STOT SE 2 |
| H372 | STOT RE 1 |

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 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** must not be labelled with H and P phrases until 125 mL (EU 1272/2008 Annex I - 1.5.2).

11 mL Anionic Surfactants 4 (R2)

Do not need labelling as hazardous
Signal word: -

6 mL Anionic Surfactants 4 (R0)



GHS06 GHS08

Signal word: DANGER
H331, H351, H361, H372
Toxic if inhaled.Suspected of causing cancer.Suspected of damaging fertility or the unborn child.Causes damage to organs through prolonged or repeated exposure.
P201, P260sh, P280sh, P311, P405
Obtain special instructions before use.Do not breathe dust/vapours.Wear protective gloves/eye protection.Call a POISON CENTER/doctor.Store locked up.

Label elements of the complete product



GHS06 GHS08

Signal word: DANGER
H331, H351, H361, H372
Toxic if inhaled.Suspected of causing cancer.Suspected of damaging fertility or the unborn child.Causes damage to organs through prolonged or repeated exposure.
P201, P260sh, P280sh, P311, P405



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Obtain special instructions before use. Do not breathe 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.

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, 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

Possible endocrine disrupting effects

no data available

SECTION 3: Composition / information on ingredients

3.1 Substances or 3.2 Mixtures

6 mL Anionic Surfactants 4 (R0)

Substance name: *phosphate buffer solution*

CAS No.: -

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

Formula: $K/Na_{1-3} H_{2-0} PO_4 \cdot x H_2 O$

Concentration: 5 - <20 %

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

Substance name: *methanol*

CAS No.: 67-56-1

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

Formula: $CH_4 O, CH_3 OH$

Pseudonym (de): Methylalkohol

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

EC No.: 200-659-6

Indice No.: 603-001-00-X

Concentration: 1 - <2,5 %

acc. CLP (GHS): H371, STOT SE 2

Substance name: *chloroform*

CAS No.: 67-66-3

Substance rating: 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, H361d, Repr. 2, H372, STOT RE 1, H412, Aquatic Chronic 3

Formula: $CHCl_3$

Pseudonym (de): Trichlormethan, Kohlenstofftrichlorid

REACH Reg. No.: 01-2119486657-20-xxxx

EC No.: 200-663-8

Indice No.: 602-006-00-4

Concentration: 40 - <75 %

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, H372, STOT RE 1

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Substance name: *water*
 CAS No.: 7732-18-5

Substance rating: No criteria for classification or naming of chemical not required.
 Formula: H₂O
 REACH Reg. No.: exempt, Annex IV
 EC No.: 231-791-2
 Concentration: 30 - <50 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

11 mL Anionic Surfactants 4 (R2)

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

Substance rating: H315, Skin Irrit. 2, H319, Eye Irrit. 2
 Formula: H₂SO₄•H₂O
 REACH Reg. No.: 01-2119458838-20-xxxx
 EC No.: 231-639-5
 Concentration: 0,01 - <0,1 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Indice No.: 016-020-00-8

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. 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

Damages organs.

CMR Effekte: 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 DISTRESSES ensure that the patient inhales oxygen. 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



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5.2 Special hazards arising from the substance or mixture

Formation of hazardous and caustic vapour-air mixtures possible.

5.3 Advice for firefighters

No, for listed product. Product package burns like paper or plastic.

5.4 Additional information

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapours. 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

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. 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

Safe storage is guaranteed in the original packaging. Products which are also classified as toxic must be kept under lock and key. Storage class (German chemical industry): see chapter 12.1

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

6 mL Anionic Surfactants 4 (R0)

Chemical: phosphate buffer solution

CAS No.: -

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



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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

11 mL Anionic Surfactants 4 (R2)

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/L
 PNEC = Predicted No Effect 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

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 Skin protection / 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 / 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.



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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

6 mL Anionic Surfactants 4 (R0)

| | |
|--------------------------------------|-------------------|
| a) State of aggregation: | liquid (2 phases) |
| b) Colour: | colourless |
| c) Odor: | like chloroform |
| 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: | 8,0 |
| l) Kinematic viscosity: | no data available |
| m) Solubility in water: | no data available |
| n) Dispersion coefficient (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 |

11 mL Anionic Surfactants 4 (R2)

| | |
|--------------------------------------|-------------------|
| a) State of aggregation: | liquid |
| b) Colour: | blue |
| 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: | 1-2 |
| l) Kinematic viscosity: | no data available |
| m) Solubility in water: | 0-100 % |
| n) Dispersion coefficient (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 |

9.2 Other information

No data is available for the other parameters for the mixtures, since no registration and no chemical safety report is required.
Properties relevant to substance groups

SECTION 10: Stability and reactivity

10.1 Reactivity

no further data available.

10.2 Chemical stability

no known instability.

10.3 Possibility of hazardous reactions

No further data available.



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10.4 Conditions to avoid

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.

6 mL Anionic Surfactants 4 (R0)

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

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_{Low} ihl rat : 64,000 mg/L/4H
 LC_{Low} orl hmn : 143 mg/kg
 LC50 ihl rat : >80 mg/L/4H
 LD50 orl mus : 7300 mg/kg

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_{Low} ihl hmn : 25 mg/L
 LC_{Low} orl hmn : 140 mg/kg
 LC_{Low} orl rbt : 500 mg/kg
 LC50 ihl rat : 9,17 mg/L/6H

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:
 Carcinogenic Effects: Suspected of causing cancer. Suspected of damaging fertility or the unborn child.
 EU carcinogen: carc. 2, repr. 2
 TRGS 905 (DE): K 1B, M 2, R D 2



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Chemical: *water* CAS No.: 7732-18-5
 TSCA Inventory: listed
 Korea Exist.Chem.Inventory: KE-35400
 LD50 orl rat : > 90000 mg/kg

11 mL Anionic Surfactants 4 (R2)

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

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.

6 mL Anionic Surfactants 4 (R0)

Chemical: *phosphate buffer solution* CAS No.: -
 Water hazard class (DE): 1
 Storage class (VCI): 12

Chemical: *methanol* CAS No.: 67-56-1
 PNEC (fresh water) : 20.8 mg/L
 PNEC = Predicted No Effect Concentration
 LC50 daphnia magna/48h : [24h] 23.5 g/L
 LC50 pimephales promelas/96h : 29.4 g/L
 LC50 fish/96h : 15.4 g/L
 EC50 daphnia/48h : >10 g/L
 IC50 scenedesmus quadricauda/72h : [IC5 8d] 8000 mg/L
 EC10 pseudomonas putita/16h : [EC5] 6.6 g/L
 Water hazard class (DE): 2 WGK No.: 0145
 Dispersion coefficient (o/w) : -0,77
 Storage class (VCI): 3

Chemical: *chloroform* CAS No.: 67-66-3
 PNEC (fresh water) : 0.146 mg/L
 PNEC = Predicted No Effect Concentration
 LC50 fish/96h : 18 mg/L
 EC50 daphnia/48h : 6.3 21d NOEC mg/L
 Water hazard class (DE): 3 WGK No.: 0054
 Dispersion coefficient (o/w) : 1,97
 Storage class (VCI): 12

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



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| | | |
|--|----------------------|--------------------|
| 11 mL Anionic Surfactants 4 (R2) | | CAS No.: 7664-93-9 |
| Chemical: | <i>sulfuric acid</i> | |
| 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 putida/16h: | [72h] 100 mg/L | |
| Water hazard class (DE): | 1 | WGK No.: 0182 |
| Storage class (VCI): | 8 B | |

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

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). Or collect in solvent waste (waste code number 07 07 04). Close container tightly.

13.1 Waste treatment methods

Not necessary, see above.

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 ADR

Classification code: M11 Tunnel restriction code: E

Limited Quantity: acc. ADR 3.3.1/251: see LQ in Alternative declaration for transportation

Air transport ICAO

PAX: 960 max. weight PAX: 10 KG

CAO: 960 max. weight CAO: 10 KG

Maritime transport IMDG

EmS: F-A, S-P Storage category: A

Or use **Alternative declaration for transportation:**

UN No.: (see below) UN 1993 class 3 III, class 6.1 III, **Excepted Quantities** (≤30 mL/Σ≤1 L) = ADR/ IATA E1

or

14.1 UN number: 1888 14.2 UN proper shipping name: Chloroform

14.3 Class: 6.1 14.4 Packing group: III

Road transport ADR

Classification code: T1 Tunnel restriction code: E

Limited Quantity: 5 L

Excepted Quantity: E 1

Air transport ICAO

Limited Quantity: LQ 7

Excepted Quantity: E 1

PAX: 680 max. weight PAX: 60 L

CAO: 680 max. weight CAO: 220 L

Maritime transport IMDG

EmS: F-A, S-A Storage category: A



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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 ADR
 Classification code: FT1
 Limited Quantity: 5 L
 Excepted Quantity: E 1
 Tunnel restriction code: E
 Special instructions: 274
Air transport ICAO
 Limited Quantity: LQ 7
 Excepted Quantity: E 1
 PAX: 355 max. weight PAX: 60 L
 CAO: 366 max. weight CAO: 220 L
Maritime transport IMDG
 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

Chemicals Prohibition Ordinance - (DE: ChemVerbotsV), aktualisiert Jan 2017
 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
 BekGS 408, Application of the GefStoffV and the TRGS with the entry into force of the CLP regulation, December 2009, status: Jan 2012
 TRGS 500, Protective measures, Mai 2008
 TRGS 510, Storage of hazardous substances in portable containers from March 2013, status: Oct 2015
 Chapter 4, Measures when storing hazardous substances up to 50 kg (small quantity regulation)
 Wasserhaushaltsgesetz - WHG, Section 3 Handling substances hazardous to water, Jul 2009, status: Aug 2016
 TRGS 561, Activities involving carcinogenic metals and their compounds, Oct 2017
 MN leaflet/instructions for use, also at www.mn-net.com
 If necessary, observe other country-specific regulations.

15.2 Chemical safety assessment

not necessary for these small amounts

SECTION 16: Other information

16.1 Changes compared to the last version

Between versions 2.2.3.10 and 2.2.2.2 following changes were applied: - 1 composition data corrected - 8 substance data corrected

16.2 List of H and P phrases

16.2.1 List of relevant H phrases

| | |
|------|------------------------------------|
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H331 | Toxic if inhaled. |
| H336 | May cause drowsiness or dizziness. |
| H351 | Suspected of causing cancer. |



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- H361 Suspected of damaging fertility or the unborn child.
- H371 May cause damage to organs.
- H372 Causes damage to organs through prolonged or repeated exposure.

16.2.2 List of relevant P phrases

- P201 Obtain special instructions before use.
- P260sh Do not breathe dust/vapours.
- P280sh Wear protective gloves/eye protection.
- P311 Call a POISON CENTER/doctor.
- P405 Store locked up.

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
 Directive 2004/37/EC on the protection of workers from the risk of carcinogens or mutagens at work 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
 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)
 TRGS 905, German rules of technology for carcinogenic and mutagenic substances, as of March 18, 2016
 Regulation 669/2018/EU, adaptation of Regulation 1272/2008/EC to technical and scientific progress (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)

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 oxygen demand
- CSC: Chemical Substance Control Law (Jp)



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| | |
|-----------------------|--|
| 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 specified) |
| 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: | intraperitoneal |
| 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 Effect 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.



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