

Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 985003

NANOCOLOR Ammonium 3

Page: 1/11

Printing date: 04.04.2023

Date of issue: 26.01.2023

Version: 2.2.3.3

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

1.1 Product identifier

REF

985003

Product name

NANOCOLOR Ammonium 3

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 20x 14 mg NANOFIX Ammonium (R2)

UFI: 41HU-03AU-H20P-9Q9R

20 x 4 mL Ammonium 3 (R0)

UFI: 0T2U-231Q-C20G-E4JT

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

Valenciennner 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>>

SECTION 2: Hazard identification

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



GHS07



GHS08

Signal word

WARNING

Hazard identification

H302

H361f

Hazard classes/categories

Acute Tox. 4 oral

Repr. 2

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

4 mL Ammonium 3 (R0)



GHS08

Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 985003

NANOCOLOR Ammonium 3

Page: 2/11

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Signal word

WARNING

Hazard identification

Hazard classes/categories

H361f

Repr. 2

20x 14 mg NANOFIX Ammonium (R2)



GHS07

Signal word

WARNING

Hazard identification

Hazard classes/categories

H302

Acute Tox. 4 oral

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).

4 mL Ammonium 3 (R0)



GHS08

Signal word: WARNING

H361f

Suspected of damaging fertility.

P201, P280sh

Obtain special instructions before use. Wear protective gloves/eye protection.

20x 14 mg NANOFIX Ammonium (R2)



GHS07

Signal word: WARNING

Label elements of the complete product



GHS07



GHS08

Signal word: WARNING

H361f

Suspected of damaging fertility.

P201, P280sh

Obtain special instructions before use. Wear protective gloves/eye protection.

2.3 Other hazards



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Page: 3/11

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Possible hazards from physicochemical properties

Information pertaining to particular risks to human and possible symptoms

Cause after oral intake, impairments of health when ingested in small quantities. Suspected of damaging fertility.

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

20x 14 mg NANOFIX Ammonium (R2)

Substance name: *sodium nitroprusside*
CAS No.: 13755-38-9

Substance rating: H301, Acute Tox. 3 oral
Formula: $\text{Na}_2[\text{Fe}(\text{CN})_5\text{NO}] \cdot 2\text{H}_2\text{O}$
Pseudonym (de): Natriumpentacyanonitrosylferrat(II)
EC No.: 238-373-9
Concentration: 15 - <33 %
acc. CLP (GHS): H302, Acute Tox. 4 oral

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

Substance rating: H272, Ox. Liq. 2, H302, Acute Tox. 4 oral, H319, Eye Irrit. 2, H335, STOT SE 3, H410, Aquatic
Chronic 1, EUH031, 031 not defined
Formula: $\text{C}_3\text{Cl}_2\text{N}_3\text{NaO}_3$
Pseudonym (de): 1,3-Dichlor-5H-(1,3,5)-triazin-2,4,6-trion
REACH Reg. No.: 01-2119489371-33-xxxx
EC No.: 220-767-7
Concentration: 3 - <10 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

Indice No.: 613-030-01-7

4 mL Ammonium 3 (R0)

Substance name: *sodium salicylate*
CAS No.: 54-21-7

Substance rating: H302, Acute Tox. 4 oral, H319, Eye Irrit. 2, H361, Repr. 2, H361d, Repr. 2
Formula: $\text{C}_7\text{H}_5\text{NaO}_3$
REACH Reg. No.: 01-2119918289-28-xxxx
EC No.: 200-198-0
Concentration: 0,3 - <10 %
acc. CLP (GHS): H361, Repr. 2, H361f, Repr. 2

Substance name: *tri-sodium citrate*
CAS No.: 6132-04-3

Substance rating: No criteria for classification or naming of chemical not required.
Formula: $\text{C}_6\text{H}_5\text{Na}_3\text{O}_7 \cdot 2\text{H}_2\text{O}$
Pseudonym (de): Na-citrat, E331
REACH Reg. No.: 01-2119457027-40-xxxx
EC No.: 200-675-3
Concentration: 1 - <10 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 985003

NANOCOLOR Ammonium 3

Page: 4/11

Printing date: 04.04.2023

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Version: 2.2.3.3

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

Substance rating: H314, Skin Corr. 1B
Formula: NaOH·H₂O
Pseudonym (de): Natronlauge
REACH Reg. No.: 01-2119457892-27-xxxx
EC No.: 215-185-5
Concentration: 0,01 - <0,5 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

Indice No.: 011-002-00-6

3.3 Remarks

When not listed, mixtures are added with water [CAS No. 7732-18-5] to 100%. List of H and P phrases: see section 16.2.

SECTION 4: First aid measures

4.1 Description of first aid measures

Place insured person out of danger zone to fresh air immediately. Ensure quiet, warmth, and provide resuscitation if necessary. If necessary contact medical advice.

4.1.1 After SKIN Contact

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. ---

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

CMR Effekte: Suspected of damaging fertility.

4.3 Indication of any immediate medical attention and special treatment needed

SECTION 5: Firefighting measures

5.1 Extinguishing media

5.1.1 Suitable extinguishing media

Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.

5.1.2 Unsuitable extinguishing media

no data available

5.2 Special hazards arising from the substance or mixture

Formation of hazardous and caustic vapour-air mixtures possible.

5.3 Advice for firefighters

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

5.4 Additional information



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REF: 985003

NANOCOLOR Ammonium 3

Page: 5/11

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Version: 2.2.3.3

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.

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 a safety bottle when shaking test tubes.

7.2 Conditions for safe storage, including any incompatibilities

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

Storage class (VCI): 8B

Water hazard class (DE): 3

7.2.1 Requirements for stock rooms and containers

Keep original product packages tightly closed during handling and storage.

7.3 Specific end use(s)

Product for analytical use.

SECTION 8: Exposure controls /personal protection

8.1 Control parameters

20x 14 mg NANOFIX Ammonium (R2)

Chemical: sodium nitroprusside

CAS No.: 13755-38-9

Chemical: dichloroisocyanuric acid, Na salt

CAS No.: 2893-78-9

NIOSH: not listed

[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: not listed

4 mL Ammonium 3 (R0)

Chemical: sodium salicylate

CAS No.: 54-21-7

DNEL: 1,32 mg/m³
DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 0,0413 mg/L
PNEC = Predicted No Effect Concentration

Chemical: tri-sodium citrate

CAS No.: 6132-04-3

Chemical: sodium hydroxide solution

CAS No.: 1310-73-2

DNEL: [inh] 1 mg/m³
DNEL = Derived No-Effect Level (for workers)

TRGS 900 (DE): 2 mg/m³
E/e respirable

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

SUVA(CH) MAK value: 2 e mg/m³

NIOSH: 2 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] 2 mg/m³

Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 985003

NANOCOLOR Ammonium 3

Page: 6/11

Printing date: 04.04.2023

Date of issue: 26.01.2023

Version: 2.2.3.3

8.2 Exposure controls

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

8.2.1 Respiratory protection

No additional recommendations.

8.2.2 Skin protection / Hand protection

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

8.2.3 Eye / Face Protection

Yes, safety glasses according EN 166 with integrated side shields or wrap-around protection.

8.2.4 Skin protection

Recommended to avoid contamination with these hazards.

8.2.5 Personal hygiene

Eating, drinking, smoking, taking snuff and storage of food in work areas and at outdoor workplaces is prohibited. Avoid contact with the skin, eyes and clothing. Rinse any clothing on which the substance has been spilled, and soak it in water. Wash hands thoroughly with soap and water when stopping work and before eating, and then apply protective skin cream.

8.2.6 Thermal hazards

no data available

8.3 Limitation and monitoring of environmental exposure

Do not release product into environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

20x 14 mg NANOFIX Ammonium (R2)

a) State of aggregation:	powder (solid)
b) Colour:	rose
c) Odor:	chloric
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:	5-7
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

4 mL Ammonium 3 (R0)

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	odorless
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	12-13
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



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Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 985003

NANOCOLOR Ammonium 3

Page: 7/11

Printing date: 04.04.2023

Date of issue: 26.01.2023

Version: 2.2.3.3

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.

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.

20x 14 mg NANOFIX Ammonium (R2)

Chemical: *sodium nitroprusside*

CAS No.: 13755-38-9

TSCA Inventory: listed (CAS 14402-89-2)

Korea Exist.Chem.Inventory: not listed

LD50 orl rat : 99 mg/kg

LC_Low orl rat : 20 mg/kg

Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

Chemical: *dichloroisocyanuric acid, Na salt*

CAS No.: 2893-78-9

TSCA Inventory: listed California Proposition 65 List: not listed

Australia NICNAS: not listed Canada CEPA 1999: DSL Yes

Japan CSCL/PRTR: not listed, Japan PDSCL: not listed

Japan ISHL: not listed

South Korea TCCA: not listed

Korea Exist.Chem.Inventory: KE-10215, >25% Toxic 2014-1-688

LD50 orl rat : 550-1600 mg/kg

LC_Low orl hmn : 3570 mg/kg

4 mL Ammonium 3 (R0)

Chemical: *sodium salicylate*

CAS No.: 54-21-7

TSCA Inventory: listed

Korea Exist.Chem.Inventory: KE-20384

LD50 orl rat : 1000 mg/kg

LC_Low orl hmn : 700 mg/kg

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

Chemical: *tri-sodium citrate*

CAS No.: 6132-04-3

TSCA Inventory: listed (CAS 68-04-2)

Korea Exist.Chem.Inventory: KE-20843

LD50 orl rat : > 8000 mg/kg



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Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 985003

NANOCOLOR Ammonium 3

Page: 8/11

Printing date: 04.04.2023

Date of issue: 26.01.2023

Version: 2.2.3.3

Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2
TSCA Inventory: listed California Proposition 65 List: not listed
Exposure Routes: inhalation, ingestion, skin and/or eye contact
Target Organs: Eyes, skin, respiratory system
Symptoms: irritation eyes, skin, mucous membrane; pneumonitis; eye, skin burns; temporary loss of hair
Australia NICNAS: not listed Canada CEPA 1999: DSL Yes
Japan CSCL/PRTR: not listed, Japan PDSC: not listed
Japan ISHL: listed $\geq 1,0\%$ / $\geq 1,0\%$, Article 57-2 (SDS required)
South Korea TCCA: not listed
Korea Exist.Chem.Inventory: KE-31487
LD50 orl rat : [40%] 1250 / [$<25\%$] >2000 mg/kg
LD50 orl mus : 40 mg/kg

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.

20x 14 mg NANOFIX Ammonium (R2)

Chemical: *sodium nitroprusside*
Water hazard class (DE): 3
Storage class (VCI): 6.1 B

CAS No.: 13755-38-9

Chemical: *dichloroisocyanuric acid, Na salt*
Water hazard class (DE): 3
Storage class (VCI): 13

CAS No.: 2893-78-9

4 mL Ammonium 3 (R0)

Chemical: *sodium salicylate*
PNEC (fresh water) : 0,0413 mg/L
PNEC = Predicted No Effect Concentration
Water hazard class (DE): 1
Storage class (VCI): 12-13

CAS No.: 54-21-7

Chemical: *tri-sodium citrate*
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 putida/16h : EC50 ps. fluorescens/8h : $>1.8-3.2$ g/L
Water hazard class (DE): 1
Storage class (VCI): 12-13

CAS No.: 6132-04-3

Chemical: *sodium hydroxide solution*
LC50 leuciscus idus/96h : 35-189 mg/L
LC50 fish/96h : 45.4 mg/L
EC50 daphnia/48h : >100 mg/L
Water hazard class (DE): 1 WGK No.: 142
Storage class (VCI): 8 B

CAS No.: 1310-73-2

12.2 Persistence and degradability

not necessary

12.3 Bioaccumulative potential



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Safety Data Sheet

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REF: 985003

NANOCOLOR Ammonium 3

Page: 9/11

Printing date: 04.04.2023

Date of issue: 26.01.2023

Version: 2.2.3.3

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).

13.1 Waste treatment methods

Not necessary, see above.

SECTION 14: Transport information

14.1 - 14.4: No dangerous goods according the transport regulations

14.5 Environmental hazards

none, contains only small quantities of hazardous substances

14.6 Special precautions for user

not necessary

14.7 Carriage in bulk by sea in accordance with IMO instruments

Not applicable.

SECTION 15: Regulatory information

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

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
 Wasserhaushaltsgesetz - WHG, Section 3 Handling substances hazardous to water, Jul 2009, status: Aug 2016
 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 2.2.3.3 and 2.2.2.2 following changes were applied: - 1 composition data corrected - 1 substance data corrected

16.2 List of H and P phrases

16.2.1 List of relevant H phrases

H302 Harmful if swallowed.
 H361 Suspected of damaging fertility or the unborn child.



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according to Regulations REACH 1907/2006/EC

REF: 985003	NANOCOLOR Ammonium 3	Page: 10/11
Printing date: 04.04.2023	Date of issue: 26.01.2023	Version: 2.2.3.3

H361f Suspected of damaging fertility.

16.2.2 List of relevant P phrases

P201 Obtain special instructions before use.
P280sh Wear protective gloves/eye protection.

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

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
CSCL: Chemical Substance Control Law (Jp)
Dam: damage
DNEL: Derived No-Effect Level (for workers)
derm: dermal
dog: dog
EC10: Concentration causing a toxic effect in 10% of the test organisms



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Safety Data Sheet

according to Regulations REACH 1907/2006/EC

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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:	lethal concentration 50%
LD50:	lethal dose 50%
leuciscus idus:	fisch, ide, orfe
MAK:	maximum workplace concentration
Met:	Metal
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.:	Registration 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.