

# Safety Data Sheet

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

REF: 985006	NANOCOLOR Ammonium 200	Page: 1/10
Printing date: 22.11.2022	Date of issue: 26.08.2022	Version: 2.2.4.2

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

### 1.1 Product identifier

REF 985006  
 no data available NANOCOLOR Ammonium 200  
 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 8 mL Ammonium 10-200 (R0)  
 1 x 20 x 18 mg NANOFIX Ammonium (R2) UFI: EUGU-Y3Y1-W20Q-X14M

### 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  
 76105 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



GHS07

Signal word WARNING

Hazard identification	Hazard classes/categories
H302	Acute Tox. 4 oral
H315	Skin Irrit. 2
H319	Eye Irrit. 2

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

8 mL Ammonium 10-200 (R0)

Signal word Do not need labelling as hazardous  
 -  
 No hazard class



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20 x 18 mg NANOFIX Ammonium (R2)



GHS07

Signal word

WARNING

**Hazard identification**

**Hazard classes/categories**

H302

Acute Tox. 4 oral

H315

Skin Irrit. 2

H319

Eye Irrit. 2

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).

8 mL Ammonium 10-200 (R0)

Do not need labelling as hazardous

Signal word: -

20 x 18 mg NANOFIX Ammonium (R2)



GHS07

Signal word: WARNING

### Label elements of the complete product



GHS07

Signal word: WARNING

## 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 after oral intake, impairments of health when ingested in small quantities.

**Information pertaining to particular risks to the environment**

**Possible endocrine disrupting effects**

no data available

## SECTION 3: Composition / information on ingredients

### 3.1 Substances or 3.2 Mixtures

8 mL Ammonium 10-200 (R0)



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

Substance rating: H314, Skin Corr. 1A  
 Formula: NaOH·H<sub>2</sub>O  
 Pseudonym (de): verdünnte Natronlauge  
 REACH Reg. No.: 01-2119457892-27-xxxx  
 EC No.: 215-185-5  
 Concentration: 0,1 - <0,5 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.  
 Substance name: *sodium salicylate*  
 CAS No.: 54-21-7

Indice No.: 011-002-00-6

Substance rating: H302, Acute Tox. 4 oral, H319, Eye Irrit. 2, H361, Repr. 2, H361d, Repr. 2  
 Formula: C<sub>7</sub>H<sub>5</sub>NaO<sub>3</sub>  
 REACH Reg. No.: 01-2119918289-28-xxxx  
 EC No.: 200-198-0  
 Concentration: 0,1 - <0,3 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

## 20 x 18 mg NANOFIX Ammonium (R2)

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

Substance rating: H301, Acute Tox. 3 oral  
 Formula: Na<sub>2</sub>[Fe(CN)<sub>5</sub>NO]·2H<sub>2</sub>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: C<sub>3</sub>Cl<sub>2</sub>N<sub>3</sub>NaO<sub>3</sub>  
 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: 10 - <20 %  
 acc. CLP (GHS): H315, Skin Irrit. 2, H319, Eye Irrit. 2

Indice No.: 613-030-01-7

### 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



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## 4.3 Indication of any immediate medical attention and special treatment needed

No additionally recommendations. ---

## 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. 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

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapours. Regular staff training is necessary.

### 6.2 Environmental precautions

not necessary

### 6.3 Methods and material for containment and cleaning up

Bind any escaping liquid with inert absorbent.  
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): 6.1B

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

**8 mL Ammonium 10-200 (R0)**

Chemical: *sodium hydroxide solution*

CAS No.: 1310-73-2

Chemical: *sodium salicylate*

CAS No.: 54-21-7

DNEL: 1,32 mg/m<sup>3</sup>

DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water) : 0,0413 mg/L



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PNEC = Predicted No Effect Concentration

## 20 x 18 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

## 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

Not necessary.

### 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

#### 8 mL Ammonium 10-200 (R0)

a) State of aggregation:	
b) Colour:	colourless
c) Odor:	red
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

#### 20 x 18 mg NANOFIX Ammonium (R2)

a) State of aggregation:	
b) Colour:	colourless
c) Odor:	red
d) Melting point:	no data available
e) Boiling point:	no data available



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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

## 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.

### 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.

#### 8 mL Ammonium 10-200 (R0)

Chemical:	<i>sodium hydroxide solution</i>	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:	-	
Japan CSCL/PRTR:	not listed, Japan PDSCL: not listed	
Japan ISHL:	listed $\geq 1,0\%$ / $\geq 1,0\%$ SDS required	
Korea Exist.Chem.Inventory:	KE-31487	
LD50 orl rat :	[< 1%] > 50000 mg/kg	
LD50 orl mus :	[< 1%] > 4000 mg/kg	

Chemical:	<i>sodium salicylate</i>	CAS No.: 54-21-7
TSCA Inventory:	listed	
Korea Exist.Chem.Inventory:	KE-20384	
LD50 orl rat :	1000 mg/kg	
LC <sub>Low</sub> orl hmn :	700 mg/kg	



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**20 x 18 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

**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.

**8 mL Ammonium 10-200 (R0)**

Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2  
 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): nwg WGK No.: 0142  
 Storage class (VCI): 12-13

Chemical: *sodium salicylate* CAS No.: 54-21-7  
 PNEC (fresh water) : 0,0413 mg/L  
 PNEC = Predicted No Effect Concentration  
 Water hazard class (DE): 1  
 Storage class (VCI): 12-13

**20 x 18 mg NANOFIX Ammonium (R2)**

Chemical: *sodium nitroprusside* CAS No.: 13755-38-9  
 Water hazard class (DE): 3  
 Storage class (VCI): 6.1 B

Chemical: *dichloroisocyanuric acid, Na salt* CAS No.: 2893-78-9  
 Water hazard class (DE): 3  
 Storage class (VCI): 13

**12.2 Persistence and degradability**

not necessary

**12.3 Bioaccumulative potential**

not necessary

**12.4 Mobility in soil**

not necessary



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## 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 to 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 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

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  
 MN leaflet/instructions for use, also at [www.mn-net.com](http://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 2.2.4.2 and 2.2.2.2 following changes were applied: - 2 composition 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.

#### 16.2.2 List of relevant P phrases

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.
P330	Rinse mouth.



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## 16.3 Recommended restriction on use

Only for professional user.  
An individual package of this product or test kit has a moderate hazardous potential.

## 16.4 Sources of key data

KÜHN, BIRETT leaflets on dangerous working materials  
Directive 1999/92/EG Minimum requirements to improve the safety and health protection of workers at risk from potentially explosive atmospheres  
SUVA .CH, limit values in the air at work 2009, revised on 01/2009  
Regulation 790/2009/EU Adaptation of the CLP Regulation 1272/2008/EU to technical and scientific progress  
Regulation 453/2010/EU REACH – REQUIREMENTS FOR THE PREPARATION OF SAFETY DATA SHEET  
Regulation 487/2013/EU, 4. Adaptation of the CLP regulation to technical and scientific progress  
Regulation 669/2018/EU, 4. Adaptation of the CLP regulation to technical and scientific progress  
Regulation 1480/2018/EU, 4. Adaptation of the CLP regulation to technical and scientific progress  
TRGS 900, German engineering rules on limit values in the air at work, as of 03/2019  
Regulation 878/2020/EU  
Regulation 849/2021/EU, 4. Adaptation of the CLP regulation to technical and scientific progress

### Revisions/Updates

*Reason for revision:* 2014-02 Corrected structure of the sections according to Regulation 453/2010/EU, if necessary  
2014-04 Adjustment of Regulation 487/2013/EU  
2016-03 Adjustment of Regulation 1221/2015/EU  
  
2017-11 adaptation of the ECHA registration dossier  
2022-11 Adjustment of Regulation 878/2020/EU

## 16.5 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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## 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  
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



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# Safety Data Sheet

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

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- 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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