

# Safety Data Sheet

according to Regulations REACH 1907/2006/EC

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Printing date: 27.09.2023	Date of issue: 12.01.2023	Version: 2.2.3.14

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

### 1.1 Product identifier

REF 985098  
 Product name NANOCOLOR Aluminium 07

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 Aluminium 07 (R2)
- 1 x Sprache noch nicht definiert!
- 1 x 11 mL Aluminium 07 (R4)
- 19 x 27 mg Aluminium 07 NANOFIX (R0)

### 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](mailto:sds@mn-net.com) ([mcsds@mn-net.com](mailto:mcsds@mn-net.com))

### 1.4 Emergency telephone number

Information not necessary.

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](mailto:sicherheit@carlroth.de)

## SECTION 2: Hazard identification

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

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

**Sprache noch nicht definiert!**

Signal word Do not need labelling as hazardous  
 -

No hazard class

**27 mg Aluminium 07 NANOFIX (R0)**

Signal word Do not need labelling as hazardous  
 -

No hazard class

**11 mL Aluminium 07 (R4)**

Signal word Do not need labelling as hazardous  
 -

No hazard class



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## 11 mL Aluminium 07 (R2)

Signal word Do not need labelling as hazardous  
-

No hazard class

List of H phrases: see section 16.2

## 2.2 Label elements according regulation (EC) 1272/2008

### Sprache noch nicht definiert!

Do not need labelling as hazardous  
Signal word: -

### 27 mg Aluminium 07 NANOFIX (R0)

Do not need labelling as hazardous  
Signal word: -

### 11 mL Aluminium 07 (R4)

Do not need labelling as hazardous  
Signal word: -

### 11 mL Aluminium 07 (R2)

Do not need labelling as hazardous  
Signal word: -

## Label elements of the complete product

## 2.3 Other hazards

### Possible hazards from physicochemical properties

According to our current status of knowledge and experience we state, that this product does not contain any substances, which - in accordance with EC regulations 1272/2008/EC, 1907/2006/EC and German Regulations for Hazardous goods - have to be declared as dangerous goods, either because of their applied concentration or because of their total amount in anyone kit. An individual package has considerably less hazardous potential. The property H314 "Causes severe skin burns and eye damage." of some salts is not applicable, because the mixture is buffered to pH >3-4 (see GHS Directive 1272/2008/EC Annex I, chapter 3.2.3.1.2.).

### Information pertaining to particular risks to human and possible symptoms

### 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

#### 27 mg Aluminium 07 NANOFIX (R0)

Substance name: *L(+)-ascorbic acid*  
CAS No.: 50-81-7

Substance rating: No criteria for classification or naming of chemical not required.  
Formula:  $C_6H_8O_6$   
Pseudonym (de): Vitamin C  
REACH Reg. No.: exempt, Annex IV  
EC No.: 200-066-2  
Concentration: 90 - <100 %  
acc. CLP (GHS): The criteria for classification are not fulfilled.

#### 11 mL Aluminium 07 (R4)



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Substance name: *ammonium acetate*  
 CAS No.: 631-61-8

Substance rating: No criteria for classification or naming of chemical not required.  
 Formula:  $C_2H_7NO_2$   
 REACH Reg. No.: 01-2119828440-45-xxxx  
 EC No.: 211-162-9  
 Concentration: 40 - <60 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

## 11 mL Aluminium 07 (R2)

Substance name: *hydrochloric acid*  
 CAS No.: 7647-01-0

Substance rating: H314, Skin Corr. 1 A, H335, resp. irrit. STOT SE 3  
 Formula:  $HCl \cdot H_2O$   
 Pseudonym (de): Chlorwasserstoffsäure  
 REACH Reg. No.: 01-2119484862-27-xxxx  
 EC No.: 231-595-7  
 Specific concentration limit: Eye Irrit. 2; H319: 10 % ≤ C < 25 % - Skin Irrit. 2; H315: 10 % ≤ C < 25 % - Skin Corr. 1B; H314: C ≥ 25 % - STOT SE 3; H335: C ≥ 10 %  
 Concentration: 0,1 - <1 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Index No.: 017-002-01-X

### 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.

#### 4.1.1 After SKIN Contact

Not necessary.

#### 4.1.2 After EYE Contact

Not necessary.

#### 4.1.3 After INHALATION of vapours

Not necessary. ---

#### 4.1.4 After ORAL Intake

Not necessary.

### 4.2 Most important symptoms and effects, both acute and delayed

### 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



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## 5.2 Special hazards arising from the substance or mixture

None.

## 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. Not necessary.

### 6.2 Environmental precautions

not necessary

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

Clean working area with water. Flush used 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): 2

#### 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

#### 27 mg Aluminium 07 NANOFIX (R0)

Chemical: *L(+)-ascorbic acid*

CAS No.: 50-81-7

#### 11 mL Aluminium 07 (R4)

Chemical: *ammonium acetate*

CAS No.: 631-61-8

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

#### 11 mL Aluminium 07 (R2)

Chemical: *hydrochloric acid*

CAS No.: 7647-01-0

DNEL: [inh] 8 mg/m<sup>3</sup>

DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 36 µg/L

PNEC = Predicted No Effect Concentration

EU value: [TWA] 5 ppm / 8 mg/m<sup>3</sup>; [STEL] 10 ppm/ 15 mg/m<sup>3</sup>

TRGS 900 (DE): 2 mL/m<sup>3</sup> / 3 mg/m<sup>3</sup>

E/e respirable

Short-term exposure factor: 2 (I), Y

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

SUVA(CH) MAK value: 2 ppm / 3\* mg/m<sup>3</sup>

NIOSH: [C] 5 ppm / 7 mg/m<sup>3</sup>

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



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OSHA: List of highly hazardous chemicals, toxics and reactives Yes (TQ = 5000 lbs) n/a; TWA 5 ppm / 7 mg/m<sup>3</sup>

## 8.2 Exposure controls

Not necessary. Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities.

### 8.2.1 Respiratory protection

Not necessary.

### 8.2.2 Skin protection / Hand protection

Not necessary.

### 8.2.3 Eye / Face Protection

Not necessary.

### 8.2.4 Skin protection

Not necessary.

### 8.2.5 Personal hygiene

Information not necessary.

### 8.2.6 Thermal hazards

no data available

## 8.3 Limitation and monitoring of environmental exposure

Information not necessary.

# SECTION 9: Physical and chemical properties

## 9.1 Information on basic physical and chemical properties

### 27 mg Aluminium 07 NANOFIX (R0)

a) State of aggregation:	solid (lyophilized)
b) Colour:	white
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:	5-6
l) Kinematic viscosity:	no data available
m) Solubility in water:	0-25 %
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 Aluminium 07 (R4)

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	acetic
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:	4-5
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



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r) Particle size: no data available

## 11 mL Aluminium 07 (R2)

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:	1-2
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:	1,0 g/cm <sup>3</sup>
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

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

None

### 10.2 Chemical stability

no known instability.

### 10.3 Possibility of hazardous reactions

None.

### 10.4 Conditions to avoid

Observe the storage temperature printed on it. Not known.

### 10.5 Incompatible materials

Not known.

### 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.

#### 27 mg Aluminium 07 NANOFIX (R0)

Chemical: L(+)-ascorbic acid  
 TSCA Inventory: listed  
 Korea Exist.Chem.Inventory: KE-01947  
 LD50 orl rat : 11900 mg/kg

CAS No.: 50-81-7



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### 11 mL Aluminium 07 (R4)

Chemical: *ammonium acetate* CAS No.: 631-61-8  
 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-01629  
 LD50 orl rat : 632 mg/kg

### 11 mL Aluminium 07 (R2)

Chemical: *hydrochloric acid* CAS No.: 7647-01-0  
 TSCA Inventory: listed California Proposition 65 List: not listed  
 Exposure Routes: inhalation, ingestion (solution), skin and/or eye contact  
 Target Organs: Eyes, skin, respiratory system  
 Symptoms: irritation nose, throat, larynx; cough, choking; dermatitis; solution: eye, skin burns; liquid: frostbite; in animals: laryngeal spasm; pulmonary edema  
 Australia NICNAS: not listed Canada CEPA 1999: DSL Yes  
 Japan CSCL/PRTR: not listed, Japan PDSCL: Deleterious Substance  
 Japan ISHL: listed ≥0,2%/≥0,1%, Article 57-2 (SDS required)  
 South Korea TCCA: Accident Precaution Chemical Yes  
 Korea Exist.Chem.Inventory: KE-20189, >10% Toxic 97-1-203, Acc. Precaution Chem.  
 LD50 orl rat : 900 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.

#### 27 mg Aluminium 07 NANOFIX (R0)

Chemical: *L(+)-ascorbic acid* CAS No.: 50-81-7  
 Water hazard class (DE): 1 WGK No.: 0737  
 Storage class (VCI): 13

#### 11 mL Aluminium 07 (R4)

Chemical: *ammonium acetate* CAS No.: 631-61-8  
 Bio Toxicity: 1/4.5/4.8  
 LC50 fish/96h : 238 mg/L  
 Water hazard class (DE): 1 WGK No.: n.n.  
 Storage class (VCI): 12-13

#### 11 mL Aluminium 07 (R2)

Chemical: *hydrochloric acid* CAS No.: 7647-01-0  
 PNEC (fresh water) : 36 µg/L  
 PNEC = Predicted No Effect Concentration  
 LC50 fish/96h : 24.6 mg/L  
 EC50 daphnia/48h : 0.492 mg/L  
 EC50 pseudokirchneriella subcapitata/72h : 0.78 mg/L  
 Water hazard class (DE): 1 WGK No.: 0238  
 Storage class (VCI): 8 B

## 12.2 Persistence and degradability

not necessary





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**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

Not necessary.

**13.1 Waste treatment methods**

GENERAL: Empty solids into municipal waste, empty liquids diluted into drains. Not necessary, see above.

## SECTION 14: Transport information

14.1 - 14.4 Not necessary

**14.5 Environmental hazards**

none

**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**

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  
 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**

## SECTION 16: Other information

**16.1 Changes compared to the last version**

Between versions 2.2.3.14 and 2.2.2.2 following changes were applied: - 1 composition data corrected - 12 substance data corrected

**16.2 List of H and P phrases**

16.2.1 List of relevant H phrases

16.2.2 List of relevant P phrases

**16.3 Recommended restriction on use**

None

**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  
 SUVA .CH, limit values in the air at work 2009, revised on 01/2009





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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)

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)  
 Regulation 692/2022/EU, adaptation of Annex VI, Part 1, of Regulation 1272/2008/EC to technical and scientific progress (18th 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

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:	lethal concentration 50%
LD50:	lethal dose 50%



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according to Regulations REACH 1907/2006/EC

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- 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.

