

# Safety Data Sheet

## SDS acc. Hazard Communication Standard

REF: 985033	NANOCOLOR COD 300	Page: 1/12
Printing Date: 15.05.2024	Date of Issue: 26.09.2022	Version: 2.2.2.19

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

#### 1.1 Product Identifier / Product Name

REF 985033  
 Product Name NANOCOLOR COD 300  
 20 x 4 mL COD 300 (R0) UFI: F7TU-536A-920N-27NN

#### 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 and 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.  
 USA: American Association Of Poison Control Centers  
 Rockville, MD 20857. tel. 1-800-222-1222, <<https://www.poisonhelp.org>>  
 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(s) Identification

#### 2.0 Classification of the complete Product



Signal Word DANGER

Hazard Identification	Hazard Classes/Categories
H302	Acute Tox. 4 oral
H312	Acute Tox. 4 derm.
H314	Skin Corr. 1 B
H317	Skin Sens. 1
H332	Acute Tox. 4 inh.
H373	STOT RE 2
H412	Aquatic Chronic 3

#### 2.1 Classification of the substance or mixture

4 mL COD 300 (R0)



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Signal Word	DANGER
<b>Hazard Identification</b>	<b>Hazard Classes/Categories</b>
H302	Acute Tox. 4 oral
H312	Acute Tox. 4 derm.
H314	Skin Corr. 1 B
H317	Skin Sens. 1
H332	Acute Tox. 4 inh.
H373	STOT RE 2
H412	Aquatic Chronic 3

List of H phrases: see section 16.2

### 2.2 Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

According the implementation of GHS immediate packages only must be labelled with product identifier(s), GHS symbol(s), signal word, manufacturer name and phone number (OSHA's interpretation of HCS 2012). Inner packages up to 10 mL need max. 2 symbols (regulation 1272/2008/EU 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) / **until 100 mL** (Canada WHMIS 2015). This labelling exemption does not apply to U.S.A. This labelling exemption is NOT valid for sensiblizing substances.

**4 mL COD 300 (R0)**



Signal Word: DANGER  
H314, H317

Causes severe skin burns and eye damage.May cause an allergic skin reaction.

P260sh, P264, P280sh, P303+361+353, P305+351+338, P310, P333+313, P405, P501

Do not breathe dust/vapors.Immediately call a POISON CENTER/doctor.Wash hands thoroughly after handling.Wear protective gloves/eye protection.IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.If skin irritation or rash occurs: Get medical advice/attention.Store locked up.Dispose of contents/container to regulated waste treatment.

### Label elements of the complete product



Signal Word: DANGER  
H314, H317

Causes severe skin burns and eye damage.May cause an allergic skin reaction.

P260sh, P264, P280sh, P303+361+353, P305+351+338, P310, P333+313, P405, P501

Do not breathe dust/vapors.Immediately call a POISON CENTER/doctor.Wash hands thoroughly after handling.Wear protective gloves/eye protection.IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.If skin irritation or rash occurs: Get medical advice/attention.Store locked up.Dispose of contents/container to regulated waste treatment.

### 2.3 Other Hazards

#### Possible Hazards from physicochemical Properties

Generally in the case of pH values are less than 2 or higher than 11.5 then it is corrosive.

#### Information pertaining to particular Risks to Human and possible Symptoms

Causes varying degrees of acid burns on the skin, to the eyes and to the mucous membranes and wounds which do not heal quickly depending on the concentration, temperature and the exposure time. Vapors especially which steam from hot liquids and mist can have a severe irritant effect upon the eyes and the respiratory organs.

Cause after oral intake, inhalation of vapors/dust, skin contact, impairments of health when ingested in small quantities. May cause sensitization by skin contact, also in repeated contact of small amounts. Can accumulate within the body.

The risk assessment of the tube tests showed no risk «Toxic if inhaled.» at the application.



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### Information pertaining to particular Risks to the Environment

Should not be released into the environment.

PBT: not applicable

vPvB: not applicable

### Possible endocrine disrupting effects

data not available

## SECTION 3: Composition/Information on Ingredients

### 3.1 Substances or 3.2 Mixtures

#### 4 mL COD 300 (R0)

Substance name: *silver sulfate*  
CAS No.: 10294-26-5

Substance rating: H318, Eye Dam. 1, H400, Aquatic Acute 1, H410, Aquatic Chronic 2

Chemical Formula: Ag<sub>2</sub>SO<sub>4</sub>

Synonyms (de): Disilber(I)-sulfat

REACH Reg. No.: 01-2119918297-31-xxxx

EC No.: 233-653-7

Concentration: 0,1 - &lt;1 %

Correlation Factor: x 0.69 (= %Ag)

The classification refers to the weight percentage of the metal (according to CLP regulation 2008/1272/EG Annex VI, 1.1.3.2 Note 1)

acc. GHS: The criteria for classification are not fulfilled.

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

Substance rating: H314, Skin Corr. 1 B

Chemical Formula: H<sub>2</sub>SO<sub>4</sub> (•H<sub>2</sub>O)

REACH Reg. No.: 01-2119458838-20-xxxx

EC No.: 231-639-5

Index No.: 016-020-00-8

Specific concentration limit: Eye Irrit. 2; H319: 5 % ≤ C &lt; 15 % - Skin Irrit. 2; H315: 5 % ≤ C &lt; 15 % - Skin Corr 1A; H314 c ≥ 15%

Concentration: 80 - &lt;100 %

acc. GHS: H314, Skin Corr. 1 B

Substance name: *potassium dichromate*  
CAS No.: 7778-50-9

Substance rating: H272, Ox. Liq. 2, H301, Acute Tox. 3 oral, H312, Acute Tox. 4 derm., H314, Skin Corr. 1 B, H317, Skin Sens. 1, H318, Eye Dam. 1, H330, Acute Tox. 2 inh., H334, Resp. Sens. 1, H335, resp. irrit. STOT SE 3, H340, Muta. 1 B, H350, Carc. 1 A, H360FD, Repr. 1 B, H372, STOT RE 1, H400, Aquatic Acute 1, H410, Aquatic Chronic 1

Chemical Formula: K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>

Synonyms (de): Kaliumbichromat

REACH Reg. No.: 01-2119454792-32-0004

**SVHC listed:** < exempt for formulation+use acc. Art.56(3)+Q&A1030

EC No.: 231-906-6

Index No.: 024-002-00-6

Specific concentration limit: STOT SE 3; H335 c ≥ 5%

Concentration: 0 - &lt;0,1 %

Correlation Factor: x 0.79 (= %CrO<sub>4</sub>)

The classification refers to the weight percentage of the metal (according to CLP regulation 2008/1272/EG Annex VI, 1.1.3.2 Note 1)

acc. GHS: H317, Skin Sens. 1

Substance name: *mercury(II) sulfate*  
CAS No.: 7783-35-9

Substance rating: H300, Acute Tox. 2 oral, H310, Acute Tox. 1 derm., H330, Acute Tox. 2 inh., H373, STOT RE 2, H400, Aquatic Acute 1, H410, Aquatic Chronic 1

Chemical Formula: HgSO<sub>4</sub>

REACH Reg. No.: not necessary, amount &lt;1 t/a

EC No.: 231-992-5

Index No.: 080-004-00-7

Specific concentration limit: STOT RE 2 H373; c ≥ 0,1%

Concentration: 0,37 - &lt;0,74 %

Correlation Factor: x 0.68 (= %Hg)

The classification refers to the weight percentage of the metal (according to CLP regulation 2008/1272/EG Annex VI, 1.1.3.2 Note 1)

acc. GHS: H302, Acute Tox. 4 oral, H312, Acute Tox. 4 derm., H332, Acute Tox. 4 inh., H373, STOT RE 2, H412, Aquatic Chronic 3



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### 3.3 Remarks

When not listed, mixtures are added with water [CAS No. 7732-18-5] to 100%. List of Hazard and Precaution 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. Remove contaminated clothing. Show product package, packing insert and this material safety data sheet to the doctor.

#### 4.1.1 After SKIN Contact

Causing allergies. Remove contaminated clothing immediately. Rinse the affected skin or mucous membrane thoroughly for min. 15 minutes under running water. (If possible) use soap. Avoid neutralisation. Then apply a loose bandage.

#### 4.1.2 After EYE Contact

After contact with the eyes rinse thoroughly under running water with the eyelid wide open for min. 10 minutes with eye washing bottle, eye douche or running water (protect intact eye). Before (if possible) apply eye drops Proxymetacaine 0.5%, if the opening the eyelid convulsion is painful. Further treatment to be carried out by an eye specialist.

#### 4.1.3 After INHALATION of Vapors

After inhalation of foam or vapor fresh air should be inhaled. Keep airways free. If vomiting and if insensible place patient in recovery position and keep airways free.

#### 4.1.4 After ORAL Intake

After oral intake lots of water with activated charcoal supplement should be drunk after it has been ingested. Do not induce vomiting under any circumstances. Do not make any efforts to neutralize it. Contact medical advice for possible consequences.

### 4.2 Most important Symptoms and Effects, both acute and delayed

Chronic effects: Potassium dichromate: Repeated contact, even in small amounts, can lead to sensitization. Rapid penetration and destruction of the skin. Especially in the heated form.

Causes severe skin burns and eye damage.

Can accumulate in the body.

### 4.3 Indication of any immediate Medical Attention and Special Treatment needed

CORROSIVE DAMAGE: After SKIN CONTACT rinse with water for a long time. Efforts to neutralise the substance can frequently make matters worse. Apply glucocorticosteroides following inflammatory reactions. After EYE CONTACT rinse immediately with plenty of water for a long time. Eyelid convulsion measures. Name the corrosive substance. Further treatment must to be carried out by an eye specialist. After INTAKE administer aluminium oxide drug suspensions. Administer a prophylaxis to counter pulmonary oedema following the INGESTION of corrosive aerosols. 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: Fire-Fighting Measures

### 5.1 Extinguishable 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

data not available

### 5.2 Special Hazards arising from the Substance or Mixture

Formation of hazardous and caustic vapor-air mixtures possible.

### 5.3 Advice for Firefighters

No, for listed product. Product package burns like paper or plastic. Spray any vapours released with water. Retent fire water. Use only acid-resistant safety equipment.

For great amount - if necessary - protective breathing apparatus which is independent of the ambient air (isolated equipment), and sealed protective clothing is necessary in the event of a large-scale formation of toxic substances.

### 5.4 Additional Information

Danger for environment **only in the event of a large-scale leakage** or formation of hazardous substances.



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### SECTION 6: Accidental Release Measures

#### 6.1 Personal Precautions, Protective Equipment and Emergency Procedure

Do not breathe vapors. Wear suitable protective gloves (see 8.2.2). Wear eye protection, respectively face protection. 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

Should not be released into the environment.

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 hazards. Clean any contaminated equipment and floors with plenty of water. Collect small amounts of leaked liquid and flush with water into sewer.

#### 6.4 Reference to other Sections

see information in section 5.4,7,8 and 13

### 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

The original product package of MACHEREY-NAGEL allows a safe storage. 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. 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

##### 4 mL COD 300 (R0)

Chemical: *mercury(II) sulfate*

CAS No.: 7783-35-9

NIOSH: [Hg Vapor: TWA<sub>skin</sub>] 0.05; other 0.1 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

OSHA: [TWA] 0.1 mg/m<sup>3</sup>

EU value: [Hg] 0.02 e mg/m<sup>3</sup>

Chemical: *sulfuric acid*

CAS No.: 7664-93-9

DNEL: [inh] 50 µg/m<sup>3</sup>

DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 2.5 µg/L

PNEC = Predicted No Effect Concentration

NIOSH: NTP Report on Carcinogens (RoC) List Yes (Known to be a human carcinogen); [TWA] 1 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

OSHA: [TWA] 1 mg/m<sup>3</sup>

EU value: 0.1 e mg/m<sup>3</sup>

Chemical: *potassium dichromate*

CAS No.: 7778-50-9

DNEL: [inh] 0.01 mg/m<sup>3</sup>

DNEL = Derived No-Effect Level (for workers)

NIOSH: NTP Report on Carcinogens (RoC) List Yes (Chromium VI - Known to be a human carcinogen); TWA

8h 0.0002 CrO<sub>3</sub> 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

OSHA: [CrO<sub>3</sub>][TWA] 0.005 mg/m<sup>3</sup>



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Chemical: *silver sulfate* CAS No.: 10294-26-5  
 DNEL: no data  
DNEL = Derived No-Effect Level (for workers)  
 PNEC (fresh water): 0.04 µg/L  
PNEC = Predicted No Effect Concentration  
 NIOSH: [TWA] 0.01 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  
 OSHA: [TWA] 0.01 mg/m<sup>3</sup>  
 EU value: [Ag] 0.01e mg/m<sup>3</sup>

### 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 (permeation time >30 min - level 2), consist of PVC, Natural latex, Neopren, or Nitril. Use for short times chemical resistant Latex gloves f.ex. with code EN 374-3 level 1.

#### 8.2.3 Eye / Face Protection

Yes, Splash Goggles or Face Protection.

#### 8.2.4 Skin Protection

Recommended to avoid clothing damage, and to avoid contamination with these hazards.

#### 8.2.5 Hygiene Measures

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

data not 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

#### 4 mL COD 300 (R0)

a) State of aggregation:	liquid
b) Color:	yellow
c) Odor:	odorless
d) Melting Point:	data not available
e) Boiling Point:	data not available
f) Flammability:	data not available
g) Explosive Limits (lower / upper):	data not available
h) Flash Point:	data not available
i) Autoignition Temperature:	data not available
j) Decomposition Temperature:	data not available
k) pH Value:	0
l) Kinematic Viscosity:	data not available
m) Soluble in Water:	0-100 %
n) Partition Coefficient (K <sub>ow</sub> ):	data not available
o) Vapor Pressure (68°F):	data not available
p) Specific Gravity:	1,73 g/cm <sup>3</sup>
q) Relative Vapor Density (air=1):	data not available
r) Particle Size:	data not available

### 9.2 Further Information

#### 9.2.1 Information on physical hazard classes

data not available



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### 9.2.2 Other safety-related parameters

No data is available for the other parameters for the mixtures, since no registration and no chemical safety report is required.

Substances are highly corrosive.

## SECTION 10: Stability and Reactivity

### 10.1 Reactivity

Strongly CORROSIVE. No further data available.

### 10.2 Chemical Stability

no known instability.

### 10.3 Possibility of Hazardous Reactions

Can react violently with organic material. No further data available.

### 10.4 Conditions to avoid

Observe the storage temperature printed on it. No more required.

### 10.5 Incompatible Materials

---

### 10.6 Hazardous Decomposition Products

In the original package all parts/all reagents are safety and separated stored. Decompositions are not observed during the expiration period under recommended conditions.

## SECTION 11: Toxicological Information

### 11.1 Information on Toxicological Effects

Following information is valid for pure chemicals. Quantitative data on the toxicity of this product are not available.

#### 4 mL COD 300 (R0)

Chemical: *mercury(II) sulfate* CAS No.: 7783-35-9  
 TSCA Inventory: listed California Prop. 65 List: listed developmental  
 Exposure Routes: inhalation, skin absorption, ingestion, skin and/or eye contact  
 Target Organs: Eyes, skin, respiratory system, central nervous system, kidneys  
 Symptoms: irritation eyes, skin; cough, chest pain, dyspnea (breathing difficulty), bronchitis, pneumonitis; tremor, insomnia, irritability, indecision, headac  
 Canada CEPA 1999: yes (mercury compound - Item 8.)  
 LD50 orl rat : 57 mg/kg  
 Acute Effects: Cause after oral intake, inhalation of vapors/dust, skin contact, impairments of health when ingested in small quantities.  
 Chronic Effects: May cause damage to organs through prolonged or repeated exposure.

Chemical: *sulfuric acid* CAS No.: 7664-93-9  
 TSCA Inventory: listed California Prop. 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, throat; pulmonary edema, bronchitis; emphysema; conjunctivitis; stomatis; dental erosion; eye, skin burns; dermatitis  
 Canada CEPA 1999: DSL Yes  
 LD50 orl rat : 2140 mg/kg  
 LC50 ihl mus : 0,85 mg/L/4H

Chemical: *potassium dichromate* CAS No.: 7778-50-9  
 TSCA Inventory: listed California Prop. 65 List: listed cancer, developmental, female, male  
 ACGIH: [CrVI] 0.05 mg/m<sup>3</sup>  
 Exposure Routes: inhalation, ingestion, skin and/or eye contact  
 Target Organs: Blood, respiratory system, liver, kidneys, eyes, skin; [lung cancer]  
 Symptoms: irritation respiratory system; nasal septum perforation; liver, kidney damage; leukocytosis (increased blood leukocytes), leukopenia (reduced blood le  
 Canada CEPA 1999: listed (hexavalent chromium compound - Item 33.)  
 LD50 orl rat : 25 mg/kg  
 LC\_Low orl gpg : 163 mg/kg  
 LC50 ihl rat : 0,094 mg/L/4H  
 Acute Effects: Cause after skin contact, impairments of health when ingested in small quantities. May cause sensitization by skin contact, also in repeated contact of small amounts.  
 EU carcinogen: carc. 1B, mutag. 1B, repr. 1B



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Chemical: *silver sulfate* CAS No.: 10294-26-5  
 TSCA Inventory: listed  
 Exposure Routes: inhalation, ingestion, skin and/or eye contact  
 Target Organs: Nasal septum, skin, eyes  
 Symptoms: Blue-gray eyes, nasal septum, throat, skin; irritation, ulceration skin; gastrointestinal disturbance  
 Canada CEPA 1999: DSL listed  
 LD50 orl rat : 2000-5110 mg/kg

### 11.2 Other Hazards

**Possible endocrine disrupting effects**

data not available

**Other Information**

no additional data available

## SECTION 12: Ecological Information

### 12.1 Toxicity

Following information is valid for pure chemicals.

**4 mL COD 300 (R0)**

Substance name: *mercury(II) sulfate* CAS-Nr.: 7783-35-9

Harmful to aquatic life with long lasting effects. Do not release into the environment.

Environmentally hazardous substances/mixtures do not have to be labeled with P-phrases up to 125 mL (EU 1272/2008 Annex I Paragraph 1.5.2).

Bio Toxicity: LC 50 : 0.5 HgCl2/48h mg/L  
 Water hazard class (DE): 3 WGK No.: 0412  
 Storage class (VCI): 6.1 B

Substance name: *sulfuric acid* CAS-Nr.: 7664-93-9

Do not release into the environment.

PNEC (fresh water) : 2.5 µg/L  
 PNEC = Predicted No Effected Concentration = concentration at which no effect on the environment is expected

LC50 fish/96h : [NOEC, 65d] 25 µg/L  
 EC50 daphnia/48h : 100 mg/L  
 EC10 pseudomonas putita/16h : [72h] 100 mg/L  
 Water hazard class (DE): 1 WGK No.: 0182  
 Storage class (VCI): 8 B

Substance name: *potassium dichromate* CAS-Nr.: 7778-50-9

LC50 fish/96h : 26.13 mg/L  
 EC50 daphnia/48h : 0.77 mg/L  
 Water hazard class (DE): 3 WGK No.: 339  
 Storage class (VCI): 6.1 B

Substance name: *silver sulfate* CAS-Nr.: 10294-26-5

PNEC (fresh water) : 0.04 µg/L  
 PNEC = Predicted No Effected Concentration = concentration at which no effect on the environment is expected

LC50 daphnia magna/48h : 0.22 µg/L  
 LC50 fish/96h : [4d] 1.2 µg/L  
 EC10 pseudomonas putita/16h : [24h] 0.41-0.54 µg/L  
 Water hazard class (DE): 3  
 Storage class (VCI): 12

### 12.2 Persistence and Degradability

### 12.3 Bioaccumulative Potential

### 12.4 Mobility in Soil

### 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.





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### 12.6 Endocrine disrupting properties

data not 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 (RCRA Code D002/D003, EU waste code number 16 05 06).

### 13.1 Waste Treatment Methods

Not necessary, see above.

## SECTION 14: Transport Information

14.1. UN/NA: 3316

14.2. Proper Shipping Name: Chemical Kit

14.3. Hazard Class: 9

14.4. Packing Group: II

Transportation by Road

Classification code: M11 Tunnel Restriction Code: E

Limited Quantity: acc. ADR 3.3.1/251: see LQ in "Alternative Declaration for Transportation"

Air transport IATA DGR

Limited Quantity:	PAX:	960	max. quantity PAX:	10 KG
	CAO:	960	max. quantity CAO:	10 KG

Maritime transport IMDG

EmS:	F-A, S-P	Staukategorie:	A
------	----------	----------------	---

Or use the alternative Declaration for Transportation:

UN/NA: (see below) Class 8 II, **Excepted Quantities** ( $\leq 30 \text{ mL} / \Sigma \leq 500 \text{ mL}$ ) = ADR/ IATA E2

or

14.1 UN number: 3264

14.2 UN proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (sulfuric acid solution)

14.3 Hazard Class: 8

14.4 Packing group: II

Road transport ADR

Classification code:	C1	Tunnel restriction code:	E
Limited Quantity:	1 L		
Excepted Quantity:	E 2		

Air transport IATA DGR

Limited Quantity:	PAX: 851	max. quantity PAX:	1 L
	CAO: 855	max. quantity CAO:	30 L
Excepted Quantity:	E 2		

Maritime transport IMDG

EmS:	F-A, S-B	Staukategorie:	B
Special instructions:	274		

### 14.5 Environmental Hazards

none, contains only small quantities of hazardous substances, contains only small amounts of these substances

### 14.6 Special Precautions for User

not necessary

### 14.7 Carriage of bulk cargo by sea in accordance with IMO instruments

Not applicable.



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### SECTION 15: Regulatory Information

#### 15.1 Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

##### U.S. Federal Regulations

OSHA "A Guide to The Globally Harmonized System of Classification and Labelling of Chemicals (GHS)"  
<https://www.osha.gov/dsg/hazcom/ghs.html>  
 29 CFR 1910.1200 Hazard communication.  
 NIOSH Pocket Guide to Chemical Hazards  
 NIOSH Workplace Safety & Health Topics  
 TSCA Inventory

##### U.S. State Regulations

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986

##### Canada

Canada CEPA 1999 - Domestic Substances List (DSL), List of Toxic Substances (Schedule 1)

MN Leaflet/User manual, also see [www.mn-net.com](http://www.mn-net.com)

#### 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 2.2.2.19 and 2.2.2.2 following changes were applied: - 17 substance data corrected

#### 16.2 List of Hazard and Precaution Phrases

##### 16.2.1 List of relevant H Phrases

H	Between versions 2.2.2.19 and 2.2.2.2 following changes were applied: - 17 substance data corrected
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

##### 16.2.2 List of relevant P Phrases

P260sh	Do not breathe dust/vapors.
P264	Wash hands thoroughly after handling.
P280sh	Wear protective gloves/eye protection.
P303+361+353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P333+313	If skin irritation or rash occurs: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container to regulated waste treatment.

#### 16.3 Recommended Restriction on Use

Only for Professional User.  
 Look about employee restrictions for young people!  
 Look about employee restrictions for pregnant women and nursing women!  
 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  
 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  
 TRGS 907, German technical rules for listing substances and causes of sensitization, updated November 2011  
 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 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)



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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**

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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 oxigen 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
- 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



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- 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
- scu: sub cutan
- RIP: REACH Implementations Projects
- 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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