

# Safety Data Sheet

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

REF: 985028	NANOCOLOR COD 15000	Page: 1/12
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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

REF 985028  
 Product name NANOCOLOR COD 15000

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 4 mL COD 15 000 (R0)  
 1 x 5 mL COD 15 000 blank (NULL)

### 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  
 Neumann-Neander-Str. 6-8, 52355 Dueren, GERMANY  
 Tel.: +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

You find our current versions of SDS (22 languages) in Internet: <http://www.mn-net.com/SDS>

## SECTION 2: Hazard identification

### 2.0 Classification of the complete product



GHS05 GHS07 GHS08

Signal word DANGER

Hazard identification	Hazard classes/categories
H302	Acute Tox. 4 oral
H312	Acute Tox. 4 derm.
H314	Skin Corr. 1A
H317	Skin Sens. 1
H332	Acute Tox. 4 inh.
H340	Muta. 1B
H350	Carc. 1A
H373	STOT RE 2
H412	Aquatic Chronic 3

### 2.1 Classification of the substance or mixture

4 mL COD 15 000 (R0)

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GHS05 GHS07 GHS08

Signal word

DANGER

**Hazard identification**

**Hazard classes/categories**

H302	Acute Tox. 4 oral
H312	Acute Tox. 4 derm.
H314	Skin Corr. 1A
H317	Skin Sens. 1
H332	Acute Tox. 4 inh.
H340	Muta. 1B
H350	Carc. 1A
H373	STOT RE 2
H412	Aquatic Chronic 3

**5 mL COD 15 000 blank (NULL)**



GHS05

Signal word

DANGER

**Hazard identification**

**Hazard classes/categories**

H314	Skin Corr. 1A
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## 2.2 Label elements

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). This labelling exemption is NOT valid for sensibilizing substances.

**4 mL COD 15 000 (R0)**



GHS05 GHS07 GHS08

Signal word: DANGER

H314, H317, H340, H350

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

P260sh, P280sh, P303+361+353, P305+351+338, P310, P405

Do not breathe dust/vapours. 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. Immediately call a POISON CENTER/doctor. Store locked up.

**5 mL COD 15 000 blank (NULL)**



GHS05

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Signal word: DANGER

H314

Causes severe skin burns and eye damage.

P260sh, P280sh, P303+361+353, P305+351+338, P310

Do not breathe dust/vapours. 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. Immediately call a POISON CENTER/doctor.

## 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. Vapours 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 vapours/dust, skin contact, impairments of health when ingested in small quantities. May cause sensitization by skin contact, also in repeated contact of small amounts. May cause genetic defects. May cause cancer. May cause cancer if inhaled. Can accumulate within the body. The risk assessment of the tube tests showed no risk H331 "Toxic if inhaled." at the application. -

### Information pertaining to particular risks to the environment

Avoid contact of substance/mixture to environment.

PBT: not applicable

vPvB: not applicable

### Other hazards

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances or 3.2 Mixtures

#### 4 mL COD 15 000 (R0)

Chemical:	<i>silver sulfate</i>	CAS No.:	10294-26-5
Classification:	H318, Eye Dam. 1, H400, Aquatic Acute 1, H410, Aquatic Chronic 1		
Formula:	Ag <sub>2</sub> SO <sub>4</sub>		
Pseudonym:	disilver(1+) sulfate		
TSCA Inventory:	listed		
REACH Reg. No.:	01-2119918297-31-xxxx		
EC No.:	233-653-7		
RTECS:	not listed		
KE No.:	KE-12273, >25% Toxic 97-1-92		
Concentration:	0.1 - <1 %	Correlation factor:	x 0.69 (= %Ag)
The classification refers to weight percent of the metal (according to CLP Regulation 2008/1272/EC Annex VI, 1.1.3.2 Note 1)			
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

Chemical:	<i>sulfuric acid</i>	CAS No.:	7664-93-9
Classification:	H314, Skin Corr. 1B		
Formula:	H <sub>2</sub> SO <sub>4</sub> (•H <sub>2</sub> O)		
TSCA Inventory:	listed		
REACH Reg. No.:	01-2119458838-20-xxxx		
EC No.:	231-639-5	Indice No.:	016-020-00-8
RTECS:	WS5600000		
KE No.:	KE-32570, >10% Toxic 97-1-405, Acc. Precaution Chem.		
Concentration:	51 - <65 %		
acc. CLP (GHS):	H314, Skin Corr. 1B		

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Chemical: *potassium dichromate* CAS No.: 7778-50-9  
 Classification: H272, Ox. Liq. 2, H301, Acute Tox. 3 oral, H312, Acute Tox. 4 derm., H314, Skin Corr. 1B, H317, Skin Sens. 1, H330, Acute Tox. 2 inh., H334, Resp. Sens. 1, H340, Muta. 1B, H350, Carc. 1A, H360FD, Repr. 1B, H372, STOT RE 1, H410, Aquatic Chronic 1  
 Formula:  $K_2Cr_2O_7$   
 TSCA Inventory: listed  
 REACH Reg. No.: 01-2119454792-32-0004  
**SVHC listed: > exempt for formulation+use acc.Art56(3)+Q&A1030**  
 EC No.: 231-906-6 Index No.: 024-002-00-6  
 RTECS: HX7680000 MFCD: 00011367  
 KE No.: not listed  
 Concentration: 0.32 - <0.38 % Correlation factor: x 0.79 (= %CrO<sub>4</sub>)  
 The classification refers to weight percent of the metal (according to CLP Regulation 2008/1272/EC Annex VI, 1.1.3.2 Note 1)  
 acc. CLP (GHS): H312, Acute Tox. 4 derm., H317, Skin Sens. 1, H340, Muta. 1B, H350, Carc. 1A, H373, STOT RE 2, H412, Aquatic Chronic 3

Chemical: *mercury(II) sulfate* CAS No.: 7783-35-9  
 Classification: H300, Acute Tox. 2 oral, H310, Acute Tox. 2 derm., H330, Acute Tox. 2 inh., H373, STOT RE 2, H400, Aquatic Acute 1, H410, Aquatic Chronic 1  
 Formula:  $HgSO_4$   
 Pseudonym: mercuric sulfate  
 TSCA Inventory: listed  
 REACH Reg. No.: not necessary, amount <1 t/a  
 EC No.: 231-992-5 Index No.: 080-004-00-7  
 RTECS: OX0500000  
 KE No.: KE-23132, Toxic 97-1-140  
 Concentration: 0.37 - <0.74 % Correlation factor: x 0.68 (= %Hg)  
 The classification refers to weight percent of the metal (according to CLP Regulation 2008/1272/EC Annex VI, 1.1.3.2 Note 1)  
 acc. CLP (GHS): H302, Acute Tox. 4 oral, H312, Acute Tox. 4 derm., H332, Acute Tox. 4 inh., H373, STOT RE 2, H412, Aquatic Chronic 3

### 5 mL COD 15 000 blank (NULL)

Chemical: *sulfuric acid* CAS No.: 7664-93-9  
 Classification: H314, Skin Corr. 1B  
 Formula:  $H_2SO_4 \cdot (H_2O)$   
 TSCA Inventory: listed  
 REACH Reg. No.: 01-2119458838-20-xxxx  
 EC No.: 231-639-5 Index No.: 016-020-00-8  
 RTECS: WS5600000  
 KE No.: KE-32570, >10% Toxic 97-1-405, Acc. Precaution Chem.  
 Concentration: 51 - <65 %  
 acc. CLP (GHS): H314, Skin Corr. 1B

### 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 16.1

## 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 vapours

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

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- 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 neutralise it. Contact medical advice for possible consequences. ---
- 4.2 Most important symptoms and effects, both acute and delayed**  
Potassium dichromate: May cause sensitization by skin contact, also in repeated contact of small amounts. CMR Effects: May cause genetic defects. May cause cancer. May cause cancer if inhaled. Can accumulate within 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 chemical. Further treatment must 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: Firefighting measures

- 5.1 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.
- 5.2 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. 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. ---

## 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). 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**  
not necessary, contains only small amounts of these substances
- 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**  
see information in section 5.4 ---

## 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. Products containing also toxic substances should be kept locked up.  
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, so that they are not immediately accessible to outside parties. Use inbreakable container for transport of glass bottles.

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## 7.3 Specific end use(s)

Product for analytical use.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### 4 mL COD 15 000 (R0)

Chemical: *silver sulfate*

CAS No.: 10294-26-5

DNEL: no data  
DNEL = Derived No-Effect Level (for workers)

PNEC<sub>(fresh water)</sub>: 0.04 µg/L  
PNEC = Predicted No Effect Concentration

EU value: [Ag] 0.01e mg/m<sup>3</sup>  
TRGS 900 (DE): [Ag] 0,01 E mg/m<sup>3</sup>  
E/e respirable

Short-term exposure factor: 2 (I)  
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

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>

Chemical: *sulfuric acid*

CAS No.: 7664-93-9

DNEL: [inh] 50 µg/m<sup>3</sup>  
DNEL = Derived No-Effect Level (for workers)

PNEC<sub>(fresh water)</sub>: 2.5 µg/L  
PNEC = Predicted No Effect Concentration

EU value: 0.1 e mg/m<sup>3</sup>  
TRGS 900 (DE): 0.1 E mg/m<sup>3</sup>  
E/e respirable

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

SUVA(CH) MAK value: 0,1 e mg/m<sup>3</sup>  
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>

Chemical: *potassium dichromate*

CAS No.: 7778-50-9

DNEL: [inh] 0.01 mg/m<sup>3</sup>  
DNEL = Derived No-Effect Level (for workers)

TRGS 900 (DE): [CrVI] (0,05 E<sub>ausgesetzt</sub>) mg/m<sup>3</sup>  
E/e respirable

Short-term exposure factor: (4), H  
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 0,05 e mg/m<sup>3</sup>  
SUVA(CH) BAT value: [U/b] 20 µg/L  
NIOSH: NTP Report on Carcinogens (RoC) List Yes (Chromium VI - Known to be a human carcinogen); TWA  
8h 0.0002CrO<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: [CrO3][TWA] 0.005 mg/m<sup>3</sup>

Chemical: *mercury(II) sulfate*

CAS No.: 7783-35-9

EU value: [Hg] 0.02 e mg/m<sup>3</sup>  
TRGS 900 (DE): [Hg] 0,02 E mg/m<sup>3</sup>  
E/e respirable

Short-term exposure factor: 8 (II), H, Sh  
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: [Hg][MAK] 0,02 e/[STEL] 0,16 e mg/m<sup>3</sup>  
SUVA(CH) BAT value: [Krea U/d] 35 µg/L  
TRGS 903 (DE): [U/aKreatinin] 25 µg/g  
B blood, U urine, a no limitation, b end of exposition or shift

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>

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## 5 mL COD 15 000 blank (NULL)

Chemical: *sulfuric acid*

CAS No.: 7664-93-9

DNEL: [inh] 50 µg/m<sup>3</sup>  
DNEL = Derived No-Effect Level (for workers)PNEC<sub>(fresh water)</sub>: 2.5 µg/L  
PNEC = Predicted No Effect ConcentrationEU value: 0.1 e mg/m<sup>3</sup>TRGS 900 (DE): 0.1 E mg/m<sup>3</sup>  
E/e respirableShort-term exposure factor: 1 (I), Y  
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excludedSUVA(CH) MAK value: 0,1 e mg/m<sup>3</sup>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 periodOSHA: [TWA] 1 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 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 protection

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

### 8.2.4 Skin protection

Recommended to avoid clothing damage, and 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.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### 4 mL COD 15 000 (R0)

Appearance: liquid	Colour: brown	Odor: odorless
pH:	0	
Specific gravity:	1,53 g/cm <sup>3</sup>	
Solubility in water:	0-100 %	
Oxidising properties:	tissue-destroying, especially in heated form	

#### 5 mL COD 15 000 blank (NULL)

Appearance: liquid	Colour: slightly green	Odor: odorless
pH:	0	
Specific gravity:	1.50-1.55 g/cm <sup>3</sup>	
Solubility in water:	0-100 %	

### 9.2 Other information

Data for the other parameters of the mixtures are not available, because no registration and no chemical safety report is required.

#### Relevant Properties of Substance Group

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Strong CORROSIVE, no further data available.

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## 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

Not necessary. Observe labeled storage temperature. ---

## 10.5 Incompatible materials

Avoid contact with strong acids or alkalines.

## 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 substances. Quantitative data on the toxicity of this product are not available.

#### 4 mL COD 15 000 (R0)

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  
 Japan CSCL/PRTR: PRTR:  $\geq 1,0\%$  Ag class I, Japan PDSCL: Deleterious substance  
 Japan ISHL: listed  $\geq 1,0\%$ / $\geq 0,1\%$   
 Korea Exist.Chem.Inventory: KE-12273, >25% Toxic 97-1-92  
 LD50<sub>orl rat</sub>: 2000-5110 mg/kg

Chemical: *sulfuric acid* CAS No.: 7664-93-9  
 TSCA Inventory: listed California Proposition 65 List: not listed  
 ACGIH: 1 ppm  
 Exposure Routes: inhalation, ingestion, skin and/or eye contact  
 Target Organs: Eyes, skin, respiratory system, teeth  
 Symptoms: irritation eyes, skin, nose, throat; pulmonary edema, bronchitis; emphysema; conjunctivitis; stomatis; dental erosion; eye, skin burns; dermatitis  
 Australia NICNAS: not listed Canada CEPA 1999: DSL Yes  
 Japan CSCL/PRTR: not listed, Japan PDSCL: Deleterious Substance  
 Japan ISHL: listed  $\geq 1,0\%$ / $\geq 1,0\%$ , Article 57-2 (SDS required)  
 South Korea TCCA: Accident Precaution Chemical Yes  
 Korea Exist.Chem.Inventory: KE-32570, >10% Toxic 97-1-405, Acc. Precaution Chem.  
 LD50<sub>orl rat</sub>: 2140 mg/kg  
 LC50<sub>ihl rat</sub>: [8h] 600/ [4h] 850 mg/m<sup>3</sup>

TRGS 905 (DE): Kat 4

Chemical: *potassium dichromate* CAS No.: 7778-50-9  
 TSCA Inventory: listed California Proposition 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  
 Japan CSCL/PRTR: PRTR:  $\geq 0,1\%$  Cr specific class I, Japan PDSCL: Deleterious substance  
 Japan ISHL: listed  $\geq 0,1\%$ / $\geq 0,1\%$ , Article 57-2 (SDS required)  
 South Korea TCCA: yes, Restricted Chemical  
 Korea Exist.Chem.Inventory: not listed  
 LD50<sub>orl rat</sub>: 25 mg/kg  
 LC<sub>LoWorl gpg</sub>: 163 mg/kg  
 LC50<sub>ihl rat</sub>: 0.094<sub>4h</sub> mg/L  
 LD50<sub>drm rbt</sub>: 14 mg/kg

Acute Effects: Cause after inhalation of vapours/dust, skin contact, impairments of health when ingested in small quantities.  
 Chronic Effects: May cause sensitization by skin contact, also in repeated contact of small amounts. May cause damage to organs through prolonged or repeated exposure.  
 Carcinogenic Effects: May cause genetic defects. May cause cancer. May cause cancer if inhaled.

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EU carcinogen: carc. 1B, mutag. 1B, repr. 1B  
 TRGS 905 (DE): K2  
 TRGS 907 (DE): Sh

Chemical: *mercury(II) sulfate* CAS No.: 7783-35-9  
 TSCA Inventory: listed California Proposition 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  
 Australia NICNAS: not listed Canada CEPA 1999: yes (mercury compound - Item 8.)  
 Japan CSCL/PRTR: PRTR: ≥1,0%Hg class I, Japan PDSCL: Poisonous substance  
 Japan ISHL: listed ≥0,3%/≥0,1%, Article 57-2 (SDS required)  
 South Korea TCCA: not listed  
 Korea Exist.Chem.Inventory: KE-23132, Toxic 97-1-140  
 LD50<sub>oral rat</sub>: 57 mg/kg  
 LD50<sub>derm rat</sub>: 625 mg/kg  
 Acute Effects: Cause after oral intake, inhalation of vapours/dust, skin contact, impairments of health when ingested in small quantities.  
 Chronic Effects: May cause damage to organs through prolonged or repeated exposure.  
 TRGS 907 (DE): Sh

## 5 mL COD 15 000 blank (NULL)

Chemical: *sulfuric acid* CAS No.: 7664-93-9  
 TSCA Inventory: listed California Proposition 65 List: not listed  
 ACGIH: 1 ppm  
 Exposure Routes: inhalation, ingestion, skin and/or eye contact  
 Target Organs: Eyes, skin, respiratory system, teeth  
 Symptoms: irritation eyes, skin, nose, throat; pulmonary edema, bronchitis; emphysema; conjunctivitis; stomatis; dental erosion; eye, skin burns; dermatitis  
 Australia NICNAS: not listed Canada CEPA 1999: DSL Yes  
 Japan CSCL/PRTR: not listed, Japan PDSCL: Deleterious Substance  
 Japan ISHL: listed ≥1,0%/≥1,0%, Article 57-2 (SDS required)  
 South Korea TCCA: Accident Precaution Chemical Yes  
 Korea Exist.Chem.Inventory: KE-32570, >10% Toxic 97-1-405, Acc. Precaution Chem.  
 LD50<sub>oral rat</sub>: 2140 mg/kg  
 LC50<sub>inhal rat</sub>: [8h] 600/ [4h] 850 mg/m<sup>3</sup>  
 TRGS 905 (DE): Kat 4

## SECTION 12: Ecological information

### 12.1 Toxicity

Following information is valid for pure substances.

#### 4 mL COD 15 000 (R0)

Chemical: *silver sulfate* CAS No.: 10294-26-5  
 PNEC(fresh water): 0.04 µg/L  
 PNEC = Predicted No Effected Concentration  
 LC50<sub>daphnia magna/48h</sub>: 0.22 µg/L  
 LC50<sub>fish/96h</sub>: [4d] 1.2 µg/L  
 EC10<sub>pseudomonas putita/16h</sub>: [24h] 0.41-0.54 µg/L  
 Water hazard class (DE): 3  
 Storage class (VCI): 12

Chemical: *sulfuric acid* CAS No.: 7664-93-9  
 Avoid contact of substance/mixture to environment.  
 PNEC(fresh water): 2.5 µg/L  
 PNEC = Predicted No Effected Concentration  
 LC50<sub>fish/96h</sub>: [NOEC, 65d] 25 µg/L  
 EC50<sub>daphnia/48h</sub>: 100 mg/L  
 EC10<sub>pseudomonas putita/16h</sub>: [72h] 100 mg/L  
 Water hazard class (DE): 1 WGK No.: 0182  
 Storage class (VCI): 8 B

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Chemical: *potassium dichromate* CAS No.: 7778-50-9  
 Harmful to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment.  
 Environmental hazards must not be labelled with P phrases until 125 mL (EU 1272/2008 Annex 1 - 1.5.2).  
 LC50<sub>fish/96h</sub>: 26.13 mg/L  
 EC50<sub>daphnia/48h</sub>: 0.77 mg/L  
 Water hazard class (DE): 3 WGK No.: 339  
 Storage class (VCI): 6.1 B

Chemical: *mercury(II) sulfate* CAS No.: 7783-35-9  
 Harmful to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment.  
 Environmental hazards must not be labelled with P phrases until 125 mL (EU 1272/2008 Annex 1 - 1.5.2).  
 Bio Toxicity: LC<sub>50</sub>: 0.5<sub>HgCl2/48h</sub> mg/L  
 Water hazard class (DE): 3 WGK No.: 0412  
 Storage class (VCI): 6.1 B

### 5 mL COD 15 000 blank (NULL)

Chemical: *sulfuric acid* CAS No.: 7664-93-9  
 Avoid contact of substance/mixture to environment.  
 PNEC<sub>(fresh water)</sub>: 2.5 µg/L  
 PNEC = Predicted No Effected Concentration  
 LC50<sub>fish/96h</sub>: [NOEC, 65d] 25 µg/L  
 EC50<sub>daphnia/48h</sub>: 100 mg/L  
 EC10<sub>pseudomonas putita/16h</sub>: [72h] 100 mg/L  
 Water hazard class (DE): 1 WGK No.: 0182  
 Storage class (VCI): 8 B

## 12.2 Persistence and degradability

not necessary

## 12.3 Bioaccumulative potential

not necessary

## 12.4 Mobility in soil

not necessary

## 12.5 Results of PBT and vPvB assessment

no data available

## 12.6 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). Close container tightly.

### 13.1 Waste treatment methods

## SECTION 14: Transport information

14.1. UN number: 3316 14.2. UN proper shipping name: Chemical Kit  
 14.3. Class: 9 14.4. Packing group: II

#### Road transport

Classification code: M11 Tunnel restriction code: E  
 Limited Quantity: acc. ADR 3.3.1/251: see LQ in Alternative declaration for transportation

#### Air transport

PAX: 960 max. weight PAX: 10 KG  
 CAO: 960 max. weight CAO: 10 KG

#### Maritime transport

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

Or use **Alternative declaration for transportation:**

14.1 UN number: 2922  
 14.2 UN proper shipping name: Corrosive liquid, toxic, n.o.s. (sulfuric acid, mercury(II) sulfate solution)  
 14.3 Class: 8 Additionally class: 6.1 14.4 Packing group: II

#### Road transport

Classification code: CT1

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Limited Quantity:	1 L	Tunnel restriction code:	E
Excepted Quantity:	E 2		
<i>Air transport</i>			
PAX:	851	max. weight PAX:	1 L
CAO:	855	max. weight CAO:	30 L
<i>Maritime transport</i>			
EmS:	F-A, S-B	Storage category:	B

**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 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**

German act governing protection from hazardous substances (Chemicals Act / Chemikaliengesetz- ChemG), revised on August 2013  
 German order governing protection from hazardous substances (Ordinance on Hazardous Substances / Gefahrstoffverordnung - GefStoffV), revised on November 2010, according to Directive 98/24/EC  
 TRGS 200, German engineering rules governing the classification and labelling of hazardous substances, preparations and products, updated October 2011  
 MN Leaflet/User manual, also see [www.mn-net.com](http://www.mn-net.com)  
 Look for your country-specific regulations.

**15.2 Chemical safety assessment**

not necessary for these small amounts ---

## SECTION 16: Other information

**16.1 List of H and P phrases**

**16.1.1 List of relevant H phrases**

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.
H340	May cause genetic defects.
H350	May cause cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

**16.1.2 List of relevant P phrases**

P201	Obtain special instructions before use.
P260sh	Do not breathe dust/vapours.
P261sh	Avoid breathing dust/vapours.
P264W	Wash with water thoroughly after handling.
P273	Avoid release to the environment.
P280sh	Wear protective gloves/eye protection.
P301+312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P302+352	IF ON SKIN: Wash with plenty of water.
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.
P308+313	IF exposed or concerned: Get medical advice/attention.
P310	Immediately call a POISON CENTER/doctor.
P330	Rinse mouth.
P405	Store locked up.

**16.2 Training advice**



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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.

## 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 Further information

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## 16.5 Sources of key data

Regulation 453/2010/EU REACH - REQUIREMENTS FOR THE COMPILATION OF SAFETY DATA SHEETS

Regulation 487/2013/EU, 4<sup>th</sup> adaptation of CLP regulation to technical and scientific progress

Regulation 669/2018/EU, 4<sup>th</sup> adaptation of CLP regulation to technical and scientific progress

Regulation 1480/2018/EU, 4<sup>th</sup> adaptation of CLP regulation to technical and scientific progress

TRGS 900, German engineering rules governing limits in air at work, updated 03/2019

SUVA .CH, Limits in air at work 2009, revised on 01.2009

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work

TRGS 905, German engineering rules governing carcinogens and mutagens, updated 03/18

TRGS 907, German engineering rules governing listing of substances and causes of sensitizations, updated November 2011

KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)

### Revisions/Updates

Reason for Revision: 2016-03 Adaptation of regulation 1221/2015/EU