

# Safety Data Sheet

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

REF: 931218

VISOCOLOR ECO Chloride, refill pack

Page: 1/11

Printing date: 12.05.2021

Date of issue: 08.02.2021

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

### 1.1 Product identifier

REF 931218  
Product name VISOCOLOR ECO Chloride, refill pack

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.

2 x 20 mL CI-1  
1 x 24 mL CI-2

### 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  
Valenciener Str. 11, 52355 Düren, 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



GHS02 GHS05 GHS06 GHS07 GHS08

Signal word DANGER

Hazard identification	Hazard classes/categories
H225	Flam. Liq. 2
H290	Met. Corr. 1
H301	Acute Tox. 3 oral
H302	Acute Tox. 4 oral
H311	Acute Tox. 3 derm.
H312	Acute Tox. 4 derm.
H314	Skin Corr. 1A
H331	Acute Tox. 3 inh.
H332	Acute Tox. 4 inh.
H370	STOT SE 1
H373	STOT RE 2
H413	Aquatic Chronic 4

### 2.1 Classification of the substance or mixture

# Safety Data Sheet

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

REF: 931218	VISOCOLOR ECO Chloride, refill pack	Page: 2/11
Printing date: 12.05.2021	Date of issue: 08.02.2021	

**20 mL CI-1**



Signal word: DANGER

Hazard identification	Hazard classes/categories
H290	Met. Corr. 1
H314	Skin Corr. 1A
H332	Acute Tox. 4 inh.

**24 mL CI-2**



Signal word: DANGER

Hazard identification	Hazard classes/categories
H225	Flam. Liq. 2
H301	Acute Tox. 3 oral
H302	Acute Tox. 4 oral
H311	Acute Tox. 3 derm.
H312	Acute Tox. 4 derm.
H331	Acute Tox. 3 inh.
H332	Acute Tox. 4 inh.
H370	STOT SE 1
H373	STOT RE 2
H413	Aquatic Chronic 4

**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).

Harmful chemicals/mixtures with signal word: **WARNING** and highly flammable chemicals/mixtures must not be labelled with H and P phrases **until 125 mL** (EU 1272/2008 Annex I - 1.5.2).

Metal corrosive solutions **do not have to** be labelled with GHS symbol, signal word, H and P phrases **until 125 mL** (EU 1272/2008 Annex I - 1.5.2.1.3).

**20 mL CI-1**



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.

# Safety Data Sheet

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

REF: 931218  
 Printing date: 12.05.2021

VISOCOLOR ECO Chloride, refill pack  
 Date of issue: 08.02.2021

Page: 3/11

## 24 mL Cl-2



Signal word: DANGER

H301, H311, H331, H370, H413

Toxic if swallowed. Toxic in contact with skin. Toxic if inhaled. Causes damage to organs. May cause long lasting harmful effects to aquatic life.

P260sh, P280sh, P301+310, P302+352, P405

Do not breathe dust/vapours. Wear protective gloves/eye protection. IF SWALLOWED: Immediately call a POISON CENTER/ doctor. IF ON SKIN: Wash with plenty of water. Store locked up.

### 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. Flammable properties. ---

#### 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 severe after oral intake, inhalation of vapours, skin contact, impairments of health or can lead to death even when only ingested in small quantities. Cause after oral intake, inhalation of vapours/dust, impairments of health when ingested in small quantities. Causes damage to organs. -

#### Information pertaining to particular risks to the environment

May cause long lasting harmful effects to aquatic life. 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

#### 20 mL Cl-1

Chemical: *nitric acid* CAS No.: 7697-37-2  
 Classification: H272, Ox. Liq. 2, H290, Met. Corr. 1, H314, Skin Corr. 1B, H331, Acute Tox. 3 inh.  
 Formula:  $\text{HNO}_3 \cdot \text{H}_2\text{O}$   
 Pseudonym: Aqua fortis, Engravers acid, hydrogen nitrate  
 TSCA Inventory: listed  
 REACH Reg. No.: 01-2119487297-23-xxxx  
 EC No.: 231-714-2 Indice No.: 007-004-00-1  
 RTECS: QU5900000/QU5775000  
 KE No.: KE-25911, >10% Toxic 97-1-246, Acc. Precaution Chem.  
 Concentration: 13 - <20 %  
 acc. CLP (GHS): H290, Met. Corr. 1, H314, Skin Corr. 1B, H332, Acute Tox. 4 inh.

Chemical: *iron(III) nitrate* CAS No.: 7782-61-8  
 Classification: H272, Ox. Liq. 2, H315, Skin Irrit. 2, H319, Eye Irrit. 2  
 Formula:  $\text{Fe}(\text{NO}_3)_3$   
 TSCA Inventory: listed (CAS 10421-48-4)  
 EC No.: 233-899-5  
 RTECS: NO7175000 MFCD: 00149708  
 Concentration: 1 - <10 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

#### 24 mL Cl-2

# Safety Data Sheet

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

REF: 931218

VISOCOLOR ECO Chloride, refill pack

Page: 4/11

Printing date: 12.05.2021

Date of issue: 08.02.2021

Chemical: *mercury(II) thiocyanate* CAS No.: 592-85-8  
 Classification: H301, Acute Tox. 3 oral, H311, Acute Tox. 3 derm., H331, Acute Tox. 3 inh., H373, STOT RE 2, H400, Aquatic Acute 1, H410, Aquatic Chronic 1  
 Formula: Hg(SCN)<sub>2</sub>  
 TSCA Inventory: listed  
 EC No.: 209-773-0 Indice No.: 080-004-00-7  
 RTECS: XL1550000  
 KE No.: KE-05-0812, Toxic 97-1-140  
 Concentration: 0.32 - <0.64 % Correlation factor: x 0.78 (= %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, H413, Aquatic Chronic 4

Chemical: *methanol* CAS No.: 67-56-1  
 Classification: H225, Flam. Liq. 2, H301, Acute Tox. 3 oral, H311, Acute Tox. 3 derm., H331, Acute Tox. 3 inh., H370, STOT SE 1  
 Formula: CH<sub>4</sub>O, CH<sub>3</sub>OH  
 TSCA Inventory: listed  
 REACH Reg. No.: 01-2119433307-44-xxxx  
 EC No.: 200-659-6 Indice No.: 603-001-00-X  
 RTECS: PC1400000 MFCD: 00004595  
 KE No.: KE-23193, Toxic 97-1-80  
 Concentration: 95 - <100 %  
 acc. CLP (GHS): H225, Flam. Liq. 2, H301, Acute Tox. 3 oral, H311, Acute Tox. 3 derm., H331, Acute Tox. 3 inh., H370, STOT SE 1

### 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. Take to a doctor, in a raised position if there are breathing difficulties.

#### 4.1.1 After SKIN Contact

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. Administer a Dexamethasone spray as soon as possible. Ensure quiet, warmth, and provide resuscitation if necessary. In the event of respiratory distress ensure that the patient inhales oxygen. Secure the breathing, heart and circulatory function. ---

#### 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

Chronic Effects: Causes damage to organs. ---

### 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 DISTRESS ensure that the patient inhales oxygen. **TOXIFICATION:** Treat symptomatically. Secure the breathing, heart and circulatory function. Remove the substance quickly from the body. Mechanically induce vomiting or ensure the patient eats medicinal charcoal compressed tablets or drinks aluminium oxide drug suspensions. In order to ensure rapid passage through the colon (administer 2 tablespoons of dissolved Glauber's salt). Alleviation of pain, if necessary sedation. Shock treatment. Administer a prophylaxis to counter pulmonary oedema.

www.mn-net.com

# Safety Data Sheet

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

REF: 931218

VISOCOLOR ECO Chloride, refill pack

Page: 5/11

Printing date: 12.05.2021

Date of issue: 08.02.2021

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

DANGER: Highly flammable (GHS regulation). Forms explosive vapour-air mixtures. 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

### 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 only in well-ventilated working areas.

### 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): 3

Water hazard class (DE): 3

### 7.2.1 Requirements for stock rooms and containers

Keep original product packages tightly closed during handling and storage, and store in a well-ventilated place at max. 25 °C, away or preferably separate from substances with which a hazardous reaction could take place, so that they are not immediately accessible to outside parties. 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

20 mL Cl-1

Chemical: *nitric acid*

CAS No.: 7697-37-2

DNEL: [inh] (1.3) mg/m<sup>3</sup>

DNEL = Derived No-Effect Level (for workers)

PNEC(fresh water): no hazard identified

www.mn-net.com

# Safety Data Sheet

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

REF: 931218

VISOCOLOR ECO Chloride, refill pack

Page: 6/11

Printing date: 12.05.2021

Date of issue: 08.02.2021

PNEC = Predicted No Effect Concentration

EU value: 1 ppm / 2.6 mg/m<sup>3</sup>  
 TRGS 900 (DE): 1 ppm / 2,6 mg/m<sup>3</sup>  
 E/e respirable

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

SUVA(CH) MAK value: 2 ppm / 5 mg/m<sup>3</sup>  
 NIOSH: [TWA] 2 ppm / 5 mg/m<sup>3</sup>  
 NIOSH STEL: 4 ppm / 10 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: List of highly hazardous chemicals, toxics and reactives Yes (TQ = 500 lbs) n/a; [TWA] 2 ppm / 5 mg/m<sup>3</sup>

Chemical: *iron(III) nitrate* CAS No.: 7782-61-8  
 SUVA(CH) MAK value: 1 e mg/m<sup>3</sup>

## 24 mL Cl-2

Chemical: *mercury(II) thiocyanate* CAS No.: 592-85-8

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

Chemical: *methanol* CAS No.: 67-56-1

DNEL: [derm] 40 mg/kg bw/day; [inh] 260 mg/m<sup>3</sup>  
 DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 20.8 mg/L no hazard identified  
 PNEC = Predicted No Effect Concentration

EU value: [TWA] 200 ppm / 260 mg/m<sup>3</sup>  
 TRGS 900 (DE): 200 ppm / 270 mg/m<sup>3</sup>  
 E/e respirable

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

SUVA(CH) MAK value: 200 ppm / 260 mg/m<sup>3</sup>  
 SUVA(CH) BAT value: [U/c,b] 30 mg/L  
 TRGS 903 (DE): U/c,b 30 mg/L  
 B blood, U urine, a no limitation, b end of exposition or shift

NIOSH: [TWA, skin] 200 ppm / 260 mg/m<sup>3</sup>  
 NIOSH STEL: 250 ppm / 325 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] 200 ppm / 260 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

Use for open access of these substances for example a protection filter, class A/AX. 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.

# Safety Data Sheet

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

REF: 931218

VISOCOLOR ECO Chloride, refill pack

Page: 7/11

Printing date: 12.05.2021

Date of issue: 08.02.2021

## 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

**20 mL CI-1**

Appearance: liquid

Colour: slightly yellow

Odor: nitric

pH:

0-1

Specific gravity:

1,15 g/cm<sup>3</sup>**24 mL CI-2**

Appearance: liquid

Colour: rose

Odor: alcoholic

pH:

-

Flash point:

18 °C

Specific gravity:

0,79 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**

Substances are very volatile and form flammable vapour-air mixtures. ---

## 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

Can react violently with organic material. Possible: Contact with acids liberates toxic gas. No further data available.

### 10.4 Conditions to avoid

Not necessary. ---

### 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.

**20 mL CI-1**

Chemical:

*nitric acid*

CAS No.: 7697-37-2

TSCA Inventory:

listed

California Proposition 65 List: not listed

Exposure Routes:

inhalation, ingestion, skin and/or eye contact

Target Organs:

Eyes, skin, respiratory system, teeth

Symptoms:

irritation eyes, skin, mucous membrane; delayed pulmonary edema, pneumonitis, bronchitis; dental erosion

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-25911, &gt;10% Toxic 97-1-246, Acc. Precaution Chem.

LC<sub>50</sub> (h) mn :

[NOAEC] 1500 mg/kg

LC<sub>50</sub> (h) rat :

[4h] 2.65 mg/L

Acute Effects: Cause after skin contact, impairments of health when ingested in small quantities.

www.mn-net.com

# Safety Data Sheet

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

REF: 931218	VISOCOLOR ECO Chloride, refill pack	Page: 8/11
Printing date: 12.05.2021	Date of issue: 08.02.2021	

TRGS 905 (DE): R<sub>F</sub> D

Chemical: *iron(III) nitrate* CAS No.: 7782-61-8  
 TSCA Inventory: listed (CAS 10421-48-4)  
 Japan ISHL: listed >1,0%/>1,0%  
 LD50<sub>orl rat</sub>: 3250 mg/kg

## 24 mL CI-2

Chemical: *mercury(II) thiocyanate* CAS No.: 592-85-8  
 TSCA Inventory: listed  
 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  
 Japan CSCL/PRTR: PRTR: ≥1,0%Hg class I, Japan PDSCl: Poisonous substance  
 Japan ISHL: listed ≥0,3%/≥0,1%  
 Korea Exist.Chem.Inventory: KE-05-0812, Toxic 97-1-140  
 LD50<sub>orl rat</sub>: 46 mg/kg  
 LD50<sub>drm rbt</sub>: 685 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

Chemical: *methanol* CAS No.: 67-56-1  
 TSCA Inventory: listed California Proposition 65 List: listed, developmental  
 ACGIH: 200 ppm / 160 mg/m<sup>3</sup>  
 Exposure Routes: inhalation, skin absorption, ingestion, skin and/or eye contact  
 Target Organs: Eyes, skin, respiratory system, central nervous system, gastrointestinal tract  
 Symptoms: irritation eyes, skin, upper respiratory system; headache, drowsiness, dizziness, nausea, vomiting; visual disturbance, optic nerve damage (blindness)  
 Australia NICNAS: Canada CEPA 1999: DSL yes  
 Japan CSCL/PRTR: PAC yes, Japan PDSCl: Deleterious Substance  
 Japan ISHL: listed ≥0,3%/≥0,1%, Article 57-2 (SDS required)  
 South Korea TCCA: Accident Precaution Chemical yes  
 Korea Exist.Chem.Inventory: KE-23193, Toxic 97-1-80  
 LD50<sub>orl rat</sub>: 5628 mg/kg  
 LC<sub>LoWi</sub><sub>rat</sub>: [4h] 64000 mg/m<sup>3</sup>  
 LC<sub>LoWo</sub><sub>rat</sub>: 143 mg/kg  
 LC50<sub>ihl rat</sub>: [4h] >80 mg/L  
 LD50<sub>drm rbt</sub>: 15800 mg/kg  
 LD50<sub>orl mus</sub>: 7300 mg/kg  
 Acute Effects: Cause severe after oral intake, inhalation of vapours, skin contact, impairments of health or can lead to death even when only ingested in small quantities.  
 Chronic Effects: Causes damage to organs.  
 TRGS 905 (DE): R<sub>F</sub> C

## SECTION 12: Ecological information

### 12.1 Toxicity

Following information is valid for pure substances.

#### 20 mL CI-1

Chemical: *nitric acid* CAS No.: 7697-37-2  
 Avoid contact of substance/mixture to environment.  
 PNEC(fresh water): no hazard identified  
 PNEC = Predicted No Effected Concentration  
 LC50<sub>daphnia magna/48h</sub>: 180 mg/L  
 LC50<sub>fish/96h</sub>: [4d] 12 g/L  
 Water hazard class (DE): 1 WGK No.: 0414  
 Storage class (VCI): 8 B



# Safety Data Sheet

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

REF: 931218

VISOCOLOR ECO Chloride, refill pack

Page: 9/11

Printing date: 12.05.2021

Date of issue: 08.02.2021

Chemical:	<i>iron(III) nitrate</i>	CAS No.:	7782-61-8
LC50 <sub>fish/96h</sub> :	72 mg/L		
EC50 <sub>daphnia/48h</sub> :	EC0 = 107 mg/L		
Water hazard class (DE):	1	WGK No.:	0516
Storage class (VCI):	5.1 B		

## 24 mL Cl-2

Chemical:	<i>mercury(II) thiocyanate</i>	CAS No.:	592-85-8
May cause long lasting harmful effects to aquatic life. Avoid contact of substance/mixture to environment.			
Environmental hazards must not be labelled with P phrases until 125 mL (EU 1272/2008 Annex I - 1.5.2).			
Bio Toxicity:	LC50 : 0.5 <sub>HgCl2/48h</sub> mg/L		
Water hazard class (DE):	3	WGK No.:	0413
Storage class (VCI):	12		

Chemical:	<i>methanol</i>	CAS No.:	67-56-1
Avoid contact of substance/mixture to environment.			
PNEC (fresh water):	20.8 mg/L	no hazard identified	
PNEC = Predicted No Effect Concentration			
LC50 <sub>daphnia magna/48h</sub> :	[24h] 23.5 g/L		
LC50 <sub>pimephales promelas/96h</sub> :	29.4 g/L		
LC50 <sub>fish/96h</sub> :	15.4 g/L		
EC50 <sub>daphnia/48h</sub> :	>10 g/L		
IC50 <sub>scenedesmus quadricauda/72h</sub> :	[IC5 8d] 8000 mg/L		
EC10 <sub>pseudomonas putida/16h</sub> :	[EC5] 6.6 g/L		
Water hazard class (DE):	2	WGK No.:	0145
Dispersion coefficient <sub>(octanol-water)</sub> :	-0.77		
Storage class (VCI):	3		

## 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

Normally it is possible to empty small amounts (diluted!) into drains. **Not for** mercury containing test solutions, please collect for disposal of hazardous waste. Empty containers of corrosive reagents prior to disposal, rinse with water. Dispose of contents/container to regulated waste treatment.

## 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:**

UN No.: (see below) UN 1993 class 3 II, class 8 II, **Excepted Quantities** ( $\leq 30 \text{ mL} / \Sigma \leq 500 \text{ mL}$ ) = ADR/ IATA E2

or

[www.mn-net.com](http://www.mn-net.com)

# Safety Data Sheet

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

REF: 931218	VISOCOLOR ECO Chloride, refill pack	Page: 10/11
Printing date: 12.05.2021	Date of issue: 08.02.2021	

**14.1 UN number:** 1992 **14.2 UN proper shipping name:** Flammable liquid, toxic, n.o.s. (methanol solution)  
**14.3 Class:** 3 **14.4 Packing group:** II  
*Road transport*  
 Classification code: FT1  
 Limited Quantity: 1 L Tunnel restriction code: E  
 Excepted Quantity: E 2 Special instructions: 274  
*Air transport*  
 PAX: 352 max. weight PAX: 1 L  
 CAO: 364 max. weight CAO: 60 L  
*Maritime transport*  
 EmS: F-E, S-D Storage category: B

**14.1 UN number:** 3264 **14.2 UN proper shipping name:** Corrosive liquid, acidic, inorganic, n.o.s. (nitric acid solution)  
**14.3 Class:** 8 **14.4 Packing group:** II  
*Road transport*  
 Classification code: C1  
 Limited Quantity: 1 L Tunnel restriction code: E  
 Excepted Quantity: E 2  
*Air transport*  
 PAX: 851 max. weight PAX: 1 L  
 CAO: 855 max. weight CAO: 30 L  
*Maritime transport*  
 EmS: F-A, S-B Storage category: B

**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**

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  
 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**

H225	Highly flammable liquid and vapour.
H290	May be corrosive to metals.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H370	Causes damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.
H413	May cause long lasting harmful effects to aquatic life.



# Safety Data Sheet

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

REF: 931218	VISOCOLOR ECO Chloride, refill pack	Page: 11/11
Printing date: 12.05.2021	Date of issue: 08.02.2021	

- 16.1.2 List of relevant P phrases**
- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
  - P233 Keep container tightly closed.
  - 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+310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
  - 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].
  - P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  - 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.
  - P311 Call a POISON CENTER/doctor.
  - P312 Call a POISON CENTER/doctor if you feel unwell.
  - P330 Rinse mouth.
  - P390 Absorb spillage to prevent material damage.
  - P403+233 Store in a well-ventilated place. Keep container tightly closed.
  - P405 Store locked up.

**16.2 Training advice**  
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**  
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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**16.5 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  
KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)

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

