

Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 920028	VISOCOLOR HE Cyanide	Page: 1/15
Printing date: 19.08.2024	Date of issue: 12.01.2023	Version: 2.2.2.12

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

1.1 Product identifier

REF 920028
 Product name VISOCOLOR HE Cyanide

REACH Registration number(s): see SECTION 3.1/3.2 or
 A registration number for the substance(s) does not exist because the annual tonnage does not require registration or the substance or its use is excluded from registration.

1 x 10 g CN-1 UFI: Q8UT-H39S-D20X-6394
 1 x 6 g CN - -2
 1 x 30 mL CN - -3
 1 x 30 mL CN - -4 UFI: XEUT-H3PK-020W-HSF8

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses
 Product for analytical use.
 Exposure Scenario Classification according REACH, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0
 The exposure scenario is integrated into sections 1-16.

Uses advised against
 not described

1.3 Details of the supplier of the safety data sheet

Manufactured by:
 MACHEREY-NAGEL GmbH & Co. KG
 Valencienner Str. 11, 52355 Düren, Germany
 Phone: +49 2421 969 0

E-mail: sds@mn-net.com (msds@mn-net.com)

1.4 Emergency telephone number

Outside Germany (DE): Call your regional Poisons Information Service or call local Life Saving Service.
 DE: Gemeinsames Giftinformationszentrum (GGIZ)
 99089 Erfurt tel. +49 361 730 730, <<https://www.ggiz-erfurt.de>>

You find our current versions of SDS in Internet:

<<http://www.mn-net.com/SDS>>

Lieferant / Supplier:
 Carl Roth GmbH & Co. KG
 Schöpperlenstr. 3-5
 76185 Karlsruhe, Germany
 +49 721 5606 0
 sicherheit@carlroth.de

SECTION 2: Hazard identification

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



Signal word	DANGER
Hazard identification	Hazard classes/categories
H226	Flam. Liq. 3
H314	Skin Corr. 1 B
H332	Acute Tox. 4 inh.
H334	Resp. Sens. 1
EUH031	-

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

30 mL CN - -4



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Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 920028	VISOCOLOR HE Cyanide	Page: 2/15
Printing date: 19.08.2024	Date of issue: 12.01.2023	Version: 2.2.2.12

Signal word: WARNING

Hazard identification	Hazard classes/categories
H226	Flam. Liq. 3
H332	Acute Tox. 4 inh.

10 g CN-1



GHS05 GHS08

Signal word: DANGER

Hazard identification	Hazard classes/categories
EUH031	-
H314	Skin Corr. 1 B
H334	Resp. Sens. 1

6 g CN -2

Signal word: Do not need labelling as hazardous

No hazard class

30 mL CN -3

Signal word: Do not need labelling as hazardous

No hazard class

List of H phrases: see section 16.2

2.2 Label elements according regulation (EC) 1272/2008

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

30 mL CN -4



GHS02 GHS07

Signal word: WARNING

10 g CN-1



GHS05 GHS08

Signal word: DANGER

H314, H334

Causes severe skin burns and eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

P260sh, P264, P280sh, P284, P303+361+353, P305+351+338, P310, P405, P501

Do not breathe dust/vapours. Wash hands thoroughly after handling. Wear protective gloves/eye protection. [In case of inadequate ventilation] wear respiratory 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. Dispose of

Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 920028	VISOCOLOR HE Cyanide	Page: 3/15
Printing date: 19.08.2024	Date of issue: 12.01.2023	Version: 2.2.2.12

contents/container to regulated waste treatment.

- 6 g CN - 2**
Do not need labelling as hazardous
Signal word: -
- 30 mL CN - 3**
Do not need labelling as hazardous
Signal word: -

Label elements of the complete product



Signal word: DANGER
H314, H334
Causes severe skin burns and eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. P260sh, P264, P280sh, P284, P303+361+353, P305+351+338, P310, P405, P501
Do not breathe dust/vapours. Wash hands thoroughly after handling. Wear protective gloves/eye protection. [In case of inadequate ventilation] wear respiratory 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. 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. 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 after impairments of health when ingested in small quantities. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- 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**
no data available
- Other hazards**
Contains an odor intensive reagent.

SECTION 3: Composition / information on ingredients

3.1 Substances or 3.2 Mixtures

30 mL CN - 4			
Substance name:	<i>pyridine</i>		
CAS No.:	110-86-1		
Substance rating:	H225, Flam. Liq. 2, H302, Acute Tox. 4 oral, H312, Acute Tox. 4 derm., H332, Acute Tox. 4 inh.		
Formula:	C ₅ H ₅ N		
Pseudonym (de):	Azin, Azabenzol		
REACH Reg. No.:	01-2119493105-40-xxxx		
EC No.:	203-809-9	Indice No.:	613-002-00-7
Concentration:	32 - <44 %		
acc. CLP (GHS):	H226, Flam. Liq. 3, H332, Acute Tox. 4 inh.		



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Safety Data Sheet

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REF: 920028

VISOCOLOR HE Cyanide

Page: 4/15

Printing date: 19.08.2024

Date of issue: 12.01.2023

Version: 2.2.2.12

10 g CN-1

Substance name: *chloramine T*
CAS No.: 127-65-1

Substance rating: H302, Acute Tox. 4 oral, H314, Skin Corr. 1 B, H334, Resp. Sens. 1, EUH031, not defined
Formula: $C_7H_7ClNNaO_2S$
Pseudonym (de): Tosylchloramid-Na
EC No.: 204-854-7
Concentration: 5 - <10 %
acc. CLP (GHS): H314, Skin Corr. 1 B, H334, Resp. Sens. 1, EUH031, Indice No.: 616-010-00-9

Substance name: *di-sodium hydrogen phosphate*
CAS No.: 7558-79-4

Substance rating: No criteria for classification or naming of chemical not required.
Formula: Na_2HPO_4
Pseudonym (de): sek-Na-phosphat
REACH Reg. No.: 01-2119489797-11-xxxx
EC No.: 231-448-7
Concentration: 50 - <100 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

6 g CN -2

Substance name: *barbituric acid*
CAS No.: 67-52-7

Substance rating: No criteria for classification or naming of chemical not required.
Formula: $C_4H_4N_2O_3$
Pseudonym (de): Pyrimidin-2,4,6(1H,3H,5H)-trion
REACH Reg. No.: as intermediate
EC No.: 200-658-0
Concentration: 80 - <100 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

30 mL CN -3

Substance name: *dimethyl sulfoxide*
CAS No.: 67-68-5

Substance rating: No criteria for classification or naming of chemical not required.
Formula: C_2H_6OS
Pseudonym (de): DMSO
REACH Reg. No.: 01-2119431362-50-xxxx
EC No.: 200-664-3
Concentration: 80 - <100 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

Substance name: *chemicals/mixture until 1%*
CAS No.: -

Substance rating: No criteria for classification or naming of chemical not required.
Concentration: 0,1 - <1 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

3.3 Remarks

When not listed, mixtures are added with water [CAS No. 7732-18-5] to 100%. List of H and P phrases: see section 16.2.



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Safety Data Sheet

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REF: 920028

VISOCOLOR HE Cyanide

Page: 5/15

Printing date: 19.08.2024

Date of issue: 12.01.2023

Version: 2.2.2.12

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

May cause allergy or asthma symptoms or breathing difficulties if inhaled. Chronic effects: 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.

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. Inform patient respectively further measures and the possibility of long-term damages. ---

SECTION 5: Firefighting measures

5.1 Extinguishing media

5.1.1 Suitable extinguishing media

Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.

5.1.2 Unsuitable extinguishing media

no data available

5.2 Special hazards arising from the substance or mixture

WARNING: Flammable (GHS regulation). May form 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.



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Safety Data Sheet

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REF: 920028

VISOCOLOR HE Cyanide

Page: 6/15

Printing date: 19.08.2024

Date of issue: 12.01.2023

Version: 2.2.2.12

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 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 5.4,7,8 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 only in well-ventilated working areas.

7.2 Conditions for safe storage, including any incompatibilities

Safe storage is guaranteed in the original packaging from MACHEREY-NAGEL. Storage class (German chemical industry): see chapter 12.1

Storage class (VCI): 3

Water hazard class (DE): 2

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

30 mL CN - -3

Chemical: *dimethyl sulfoxide*

CAS No.: 67-68-5

DNEL: 394 inh mg/m³

DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 17 mg/L

PNEC = Predicted No Effect Concentration

TRGS 900 (DE): 50 ppm / 160 mg/m³

E/e respirable

Short-term exposure factor: 2 (I), H, Z

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

SUVA(CH) MAK value: 50 ppm / 160 mg/m³

Chemical: *chemicals/mixture until 1%*

CAS No.: -

10 g CN-1

Chemical: *chloramine T*

CAS No.: 127-65-1

NIOSH: not listed

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

OSHA: not listed

Chemical: *di-sodium hydrogen phosphate*

CAS No.: 7558-79-4

DNEL: 4.07 inh mg/m³

DNEL = Derived No-Effect Level (for workers)

TRGS 900 (DE): -

E/e respirable

6 g CN - -2

Chemical: *barbituric acid*

CAS No.: 67-52-7

30 mL CN - -4



Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 920028	VISOCOLOR HE Cyanide	Page: 7/15
Printing date: 19.08.2024	Date of issue: 12.01.2023	Version: 2.2.2.12

Chemical:	<i>pyridine</i>	CAS No.: 110-86-1
PNEC (fresh water):	300 µg/L	
	PNEC = Predicted No Effect Concentration	
EU value:	[TWA] 5 ppm / 15 mg/m ³	
TRGS 900 (DE):	[8h] 5 ppm / 15 mg/m ³	
	E/e respirable	
Short-term exposure factor:	2 (II)	
	skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded	
SUVA(CH) MAK value:	5 ppm / 15 mg/m ³	
NIOSH:	[TWA] 5 ppm / 15 mg/m ³	
	[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period	
OSHA:	[TWA] 5 ppm / 15 mg/m ³	

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 Skin protection / Hand protection

Yes, gloves according EN 374 (permeation time >30 min - level 2), consist of PVC, natural latex, Neopren, or Nitril (f.ex. from Ansell or KCL). Use for short times chemical resistant latex gloves with code EN 374-3 level 1.

8.2.3 Eye / Face Protection

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

8.2.6 Thermal hazards

no data available

8.3 Limitation and monitoring of environmental exposure

Do not release product into environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

30 mL CN - -3

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	fusty, mouldy
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	95 °C
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	6-8
l) Kinematic viscosity:	no data available
m) Solubility in water:	0-100 %
n) Dispersion coefficient (K _{ow}):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	1,1 g/cm ³
q) Relative vapour density (air=1):	no data available
r) Particle size:	no data available

10 g CN-1

a) State of aggregation:	powder (solid)
b) Colour:	colourless
c) Odor:	chloric
d) Melting point:	no data available



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Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 920028

VISOCOLOR HE Cyanide

Page: 8/15

Printing date: 19.08.2024

Date of issue: 12.01.2023

Version: 2.2.2.12

e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	7-8
l) Kinematic viscosity:	no data available
m) Solubility in water:	0-100 %
n) Dispersion coefficient (K _{o/w}):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	no data available
q) Relative vapour density (air=1):	no data available
r) Particle size:	no data available

6 g CN - -2

a) State of aggregation:	powder (solid)
b) Colour:	white
c) Odor:	odorless
d) Melting point:	250-252 °C
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	no data available
l) Kinematic viscosity:	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient (K _{o/w}):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	no data available
q) Relative vapour density (air=1):	no data available
r) Particle size:	no data available

30 mL CN - -4

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	like pyridine
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	6-8
l) Kinematic viscosity:	no data available
m) Solubility in water:	0-100 %
n) Dispersion coefficient (K _{o/w}):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	0,99 g/cm ³
q) Relative vapour density (air=1):	no data available
r) Particle size:	no data available

9.2 Other information

9.2.1 Information on physical hazard classes

no data available



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Safety Data Sheet

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REF: 920028

VISOCOLOR HE Cyanide

Page: 9/15

Printing date: 19.08.2024

Date of issue: 12.01.2023

Version: 2.2.2.12

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

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

No more required.

10.5 Incompatible materials

no additional data available

10.6 Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1 Information on the hazard classes according regulation (EC) 1272/2008

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

30 mL CN - 3

Chemical: *dimethyl sulfoxide*
TSCA Inventory: listed
Korea Exist.Chem.Inventory: KE-32367
LD50 orl rat : 14500 mg/kg

CAS No.: 67-68-5

Chemical: *chemicals/mixture until 1%*
TSCA Inventory: all listed, <1%
Korea Exist.Chem.Inventory: listed

CAS No.: -

10 g CN-1

Chemical: *chloramine T*
TSCA Inventory: listed
Australia NICNAS: not listed
Japan CSCL/PRTR: not listed, Japan PDSCL: not listed
Japan ISHL: not listed
South Korea TCCA: not listed
Korea Exist.Chem.Inventory: 2000-3-1539
LD50 orl rat : 1000 mg/kg

CAS No.: 127-65-1

California Proposition 65 List: not listed
Canada CEPA 1999: DSL Yes

Acute Effects: Cause after 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 allergy or asthma symptoms or breathing difficulties if inhaled.

Chemical: *di-sodium hydrogen phosphate*
TSCA Inventory: listed
Korea Exist.Chem.Inventory: KE-12344
LD50 orl rat : 17000 mg/kg

CAS No.: 7558-79-4

6 g CN - 2

Chemical: *barbituric acid*
TSCA Inventory: listed
Korea Exist.Chem.Inventory: 97-3-1
LD50 orl rat : >5000 mg/kg

CAS No.: 67-52-7

California Proposition 65 List: Barbiturates listed, developmental



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Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 920028	VISOCOLOR HE Cyanide	Page: 10/15
Printing date: 19.08.2024	Date of issue: 12.01.2023	Version: 2.2.2.12

30 mL CN - -4

Chemical: *pyridine* CAS No.: 110-86-1
 TSCA Inventory: listed California Proposition 65 List: listed cancer
 Exposure Routes: inhalation, skin absorption, ingestion, skin and/or eye contact
 Target Organs: Eyes, skin, central nervous system, liver, kidneys, gastrointestinal tract,
 Symptoms: irritation eyes; headache, anxiety, dizziness, insomnia; nausea, anorexia; dermatitis; liver, kidney damage
 Japan CSCL/PRTR: PRTR: ≥1,0% class I
 Japan ISHL: listed ≥1,0%/≥0,1%,
 Korea Exist.Chem.Inventory: KE-29929
 LD50 orl rat : 800-1600 mg/kg
 LC_{Low} ihl rat : 4900 ppm/4H
 LC_{Low} orl gpg : 4000 mg/kg
 LC_{Low} orl hmn : 500 mg/kg
 LC50 ihl rat : 15,852 mg/L/4H
 Acute Effects: Cause after skin contact, impairments of health when ingested in small quantities.
 TRGS 905 (DE): [DFG] carc. 3B

11.2 Other hazards

Possible endocrine disrupting effects
 no data available

Other information
 no additional data available

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

30 mL CN - -3

Substance name: *dimethyl sulfoxide* CAS-Nr.: 67-68-5
 PNEC (fresh water) : 17 mg/L
 PNEC = Predicted No Effect Concentration = concentration at which no effect on the environment is expected
 LC50 fish/96h : 38.5 g/L
 EC50 daphnia/48h : 24.6 g/L
 EC10 pseudomonas putida/16h : EC/16h: 7100 mg/L
 Water hazard class (DE): 1 WGK No.: 5050
 Storage class (VCI): 12

Substance name: *chemicals/mixture until 1%* CAS-Nr.: -
 Water hazard class (DE): 1
 Storage class (VCI): 12-13

10 g CN-1

Substance name: *chloramine T* CAS-Nr.: 127-65-1
 Do not release into the environment.
 Water hazard class (DE): 2 WGK No.: 0640
 Storage class (VCI): 8 A

Substance name: *di-sodium hydrogen phosphate* CAS-Nr.: 7558-79-4
 Water hazard class (DE): 1 WGK No.: 330
 Storage class (VCI): 12-13

6 g CN - -2

Substance name: *barbituric acid* CAS-Nr.: 67-52-7

30 mL CN - -4

Substance name: *pyridine* CAS-Nr.: 110-86-1
 PNEC (fresh water) : 300 µg/L
 PNEC = Predicted No Effect Concentration = concentration at which no effect on the environment is expected
 LC50 fish/96h : [EC50 4h] 560-1000 mg/L
 EC50 daphnia/48h : 320 mg/L



Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 920028	VISOCOLOR HE Cyanide	Page: 11/15
Printing date: 19.08.2024	Date of issue: 12.01.2023	Version: 2.2.2.12

IC50 <i>scenedesmus quadricauda</i> /72h :	IC5/7d: 120 mg/L
EC10 <i>pseudomonas putida</i> /16h :	[EC50 72h] 320 mg/L mg/L
Water hazard class (DE):	2 WGK No.: 0179
Storage class (VCI):	3

12.2 Persistence and degradability

12.3 Bioaccumulative potential

30 mL CN - -3		
Substance name:	<i>dimethyl sulfoxide</i>	CAS-Nr.: 67-68-5
Dispersion coefficient (K _{o/w}):	-1,35	

30 mL CN - -4		
Substance name:	<i>pyridine</i>	CAS-Nr.: 110-86-1
Dispersion coefficient (K _{o/w}):	0,64	

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.

12.6 Endocrine disrupting properties

no data available

12.7 Other adverse effects

no additional data available

SECTION 13: Disposal considerations

Please observe local regulations for collection and disposal of hazardous waste and contact waste disposal company, where you will obtain information on laboratory waste disposal (waste code number 16 05 06).

13.1 Waste treatment methods

Normally it is possible to empty small amounts (diluted!) into drains. Empty containers of corrosive reagents prior to disposal, rinse with water.

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 ADR

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 **Alternative declaration for transportation:**

UN No.: (see below) class 8 III, **Excepted Quantities** ($\leq 30 \text{ mL} / \sum \leq 1 \text{ L}$) = ADR/ IATA E1

UN 1993 class 3 II, **Excepted Quantities** ($\leq 30 \text{ mL} / \sum \leq 500 \text{ mL}$) = ADR/ IATA E2

or

14.1 UN number: 1993

14.2 UN proper shipping name: Flammable liquid, n.o.s. (pyridine mixture)

14.3 Class: 3

14.4 Packing group: II

Road transport ADR

Classification code: F1

Limited Quantity: 1 L Tunnel restriction code: E



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Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 920028	VISOCOLOR HE Cyanide	Page: 12/15
Printing date: 19.08.2024	Date of issue: 12.01.2023	Version: 2.2.2.12

Excepted Quantity: E 2
 Special instructions: 640C

Air transport IATA DGR

Limited Quantity: PAX: 353 max. quantity PAX: 5 L
 CAO: 364 max. quantity CAO: 60 L
 Excepted Quantity: E 2

Maritime transport IMDG

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

14.1 UN number: 3263

14.2 UN proper shipping name: Corrosive solid, basic, organic, n.o.s. (chloramine T mixture)

14.3 Class: 8

14.4 Packing group: III

Road transport ADR

Classification code: C8
 Limited Quantity: 5 Kg Tunnel restriction code: E
 Excepted Quantity: E 1

Air transport IATA DGR

Limited Quantity: PAX: 860 max. quantity PAX: 25 Kg
 CAO: 864 max. quantity CAO: 100 Kg
 Excepted Quantity: E 1

Maritime transport IMDG

EmS: F-A, S-B Staukategorie: A
 Special instructions: 223, 274

14.5 Environmental hazards

none, contains only small quantities of hazardous substances

14.6 Special precautions for user

not necessary

14.7 Carriage in bulk by sea in accordance with IMO instruments

Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Dangerous Substances Protection Act (DE: Chemikaliengesetz - ChemG), Aug 2013, Stand: Okt 2020
 Ordinance on protection against dangerous substances (E: Gefahrstoffverordnung - GefStoffV), Nov 2010, Stand: Mrz 2017
 TRGS 201, Classification and labeling of activities involving hazardous substances, Feb 2017
 TRGS 220, National aspects when preparing safety data sheets, Jan 2017
 TRGS 400, Risk assessment for activities involving hazardous substances, Jul 2017
 TRGS 401, Skin contact hazard - identification, assessment, action, Jun 2008, status: Feb 2011
 BekGS 408, Application of the GefStoffV and the TRGS with the entry into force of the CLP regulation, December 2009, status: Jan 2012
 TRGS 500, Protective measures, Mai 2008
 TRGS 510, Storage of hazardous substances in portable containers from March 2013, status: Oct 2015
 Chapter 4, Measures when storing hazardous substances up to 50 kg (small quantity regulation)
 Wasserhaushaltsgesetz - WHG, Section 3 Handling substances hazardous to water, Jul 2009, status: Aug 2016
 MN leaflet/instructions for use, also at www.mn-net.com
 If necessary, observe other country-specific regulations.

15.2 Chemical safety assessment

not necessary for these small amounts



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Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 920028	VISOCOLOR HE Cyanide	Page: 13/15
Printing date: 19.08.2024	Date of issue: 12.01.2023	Version: 2.2.2.12

SECTION 16: Other information

16.1 Changes compared to the last version

Between versions 2.2.2.12 and 2.2.2.2 following changes were applied: - 10 substance data corrected

16.2 List of H and P phrases

16.2.1 List of relevant H phrases

H	Between versions 2.2.2.12 and 2.2.2.2 following changes were applied: - 10 substance data corrected
H226	Flammable liquid and vapour.
H314	Causes severe skin burns and eye damage.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
EUH031	Contact with acids liberates toxic gas.

16.2.2 List of relevant P phrases

P260sh	Do not breathe dust/vapours.
P264	Wash hands thoroughly after handling.
P280sh	Wear protective gloves/eye protection.
P284	[In case of inadequate ventilation] wear respiratory 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.
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 (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 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 progressText (11th ATP)
 Regulation 1480/2018/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (13th ATP)
 Regulation 521/2019/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (12th ATP)
 TRGS 900, German rules of technology on limit values in the air at work, as of 03/2019
 Regulation 217/2020/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (14th ATP)
 Regulation 878/2020/EU, adaptation of Annex II of the REACH regulation 1907/2006/EG
 Regulation 1182/2020/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (15th ATP)
 Regulation 643/2021/EU, adaptation of Annex VI, Part 1, of Regulation 1272/2008/EC to technical and scientific progress (16th ATP)
 Regulation 849/2021/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (17th ATP)
 Regulation 692/2022/EU, adaptation of Annex VI, Part 1, of Regulation 1272/2008/EC to technical and scientific progress (18th ATP)

revisions/updates

Reason for revision: 2014-02 Corrected structure of the sections according to Regulation 453/2010/EU, if necessary
 2014-04 adjustment according Regulation 487/2013/EU
 2016-03 adjustment according Regulation 1221/2015/EU

 2017-11 adjustment according the ECHA registration dossier
 2022-11 adjustment according Regulation 878/2020/EU

16.5 Further information

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Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 920028
 Printing date: 19.08.2024

VISOCOLOR HE Cyanide
 Date of issue: 12.01.2023

Page: 14/15
 Version: 2.2.2.12

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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 spezified)
- 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: fisch, rainbow trout
- orl: oral
- OSHA: Occupational Safety and Health Administration
- PAX: transport on passenger planes allowed
- PBT: persistent, bioaccumulating, toxic substance
- pH: pH value
- pimephales promelas: fisch, fathead minnow
- PNEC: Predicted No Effect Concentration
- PROC 15: Process category 'for laboratory use'
- PRTR: Law for PRTR and Promotion of Chemical Management (Jp)
- PVC: polyvinyl chloride
- quail: bird, quail
- rat: rat
- rbt: rabbit
- RD: rapidly degradable
- RE: repeated
- REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
- REF: item number, reference number
- Reg.No.: rRegistration number
- Repr: harmful to reproduction
- Resp: respiratory
- RIP: REACH Implementations Projects
- scu: sub cutan
- SDS: safety data sheet
- Sens: sensitisation



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Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 920028

VISOCOLOR HE Cyanide

Page: 15/15

Printing date: 19.08.2024

Date of issue: 12.01.2023

Version: 2.2.2.12

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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