

Safety Data Sheet

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

REF: 931211

VISOCOLOR ECO Bromine, refill pack

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Printing date: 26.07.2017

Date of issue: 05.05.2017

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

1.1 Product identifier

REF 931211
Product name VISOCOLOR ECO Bromine, 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.

1 x 30 mL Br₂ -2
1 x 28 g Br₂ -1

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 Düren, GERMANY
Tel.: +49 2421 969 0

E-mail: msds@mn-net.com

1.4 Emergency telephone number

Information not necessary.

You find our current versions of SDS (22 languages) in Internet:

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

SECTION 2: Hazard identification

2.0 Classification of the complete product

-

2.1 Classification of the substance or mixture

30 mL Br₂ -2

Signal word do not need labelling as hazardous
-

No hazard class

28 g Br₂ -1

Signal word do not need labelling as hazardous
-

No hazard class

2.2 Label elements

30 mL Br₂ -2

do not need labelling as hazardous
Signal word: -

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28 g Br₂ -1

do not need labelling as hazardous
Signal word: -

2.3 Other hazards

Possible Hazards from physicochemical Properties

According to our current status of knowledge and experience we state, that this product does not contain any substances, which - in accordance with EC regulations 1272/2008/EC, 1907/2006/EC and German Regulations for Hazardous goods - have to be declared as dangerous goods, either because of their applied concentration or because of their total amount in anyone kit. An individual package has considerably less hazardous potential.

Information pertaining to particular Risks to Human and possible Symptoms

Information pertaining to particular Risks to the Environment

Other Hazards

SECTION 3: Composition/Information on Ingredients

3.1 Substances or 3.2 Mixtures

30 mL Br₂ -2

Chemical: *potassium iodide*
Concentration: 1 - <10 %
Formula: KI
REACH Reg. No.: YES, confidential
EC No.: 231-659-4
RTECS: TT29750000
TSCA Inventory: listed
KE No.: not listed
acc. CLP (GHS): not necessary

CAS No.: 7681-11-0

MFCD: 00011405

28 g Br₂ -1

Chemical: *boric acid*
Concentration: 0,5 - <5,5 %
Formula: H₃BO₃
REACH Reg. No.: 01-2119486683-25-0024
SVHC listed: YES
EC No.: 233-139-2
RTECS: ED4550000
TSCA Inventory: listed
KE No.: KE-03499
acc. CLP (GHS): not necessary

CAS No.: 10043-35-3

Correlation factor: x 0.17 (= %B)

Indice No.: 005-007-00-2
MFCD: 00011337

Chemical: *tri-sodium citrate*
Concentration: 30 - <50 %
Formula: C₆H₅Na₃O₇•2H₂O
REACH Reg. No.: 01-2119457027-40-xxxx
EC No.: 200-675-3
RTECS: GE8300000
TSCA Inventory: listed (CAS 68-04-2)
KE No.: KE-20843
acc. CLP (GHS): not necessary

CAS No.: 6132-04-3

Chemical: *N,N-Diethyl-1,4-phenylene diammonium sulfate*
Concentration: 1 - <5 %
Formula: C₁₀H₁₆N₂•H₂O
Pseudonym: N,N-diethylbenzene-1,4-diammonium sulfate
EC No.: 228-500-6
RTECS: SS9625000
TSCA Inventory: listed (CAS 6065-27-6)
acc. CLP (GHS): not necessary

CAS No.: 6283-63-2

Indice No.: 612-080-00-X
MFCD: 00012993

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Chemical: *potassium dihydrogen phosphate*
Concentration: 5 - <25 %
Formula: KH_2PO_4
REACH Reg. No.: 01-2119490224-41-XXXX
EC No.: 231-913-4
RTECS: TC6615500
TSCA Inventory: listed
KE No.: KE-28622
acc. CLP (GHS): not necessary

CAS No.: 7778-77-0

MFCD: 00011401

3.3 Remarks

SECTION 4: First aid measures

4.1 Description of first aid measures

Place insured person out of danger zone to fresh air immediately.

4.1.1 After SKIN Contact
Not necessary.

4.1.2 After EYE Contact
Not necessary.

4.1.3 After INHALATION of Vapours
Not necessary.

4.1.4 After ORAL Intake
Not necessary.

4.2 Most important symptoms and effects, both acute and delayed

Avoid inhalation of dust. ---

4.3 Indication of any immediate medical attention and special treatment needed

No additionally recommendations. ---

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

None.

5.3 Advice for firefighters

No, for listed product. Product package burns like paper or plastic.

5.4 Additional Information

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapours. Not necessary.

6.2 Environmental precautions

not necessary

6.3 Methods and material for containment and cleaning up

Clean working area with water. Flush used water into drains.

6.4 Reference to other sections

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handling in accordance with the test instruction, that comes with the product.

7.2 Conditions for safe storage, including any incompatibilities

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

Storage class (VCI): 6.1D

Water hazard class (DE): 3

7.2.1 Requirements for Stock Rooms and Containers

Keep original product packages tightly closed during handling and storage.

7.3 Specific end use(s)

Product for analytical use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

30 mL Br₂ -2

Chemical: *potassium iodide*

CAS No.: 7681-11-0

28 g Br₂ -1

Chemical: *boric acid*

CAS No.: 10043-35-3

DNEL: 392_{derm} mg/kg_{bw}/day ; 8.3_{inh} mg/m³

DNEL = Derived No-Effect Level (for workers)

TRGS 900 (DE): 0.5_E mg/m³

E/e respirable

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

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

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: *tri-sodium citrate*

CAS No.: 6132-04-3

Chemical: *N,N-Diethyl-1,4-phenylene diammonium sulfate*

CAS No.: 6283-63-2

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: *potassium dihydrogen phosphate*

CAS No.: 7778-77-0

8.2 Exposure controls

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

8.2.1 Respiratory Protection

Not necessary.

8.2.2 Hand Protection

Not necessary.

8.2.3 Eye Protection

Not necessary.

8.2.4 Skin Protection

Not necessary.

8.2.5 Personal Hygiene

Information not necessary.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

30 mL Br₂ -2

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Appearance: liquid

Colour: colourless

Odor: odorless

pH:

9

Solubility in water:

0-100 %

28 g Br₂ -1

Appearance: powder (solid)

Colour: colourless

Odor: odorless

pH:

6

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

SECTION 10: Stability and reactivity

10.1 Reactivity

None

10.2 Chemical stability

No known instability.

10.3 Possibility of hazardous reactions

None.

10.4 Conditions to avoid

10.5 Incompatible materials

Not necessary.

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.

30 mL Br₂ -2

Chemical: *potassium iodide*

CAS No.: 7681-11-0

TSCA Inventory: listed

Korea Exist.Chem.Inventory: not listed

LD50_{orl rat}: 2779 mg/kg

28 g Br₂ -1

Chemical: *boric acid*

CAS No.: 10043-35-3

TSCA Inventory: listed

California Proposition 65 List: not listed

Australia NICNAS: not listed

Canada CEPA 1999: DSL yes

Japan CSCL/PRTR: PRTR: ≥1,0%B class I

Japan PDSCL: not listed

Japan ISHL: not listed

South Korea TCCA: not listed

Korea Exist.Chem.Inventory: KE-03499

LD50_{orl rat}: 2660 mg/kg

LD50_{drm rat}: >2000 mg/kg

EU carcinogen: Repr. 1B

TRGS 905 (DE): R_E 2, R_F 2

Chemical: *tri-sodium citrate*

CAS No.: 6132-04-3

TSCA Inventory: listed (CAS 68-04-2)

Korea Exist.Chem.Inventory: KE-20843

LD50_{orl rat}: >8000 mg/kg

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Chemical: *N,N-Diethyl-1,4-phenylene diammonium sulfate* CAS No.: 6283-63-2
TSCA Inventory: listed (CAS 6065-27-6) California Proposition 65 List: not listed
Australia NICNAS: not listed Canada CEPA 1999: not listed
Japan CSCL/PRTR: not listed
Japan PDSCL: not listed Japan ISHL: not listed
South Korea TCCA: not listed
LD50_{rat}: 497 mg/kg

Chemical: *potassium dihydrogen phosphate* CAS No.: 7778-77-0
TSCA Inventory: listed
Korea Exist.Chem.Inventory: KE-28622
LD50_{rat}: 4640 mg/kg
LD50_{dmr}: >4640 mg/kg

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

30 mL Br₂-2

Chemical: *potassium iodide* CAS No.: 7681-11-0
LC50_{fish/96h}: 2190 mg/L
Water hazard class (DE): 1
Dispersion coefficient_(octanol-water): 0.04
Storage class (VCI): 12-13

28 g Br₂-1

Chemical: *boric acid* CAS No.: 10043-35-3
LC50_{fish/96h}: 50-100 mg/L
EC50_{daphnia/48h}: 133 mg/L
Water hazard class (DE): 1 WGK No.: 0315
Storage class (VCI): 6.1 D

Chemical: *tri-sodium citrate* CAS No.: 6132-04-3
LC50_{fish/96h}: 18-32 g/L
EC50_{daphnia/48h}: 5.6-10 g/L
EC50_{chlorella vulgaris/5d}: >18-32 g/L
EC10_{pseudomonas putida/16h}: EC50_{ps. fluorescens/8h}: >1.8-3.2 g/L
Water hazard class (DE): 1
Storage class (VCI): 12-13

Chemical: *N,N-Diethyl-1,4-phenylene diammonium sulfate* CAS No.: 6283-63-2
Water hazard class (DE): 3
Storage class (VCI): 12-13

Chemical: *potassium dihydrogen phosphate* CAS No.: 7778-77-0
LC50_{leuciscus idus/96h}: 90048h mg/L
Water hazard class (DE): 1
Storage class (VCI): 12-13

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

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no data available

12.6 Other adverse effects

no additional data available

SECTION 13: Disposal considerations

Not necessary.

13.1 Waste treatment methods

GENERAL: Empty solids into municipal waste, empty liquids diluted into drains. Normally it is possible to empty small amounts (diluted!) into drains.

SECTION 14: Transport information

14.1 - 14.4 Not necessary

14.5 Environmental hazards

not necessary

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

15.2 Chemical safety assessment

SECTION 16: Other Information

16.1 List of H and P phrases

16.1.1 List of relevant H phrases

16.1.2 List of relevant P phrases

16.2 Training Advice

Regular safety training.

16.3 Recommended Restriction on Use

None

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 790/2009/EU adaptation of CLP regulation 1272/2008/EU to technical and scientific progress
Regulation 453/2010/EU REACH - REQUIREMENTS FOR THE COMPILATION OF SAFETY DATA SHEETS
Regulation 487/2013/EU, 4th adaptation of CLP regulation to technical and scientific progress
TRGS 900, German engineering rules governing limits in air at work, updated September 2016
SUVA .CH, Limits in air at work 2009, revised on 01.2009
KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)

Revisions/Updates

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