Safety Data Sheet  
according to Regulations REACh 1907/2006/EC

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

1.1 Product identifier

REF: 931066  
Product name: VISOCOLOR ECO pH 4.0-9.0

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 24 mL pH-1  
UFI: DCEU-93XJ-120C-S47R

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)
90089 Erfurt tel. +49 361 730 730, <https://www.ggiz-erfurt.de>

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

SECTION 2: Hazard identification

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

GHS02

Signal word: DANGER

Hazard identification: H225  
Hazard classes/categories: Flam. Liq. 2

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

24 mL pH-1

GHS02

Signal word: DANGER

Hazard identification: H225  
Hazard classes/categories: Flam. Liq. 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 identificator(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).

24 mL pH-1

GHS02

Signal word: DANGER

Label elements of the complete product

GHS02

Signal word: DANGER

2.3 Other hazards

Possible hazards from physicochemical properties
Flammable properties.

Information pertaining to particular risks to human and possible symptoms

Information pertaining to particular risks to the environment

Possible endocrine disrupting effects
no data available

SECTION 3: Composition / information on ingredients

3.1 Substances or 3.2 Mixtures

24 mL pH-1

Substance name: indicator dye(s)
CAS No.: -

Substance rating: No criteria for classification or naming of chemical not required.
Concentration: 0,01 - <0,1 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

Substance name: ethanol
CAS No.: 64-17-5
(denatured with 1% 2-butanone / 1% 2-propanol)

Substance rating: H225, Flam. Liq. 2
Formula: C_2 H_6 O; C_2 H_5 OH
Pseudonym (de): Äthylalkohol, vergällter Spiritus
REACH Reg. No.: 01-2119457610-43-xxxx
EC No.: 200-578-6
Concentration: 90 - <100 %
acc. CLP (GHS): H225, Flam. Liq. 2
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.

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.

4.1.1 After SKIN Contact
Remove contaminated clothing. Rinse the affected skin or mucous membrane thoroughly under running water. (If possible) use soap.

4.1.2 After EYE Contact
After contact with the eyes rinse thoroughly under running water with the eyelid wide open with eye washing bottle, eye douche or running water (protect intact eye).

4.1.3 After INHALATION of vapours
After inhalation of foam or vapour fresh air should be inhaled. Keep airways free. ---

4.1.4 After ORAL Intake
After oral intake lots of water should be drunk after it has been ingested.

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment needed
No additionally recommendations. ---

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. 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

5.3 Advice for firefighters
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. Regular staff training is necessary.

6.2 Environmental precautions
not necessary

6.3 Methods and material for containment and cleaning up
Bind any escaping liquid with inert absorbent. Collect small amounts of leaked liquid and flush with water into drains.

6.4 Reference to other sections

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
Safe storage is guaranteed in the original packaging. 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.

7.3 Specific end use(s)
Product for analytical use.

SECTION 8: Exposure controls /personal protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS No.:</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 mL pH-1</td>
<td></td>
</tr>
<tr>
<td>Chemical: indicator dye(s)</td>
<td>CAS No.: -</td>
</tr>
<tr>
<td>Ethanol</td>
<td>CAS No.: 64-17-5</td>
</tr>
<tr>
<td>DNEL: [derm] 343 mg/kg; [inh] 950 mg/m³</td>
<td></td>
</tr>
<tr>
<td>PNEC (fresh water): 0.96 mg/L</td>
<td></td>
</tr>
<tr>
<td>TRGS 900 (DE): 200 mL/m³ / 380 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Short-term exposure factor: 4 (II), Y skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded</td>
<td></td>
</tr>
<tr>
<td>SUVA(CH) MAK value: 500 ppm / 960 mg/m³</td>
<td></td>
</tr>
<tr>
<td>NIOSH: [TWA] 1000 ppm / 1900 mg/m³</td>
<td></td>
</tr>
<tr>
<td>OSHA: [TWA] 1000 ppm / 1900 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Phenolphthalein (pH indicator) CAS No.: 77-09-8</td>
<td></td>
</tr>
<tr>
<td>NIOSH: not listed, NTP Report on Carcinogens (RoC) List Yes (Reasonably anticipated to be a human carcinogen)</td>
<td></td>
</tr>
<tr>
<td>OSHA: not listed</td>
<td></td>
</tr>
</tbody>
</table>

8.2 Exposure controls
Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities. The highest level of cleanliness must be maintained at the workplace.

8.2.1 Respiratory protection
No additional recommendations.

8.2.2 Skin protection / Hand protection
Yes, gloves 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.

8.2.4 Skin protection
Not necessary.

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>State of aggregation:</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour:</td>
<td>red</td>
</tr>
<tr>
<td>Odor:</td>
<td>alcoholic</td>
</tr>
<tr>
<td>Melting point:</td>
<td>-114 °C</td>
</tr>
<tr>
<td>Boiling point:</td>
<td>78 °C</td>
</tr>
<tr>
<td>Flammability:</td>
<td>no data available</td>
</tr>
<tr>
<td>Explosive limits (lower / upper):</td>
<td>3.5 ... 15 Vol%</td>
</tr>
<tr>
<td>Flash point:</td>
<td>&gt; 12 °C</td>
</tr>
<tr>
<td>Flashing temperature:</td>
<td>425 °C</td>
</tr>
<tr>
<td>Decomposition temperature:</td>
<td>no data available</td>
</tr>
<tr>
<td>pH value:</td>
<td>7</td>
</tr>
<tr>
<td>Kinematic viscosity:</td>
<td>no data available</td>
</tr>
<tr>
<td>Solubility in water:</td>
<td>0-100 %</td>
</tr>
<tr>
<td>Dispersion coefficient (o/w):</td>
<td>no data available</td>
</tr>
<tr>
<td>Vapour pressure (20°C):</td>
<td>59 hPa</td>
</tr>
<tr>
<td>Specific gravity:</td>
<td>0.79-0.86 g/cm³</td>
</tr>
<tr>
<td>Relative vapour density (air=1):</td>
<td>1.59</td>
</tr>
<tr>
<td>Particle size:</td>
<td>no data available</td>
</tr>
</tbody>
</table>

9.2 Other information
No data is available for the other parameters for the mixtures, since no registration and no chemical safety report is required. Properties relevant to substance groups
Substances are highly volatile and form flammable gas-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
No further data available.

10.4 Conditions to avoid

10.5 Incompatible materials
10.6 Hazardous decomposition products
In the original package all parts/all reagents are safely 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.

24 mL pH-1
Chemical: indicator dye(s)  CAS No.: -
TSCA Inventory: all listed, <1%

Chemical: ethanol  CAS No.: 64-17-5
TSCA Inventory: listed California Proposition 65 List: not listed
ACGIH: 1000 ppm
Exposure Routes: inhalation, ingestion, skin and/or eye contact
Target Organs: Eyes, skin, respiratory system, central nervous system, liver, blood, reproductive system
Symptoms: irritation eyes, skin, nose, headache, drowsiness, lassitude (weakness, exhaustion), narcosis; cough;
liver damage; anemia; reproductive, teratogenic
Australia NICNAS: not listed Canada CEPA 1999: DSL yes
Japan CSCL/PRTR: not listed, Japan PDSCL: not listed Japan ISHL: listed ≥0,1%/≥0,1%, Article 57-2 (SDS required) South Korea TCCA: not listed
Korea Exist.Chem.Inventory: KE-13217
LD50 orl rat : 6200 mg/kg LC_Low inh gpg : 21,900 mg/L LC_Low orl hmn : 1400 mg/kg LC50 inh mus : 123,4 mg/L/4H LC50 inh rat : 115,9-133,8 mg/L/4H LD50 orl mus : 3450 mg/kg TRGS 905 (DE): K5, M5, R f C

Chemical: phenolphthalein (pH indicator)  CAS No.: 77-09-8
TSCA Inventory: listed California Proposition 65 List: listed, cancer
Australia NICNAS: not listed Canada CEPA 1999: DSL yes Japan CSCL/PRTR: PRTR - Class II Designated Chemical Substance, Japan PDSCL: not listed Japan ISHL: not listed South Korea TCCA: not listed Korea Exist.Chem.Inventory: KE-03234
LD50 orl rat : > 1000 mg/kg EU carcinogen: Carcinogenicity cat. 2, Germ Cell Mutagenicity cat. 3, >5% Reproductive Toxicity cat. 3 TRGS 905 (DE): Karzinogenität Kat. 2

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.

24 mL pH-1
Chemical: indicator dye(s)  CAS No.: -
Storage class (VCI): 12-13
Safety Data Sheet
according to Regulations REACh 1907/2006/EC

Chemical: ethanol
CAS No.: 64-17-5
PNEC = Predicted No Effect Concentration
LC50 (fresh water):
- daphnia magna/48h: >100 mg/L
- pimephales promelas/96h: 13400 - 15100 mg/L
- leuciscus idus/96h: 13 g/L
- fish/96h: 8140 mg/L
EC50 (fresh water):
- daphnia/48h: 9.3-14.2 g/L
- scenedesmus quadricauda/72h: 5000 mg/L
EC10 (fresh water):
- pseudomonas putita/16h: 6500 mg/L

Water hazard class (DE):
- 1
WGK No.:
- 0096
Dispersion coefficient (o/w):
- 0.31
Storage class (VCI):
- 3

Chemical: phenolphthalein (pH indicator)
CAS No.: 77-09-8
Water hazard class (DE):
- 1
Dispersion coefficient (o/w):
- 0.9
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
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.

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 1993 class 3 II, Excepted Quantities (≤30 mL/∑≤500 mL) = ADR/ IATA E2 or
14.1 UN number: 1993
14.2 UN proper shipping name: Flammable liquid, n.o.s. (ethanol mixture)
14.3 Class: 3
14.4 Packing group: II

Road transport ADR
- Classification code: F1
- Limited Quantity: 1 L
- Excepted Quantity: E 2

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

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
- BekGS 408, Application of the GefStoffV and the TRGS with the entry into force of the CLP regulation, December 2009, status: Jan 2012
- 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

SECTION 16: Other information

16.1 Changes compared to the last version
- in preparation

16.2 List of H and P phrases
16.2.1 List of relevant H phrases
- H225 Highly flammable liquid and vapour.

16.2.2 List of relevant P phrases

16.3 Recommended restriction on use
- Only for professional user.
- 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
- 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)
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
2017–08 adjustment according the Ordinance on Ethanol Denaturation 2016/1867/EU
2017-11 adjustment according the ECHA registration dossier
2022-11 adjustment according Regulation 878/2020/EU

16.5 Further information
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16.6 Legend / Abbreviations
acc: according
ADR: Convention concerning the International Carriage of Dangerous Goods by Road
Act: acute
BAT: biological workplace tolerance value
CAO: Cargo Aircraft Only
Carc: carcinogen
CAS: Chemical Abstracts Service
CLP: Classification, Labelling and Packaging regulation
CMR: carcinogen, mutagen, reproduction toxic
Corr: corrosive
COD: chemical oxygen demand
CSCL: Chemical Substance Control Law (Jp)
Dam: damage
DNEL: Derived No-Effect Level (for workers)
derm: dermal
dog: dog
EC10: Concentration causing a toxic effect in 10% of the test organisms
EC: European Community
EC-Nr: Substance number of the EC substance inventory
EmS: Guide to accident management measures on ships
EU: European Union
fish: fish (not specified)
GHS: Global Harmonized System of Classification and Labeling of Chemicals
gpg: guinea pig
ICAO: International Civil Aviation Organization
ih: inhaled
IMDG: International Maritime Dangerous Goods Code
intrav: intravenous
ipt: intraperitoneal
ISHL: Industrial Safety and Health Law (Jp)
LC50: lethal concentration 50%
LD50: lethal dose 50%
leuciscus idus: fisch, ide, orfe
MAK: maximum workplace concentration
Met: Metall
mus: mouse
Muta: mutagen
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.