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

### 1.1 Product identifier

REF 931030
Product name VISOCOLOR ECO Hydrazine

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 $N_2H_4$ -1
1 x 27 mL $N_2H_4$ -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
Valencienner 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



GHS05

Signal word DANGER

| Hazard identification | Hazard classes/categories |
|---|---|
| H314 | Skin Corr. 1A |

### 2.1 Classification of the substance or mixture

**30 mL $N_2H_4$ -1**



GHS05

Signal word DANGER

| Hazard identification | Hazard classes/categories |
|---|---|
| H314 | Skin Corr. 1A |



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Version: M V 4.12.0

**27 mL $N_2H_4$ -2**

Do not need labelling as hazardous

Signal word -

No hazard class

### 2.2 Label elements

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).

#### 30 mL $N_2H_4$ -1



GHS05

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.

#### 27 mL $N_2H_4$ -2

Do not need labelling as hazardous
Signal word: -

### 2.3 Other hazards

**Possible hazards from physicochemical properties**
Generally in the case of pH values are less than 2 or higher than 11.5 then it is corrosive. ---

**Information pertaining to particular risks to human and possible symptoms**
Causes varying degrees of acid burns on the skin, to the eyes and to the mucous membranes and wounds which do not heal quickly depending on the concentration, temperature and the exposure time. Vapours especially which steam from hot liquids and mist can have a severe irritant effect upon the eyes and the respiratory organs.
-

**Information pertaining to particular risks to the environment**
Avoid contact of substance/mixture to environment.
**PBT:** not applicable
**vPvB:** not applicable

**Other hazards**
---

## SECTION 3: Composition/information on ingredients

### 3.1 Substances or 3.2 Mixtures

**30 mL $N_2H_4$ -1**

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



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CH: Tel.: +41 62 388 55 00 Fax: +41 62 388 55 05 E-mail: sales-ch@mn-net.com
FR: Tel.: +33 388 68 22 68 Fax: +33 388 51 76 88 E-mail: sales-fr@mn-net.com
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**27 mL $N_2H_4$ -2**

Chemical: *4-dimethylaminobenzaldehyde* CAS No.: 100-10-7
Classification: No criteria for classification or naming of chemical not required.
Formula: $C_9H_{11}NO$
TSCA Inventory: listed
REACH Reg. No.: n/a
EC No.: 202-819-0
RTECS: CU5775000 MFCD: 00003381
Concentration: 1 - <10 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

Chemical: *dimethyl sulfoxide* CAS No.: 67-68-5
Classification: No criteria for classification or naming of chemical not required.
Formula: $C_2H_6OS$
Pseudonym: DMSO, 1,1'-sulfinylbis-methane
TSCA Inventory: listed
REACH Reg. No.: 01-2119431362-50-xxxx
EC No.: 200-664-3
RTECS: PV6210000 MFCD: 00002089
KE No.: KE-32367
Concentration: 40 - <60 %
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 16.1

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Place insured person out of danger zone to fresh air immediately. Ensure quiet, warmth, and provide resuscitation if necessary. If necessary contact medical advice. Remove contaminated clothing. Show product package, packing insert and this material safety data sheet to the doctor.

**4.1.1 After SKIN Contact**
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. ---

**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

---

### 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 to 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 DISTREES ensure that the patient inhales oxygen. ---



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DE / international: Tel.: +49 24 21 969-0 Fax: +49 24 21 969-199 E-mail: info@mn-net.com
CH: Tel.: +41 62 388 55 00 Fax: +41 62 388 55 05 E-mail: sales-ch@mn-net.com
FR: Tel.: +33 388 68 22 68 Fax: +33 388 51 76 88 E-mail: sales-fr@mn-net.com
US: Tel.: +1 484 821 0984 Fax: +1 484 821 1272 E-mail: sales-us@mn-net.com

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

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

### 5.2 Special hazards arising from the substance or mixture

Formation of hazardous and caustic vapour-air mixtures possible. ---

### 5.3 Advice for firefighters

No, for listed product. Product package burns like paper or plastic. Spray any vapours released with water. Retent fire water. Use only acid-resistant safety equipment.
For great amount - if necessary - protective breathing apparatus which is independent of the ambient air (isolated equipment), and sealed protective clothing is necessary in the event of a large-scale formation of toxic substances.

### 5.4 Additional information

Danger for environment **only in the event of a large-scale leakage** or formation of hazardous substances. ---

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapours. Wear suitable protective gloves (see 8.2.2). Wear eye protection, respectively face protection. Regular staff training is necessary, indicating hazards and precautions on the basis of operating instructions. Restrictions on activity must be observed.

### 6.2 Environmental precautions

not necessary

### 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.

### 7.2 Conditions for safe storage, including any incompatibilities

The original product package of MACHEREY-NAGEL allows a safe storage.
Storage class (VCI): 8B
Water hazard class (DE): 1

#### 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 $N_2H_4$ -1**
Chemical: *sulfuric acid* CAS No.: 7664-93-9
DNEL: [inh] 50 µg/m³
DNEL = Derived No-Effect Level (for workers)
$PNEC_{(fresh\ water)}$ : 2.5 µg/L
PNEC = Predicted No Effected Concentration
EU value: 0.1 e mg/m³
TRGS 900 (DE): 0.1 E mg/m³
E/e respirable
Short-term exposure factor: 1 (I), Y
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded
SUVA(CH) MAK value: 0,1 e mg/m³
NIOSH: NTP Report on Carcinogens (RoC) List Yes (Known to be a human carcinogen); [TWA] 1 mg/m³



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DE / international: Tel.: +49 24 21 969-0 Fax: +49 24 21 969-199 E-mail: info@mn-net.com
CH: Tel.: +41 62 388 55 00 Fax: +41 62 388 55 05 E-mail: sales-ch@mn-net.com
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[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: [TWA] 1 mg/m³

**27 mL $N_2H_4$ -2**

Chemical: *4-dimethylaminobenzaldehyde* CAS No.: 100-10-7

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 Effected 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

### 8.2 Exposure controls

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

**8.2.1 Respiratory protection**
No additional recommendations.

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

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

**8.2.4 Skin protection**
Recommended to avoid clothing damage, and to avoid contamination with these hazards.

**8.2.5 Personal hygiene**
Eating, drinking, smoking, taking snuff and storage of food in work areas and at outdoor workplaces is prohibited. Avoid contact with the skin, eyes and clothing. Rinse any clothing on which the substance has been spilled, and soak it in water. Wash hands thoroughly with soap and water when stopping work and before eating, and then apply protective skin cream.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**30 mL $N_2H_4$ -1**

| | | |
|---|---|---|
| Appearance: liquid | Colour: colourless | Odor: odorless |
| pH: | 0-1 | |
| Specific gravity: | 1,77 g/cm³ | |
| Solubility in water: | 0-100 % | |

**27 mL $N_2H_4$ -2**

| | | |
|---|---|---|
| Appearance: liquid | Colour: slightly yellow | Odor: fusty, mouldy |
| pH: | 6-8 | |
| Flash point: | 100 °C | |
| Solubility in water: | 0-100 % | |

### 9.2 Other information

Data for the other parameters of the mixtures are not available, because no registration and no chemical safety report is required.
**Relevant Properties of Substance Group**
---



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CH: Tel.: +41 62 388 55 00 Fax: +41 62 388 55 05 E-mail: sales-ch@mn-net.com
FR: Tel.: +33 388 68 22 68 Fax: +33 388 51 76 88 E-mail: sales-fr@mn-net.com
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## 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
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.

**30 mL $N_2H_4$ -1**

| | | |
|---|---|---|
| Chemical: | *sulfuric acid* | CAS No.: 7664-93-9 |
| TSCA Inventory: | listed | California Proposition 65 List: not listed |
| ACGIH: | 1 ppm | |
| Exposure Routes: | inhalation, ingestion, skin and/or eye contact | |
| Target Organs: | Eyes, skin, respiratory system, teeth | |
| Symptoms: | irritation eyes, skin, nose, throat; pulmonary edema, bronchitis; emphysema; conjunctivitis; stomatis; dental erosion; eye, skin burns; dermatitis | |
| Australia NICNAS: | not listed | Canada CEPA 1999: DSL Yes |
| Japan CSCL/PRTR: | not listed, Japan PDSCL: Deleterious Substance | |
| Japan ISHL: | listed ≥1,0%/≥1,0%, Article 57-2 (SDS required) | |
| South Korea TCCA: | Accident Precaution Chemical Yes | |
| Korea Exist.Chem.Inventory: | KE-32570, >10% Toxic 97-1-405, Acc. Precaution Chem. | |
| $LD50_{orl\ rat}$ : | 2140 mg/kg | |
| $LC50_{ihl\ rat}$ : | [8h] 600/ [4h] 850 mg/m³ | |
| TRGS 905 (DE): | Kat 4 | |

**27 mL $N_2H_4$ -2**

| | | |
|---|---|---|
| Chemical: | *4-dimethylaminobenzaldehyde* | CAS No.: 100-10-7 |
| TSCA Inventory: | listed | |
| $LD50_{orl\ rat}$ : | >6400 mg/kg | |
| $LC_Low_{orl\ rat}$ : | 500 mg/kg | |

| | | |
|---|---|---|
| Chemical: | *dimethyl sulfoxide* | CAS No.: 67-68-5 |
| TSCA Inventory: | listed | |
| Korea Exist.Chem.Inventory: | KE-32367 | |
| $LD50_{orl\ rat}$ : | 14.5 g/kg | |
| $LD50_{drm\ rat}$ : | 40 g/kg | |

## SECTION 12: Ecological information

### 12.1 Toxicity
**Following information is valid for pure substances.**

**30 mL $N_2H_4$ -1**



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DE / international: Tel.: +49 24 21 969-0 Fax: +49 24 21 969-199 E-mail: info@mn-net.com
CH: Tel.: +41 62 388 55 00 Fax: +41 62 388 55 05 E-mail: sales-ch@mn-net.com
FR: Tel.: +33 388 68 22 68 Fax: +33 388 51 76 88 E-mail: sales-fr@mn-net.com
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Chemical: *sulfuric acid* CAS No.: 7664-93-9
Avoid contact of substance/mixture to environment.
$PNEC_{(fresh\ water)}$ : 2.5 µg/L
PNEC = Predicted No Effected Concentration
$LC50_{fish/96h}$ : [NOEC, 65d] 25 µg/L
$EC50_{daphnia/48h}$ : 100 mg/L
$EC10_{pseudomonas\ putita/16h}$ : [72h] 100 mg/L
Water hazard class (DE): 1 WGK No.: 0182
Storage class (VCI): 8 B

**27 mL $N_2H_4$ -2**

Chemical: *4-dimethylaminobenzaldehyde* CAS No.: 100-10-7
Water hazard class (DE): 1
Storage class (VCI): 12-13

Chemical: *dimethyl sulfoxide* CAS No.: 67-68-5
$PNEC_{(fresh\ water)}$ : 17 mg/L
PNEC = Predicted No Effected Concentration
$LC50_{fish/96h}$ : 38.5 g/L
$EC50_{daphnia/48h}$ : 24.6 g/L
$EC10_{pseudomonas\ putita/16h}$ : EC/16h: 7100 mg/L
Water hazard class (DE): 1 WGK No.: 5050
$Dispersion\ coefficient_{(octanol\text{-}water)}$ : -1.35
Storage class (VCI): 12

### 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).

### 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*
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) class 8 II, **Excepted Quantities** (≤30 mL/∑≤500 mL) = ADR/ IATA E2
or
**14.1 UN number: 3264 14.2 UN proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (sulfuric acid solution)**
**14.3 Class: 8 14.4 Packing group: II**
*Road transport*
Classification code: C1



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DE / international: Tel.: +49 24 21 969-0 Fax: +49 24 21 969-199 E-mail: info@mn-net.com
CH: Tel.: +41 62 388 55 00 Fax: +41 62 388 55 05 E-mail: sales-ch@mn-net.com
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| | | | |
|---|---|---|---|
| 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**

| | |
|---|---|
| H314 | Causes severe skin burns and eye damage. |

**16.1.2 List of relevant P phrases**

| | |
|---|---|
| P260sh | Do not breathe dust/vapours. |
| P280sh | Wear protective gloves/eye 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. |

### 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.
MACHEREY-NAGEL GmbH & Co. KG makes NO REPRESENTATIONS or WARRANTIES, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly MACHEREY-NAGEL GmbH & Co. KG will not be responsible for damages resulting from use of or reliance upon this information. See terms and conditions at the end of our price lists for additional information.



MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6–8 · 52355 Düren · Germany

DE / international:
Tel.: +49 24 21 969-0
Fax: +49 24 21 969-199
E-mail: info@mn-net.com

CH:
Tel.: +41 62 388 55 00
Fax: +41 62 388 55 05
E-mail: sales-ch@mn-net.com

FR:
Tel.: +33 388 68 22 68
Fax: +33 388 51 76 88
E-mail: sales-fr@mn-net.com

US:
Tel.: +1 484 821 0984
Fax: +1 484 821 1272
E-mail: sales-us@mn-net.com

### 16.5 Sources of key data

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
Regulation 669/2018/EU, 4th adaptation of CLP regulation to technical and scientific progress
Regulation 1480/2018/EU, 4th adaptation of CLP regulation to technical and scientific progress
Regulation 849/2021/EU, 4th 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
KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)

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



MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6–8 · 52355 Düren · Germany
DE / international: Tel.: +49 24 21 969-0 Fax: +49 24 21 969-199 E-mail: info@mn-net.com
CH: Tel.: +41 62 388 55 00 Fax: +41 62 388 55 05 E-mail: sales-ch@mn-net.com
FR: Tel.: +33 388 68 22 68 Fax: +33 388 51 76 88 E-mail: sales-fr@mn-net.com
US: Tel.: +1 484 821 0984 Fax: +1 484 821 1272 E-mail: sales-us@mn-net.com