

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

VISOCOLOR ECO Sulfide Page: 1/10

Printing date: 01.10.2019 Date of issue: 17.04.2019

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

1.1 **Product identifier**

REF 931094

Product name VISOCOLOR ECO Sulfide

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 5 g S-1 1 x 22 mL S-2 1 x 30 mL S-3

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 Dueren, 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





GHS07

GHS05

DANGER Signal word

| Hazard identification | Hazard classes/categories |
|-----------------------|---------------------------|
| H314 | Skin Corr. 1A |
| H315 | Skin Irrit. 2 |
| H319 | Eye Irrit. 2 |
| H412 | Aguatic Chronic 3 |

Classification of the substance or mixture 2.1

5 q S-1



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> Signal word WARNING

| Hazard identification | Hazard classes/categories |
|-----------------------|---------------------------|
| H315 | Skin Irrit. 2 |
| H319 | Eye Irrit. 2 |
| H412 | Aquatic Chronic 3 |

22 mL S-2



DANGER

Hazard identification Hazard classes/categories

H314 Skin Corr. 1A

30 mL S-3

Do not need labelling as hazardous

Signal word

No hazard class

Signal word

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).

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

5 g S-1



Signal word: WARNING

22 mL S-2



GHS05

Signal word: DANGER

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.

30 mL S-3

Do not need labelling as hazardous

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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. In the case of pH values are less than 5 or higher than 9 then it is irritant. --

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 not applicable vPvB:

Other hazards

SECTION 3: Composition/information on ingredients

3.1 Substances or 3.2 Mixtures

5 g S-1

Chemical: aminosulfonic acid (sulfamic acid) CAS No.: 5329-14-6

H315, Skin Irrit. 2, H319, Eye Irrit. 2, H412, Aquatic Chronic 3 Classification:

Formula: H₃ NO₃ S; NH₂ -SO₃ H TSCA Inventory: listed REACH Reg. No.: 01-2119488633-28-xxxx

EC No.: 226-218-8 Indice No.: 016-026-00-0 RTECS: WO5950000 0005994x MFCD:

Concentration: 90 - <100 %

acc. CLP (GHS): H315, Skin Irrit. 2, H319, Eye Irrit. 2, H412, Aquatic Chronic 3

22 mL S-2

Chemical: N,N-dimethyl-1,4-phenylenediammonium dichloride CAS No : 536-46-9

Classification: No criteria for classification or naming of chemical not required.

Formula: C₈ H₁₂ N₂ •HCl

TSCA Inventory: listed REACH Reg. No.:

EC No.: 208-635-7

MFCD: RTECS: ST1300000 00012991 Concentration: < 1,00 %

acc. CLP (GHS): The criteria for classification are not fulfilled

Chemical: CAS No.: 7664-93-9 sulfuric acid

Classification: H314, Skin Corr. 1B Formula: H₂ SO₄ (•H₂ O) TSCA Inventory: listed

REACH Reg. No.: 01-2119458838-20-xxxx

EC No.: 231-639-5 016-020-00-8 Indice No.:

RTFCS WS5600000

KE-32570, >10% Toxic 97-1-405, Acc. Precaution Chem. KE No .:

Concentration: 51 - <65 % acc. CLP (GHS): H314, Skin Corr. 1B

30 mL S-3

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MACHEREY-NAGEL



CAS No.: 7664-93-9d

016-020-00-8

Safety Data Sheet

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> Chemical: sulfuric acid (diluted < 5 %)

Classification: H315, Skin Irrit. 2, H319, Eye Irrit. 2

Formula: H₂ SO₄ •H₂ O TSCA Inventory: listed

REACH Reg. No.:

01-2119458838-20-xxxx EC No.: 231-639-5 Indice No.:

WS5600000 RTFCS KE No .: KE-32570 Concentration: 1 - <5 %

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

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 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 INTAKÉ 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. ---

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

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. ---

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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, contains only small amounts of these substances

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): Water hazard class (DE) 3

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

5 g S-1

Chemical: aminosulfonic acid (sulfamic acid) CAS No.: 5329-14-6

[derm] 10 mg/kg bw/d; [inh] 70,5 mg/m³ DNEL:

DNEL = Derived No-Effect Level (for workers) PNEC_(fresh water): 1.8 mg/L PNEC = Predicted No Effected Concentration

22 mL S-2

Chemical: N,N-dimethyl-1,4-phenylenediammonium dichloride CAS No.: 536-46-9

Chemical: CAS No.: 7664-93-9 sulfuric acid

[inh] 50 µg/m³ DNEL = Derived No-Effect Level (for workers) DNEL: $\begin{array}{ccc} PNEC_{(fresh\ water)}: & 2.5\ \mu g/L \\ PNEC = Predicted\ No\ Effected\ Concentration \end{array}$ EU value: 0.1 e mg/m³ 0.1 E mg/m³ E/e respirable TRGS 900 (DE):

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:

NTP Report on Carcinogens (RoC) List Yes (Known to be a human carcinogen); [TWA] 1 mg/m³ NIOSH:

[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

30 mL S-3

Chemical: sulfuric acid CAS No.: 7664-93-9d

DNEL: 50 μg/m³ DNEL = Derived No-Effect Level (for workers) $\mathsf{PNEC}_{(\mathsf{fresh\ water})}$: 2.5 µg/L

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> PNEC = Predicted No Effected Concentration TRGS 900 (DE): 0.1 E mg/m³ E/e respirable

Short-term exposure factor: 1 (I)

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

i: NTP Report on Carcinogens (RoC) List Yes (Known to be a human carcinogen); TWA 1 mg/m³ [TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period NIOSH:

OSHA: [TWA] 1 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

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

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

5 g S-1

Colour: colourless Odor: odorless Appearance: solid

pH: < 2

0-17 % Solubility in water:

22 mL S-2

Appearance: liquid Colour: colourless Odor: odorless

pH:

Specific gravity: 1,42 g/cm³ Solubility in water: 0-100 %

30 mL S-3

Appearance: liquid Colour: slightly yellow Odor: odorless

pH: 0-1

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

no further data available.

10.2 Chemical stability

No known instability.

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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.

Chemical: aminosulfonic acid (sulfamic acid) CAS No.: 5329-14-6

TSCA Inventory: listed

Target Organs: affect the eye or visual capacity conjunctivitis; corneal damage Symptoms:

LD50_{orl rat}: 2065 mg/kg LC50_{drm rbt}: 2000 mg/m³

22 mL S-2

Chemical: N.N-dimethyl-1,4-phenylenediammonium dichloride CAS No.: 536-46-9

TSCA Inventory: listed

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 [8h] 600/ [4h] 850 mg/m³ LC50_{ihl rat}:

TRGS 905 (DE): Kat 4

30 mL S-3

Chemical: sulfuric acid CAS No.: 7664-93-9d

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

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 2140 mg/kg LD50orl rat:

[8h] 600/ [4h] 850 mg/m³ LC50_{ihl rat}:

TRGS 905 (DE): R_E C

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SECTION 12: Ecological information

12.1 **Toxicity**

Following information is valid for pure substances.

5 g S-1

aminosulfonic acid (sulfamic acid) CAS No.: 5329-14-6 Chemical:

Harmful to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment. Environmental hazards must not be labelled with P phrases until 125 mL (EU 1272/2008 Annex I - 1.5.2).

PNEC (fresh water):
PNEC = Predicted No Effected Concentration 1.8 mg/L

LC50_{fish/96h}: [4d] 70.3 mg/L $EC50_{daphnia/48h}$: [48h=24h] 71.6 mg/L [72h] 48 mg/L IC50scenedesmus quadricauda/72h

WGK No.: 1266 Water hazard class (DE): -4 34

Dispersion coefficient(octanol-water): Storage class (VCI): 8 B

22 mL S-2

Chemical: N,N-dimethyl-1,4-phenylenediammonium dichloride CAS No.: 536-46-9

Water hazard class (DE): Storage class (VCI): 6.1 D

Chemical: sulfuric acid CAS No.: 7664-93-9

Avoid contact of substance/mixture to environment. PNEC(fresh water):
PNEC = Predicted No Effected Concentration $2.5 \mu g/L$

 $LC50_{fish/96h}$: [NOEC, 65d] 25 µg/L EC50_{daphnia/48h}: 100 mg/L EC10_{pseudomonas putita/16h}: [72h] 100 mg/L

Water hazard class (DE): WGK No.: 0182

Storage class (VCI):

30 mL S-3

Chemical: sulfuric acid CAS No.: 7664-93-9d

PNEC_(fresh water):
PNEC = Predicted No Effected Concentration 2.5 µg/L

LC50_{fish/96h}: [NOEC, 65d] 25 µg/L EC50_{daphnia/48h}: 100 mg/L [72h] 100 mg/L EC10_{pseudomonas putita/16h} Water hazard class (DE): WGK No.: 0182

Storage class (VCI):

12.2 Persistence and degradability

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.

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SECTION 14: Transport information

14.1. UN number: 3316 14.3. Class: 9 14.2. UN proper shipping name: Chemical Kit

14.4. Packing group:

Road transport Classification code: M11 Tunnel restriction code:

Limited Quantity: acc. ADR 3.3.1/251: see LQ in Alternative declaration for transportation

Air transport

PAX: 960 max. weight PAX: 10 KG max. weight CAO: CAO: 960 10 KG

Maritime transport

EmS: F-A, S-P Storage category:

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:

14.2 UN proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (aminosulfonic acid (sulfamic acid), sulfuric acid solution)

14.3 Class: 14.4 Packing group:

Road transport

Classification code: C1

Tunnel restriction code: Ε Limited Quantity: 1 L

Excepted Quantity: F 2

Air transport

PAX. max. weight PAX: 1 I CAO: 855 30 L max. weight CAO:

Maritime transport

EmS: F-A, S-B Storage category: В

14.5 **Environmental hazards**

none, contains only small quantities of hazardous substances, contains only small amounts of these substances

14.6 Special precautions for user

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

Causes severe skin burns and eye damage. H314

H315 Causes skin irritation. H319 Causes serious eye irritation.

Harmful to aquatic life with long lasting effects. H412

16.1.2 List of relevant P phrases

Do not breathe dust/vapours. P260sh P273 Avoid release to the environment. P280sh Wear protective gloves/eye protection.

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Safety Data Sheet

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

REF: 931094 VISOCOLOR ECO Sulfide Page: 10/10 Printing date: 01.10.2019 Date of issue: 17.04.2019

> 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

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16.5 Sources of key data

Regulation 453/2010/EU REACH - REQUIREMENTS FOR THE COMPILATION OF SAFETY DATA SHEETS

Regulation 487/2013/EU, 4th adaptation of CLP regulation to technical and scientific progress Regulation 669/2018/EU, 4th adaptation of CLP regulation to technical and scientific progress TRGS 900, German engineering rules governing limits in air at work, updated 03/2018

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

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