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

1.1 Product identifier

REF: 931008
Product name: VISOCOLOR ECO Ammonium 3

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 NH₄⁺ -1
1 x 2.5 g NH₄⁺ -2
1 x 10 mL NH₄⁺ -3

UFI: AADU-73NS-C20E-U17Y
UFI: JKDU-R3QY-820W-T205

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>

SECTION 2: Hazard identification

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

GHS02 GHS05
Signal word: DANGER

Hazard identification Hazard classes/categories
H226 Flam. Liq. 3
H314 Skin Corr. 1B
H412 Aquatic Chronic 3

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

30 mL NH₄⁺ -1

GHS05
Safety Data Sheet
according to Regulations REACh 1907/2006/EC

Signal word
DANGER

Hazard identification
H314
Skin Corr. 1B

Signal word
DANGER

Hazard classes/categories
H226
Flam. Liq. 3
H314
Skin Corr. 1B
H412
Aquatic Chronic 3

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).

30 mL NH₄ -1

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.

10 mL NH₄ -3

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.
2.5 g NH₄⁻²

Do not need labelling as hazardous
Signal word: -

Label elements of the complete product

GHS02  GHS05

Signal word: DANGER
H314
Causes severe skin burns and eye damage.
P260sh, P280sh, P303+351+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.

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.

Information pertaining to particular risks to the environment
Avoid contact of substance/mixture to environment.

PBT: not applicable
vPvB: not applicable

Possible endocrine disrupting effects
no data available

SECTION 3: Composition / information on ingredients

3.1 Substances or 3.2 Mixtures

2.5 g NH₄⁻²

Substance name: sodium chloride
CAS No.: 7647-14-5

Substance rating: No criteria for classification or naming of chemical not required.
Formula: NaCl
Pseudonym (de): Kochsaiz
REACH Reg. No.: exempt, Annex V
EC No.: 231-598-3
Concentration: 80 - <100 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

Substance name: dichloroisocyanuric acid, Na salt
CAS No.: 2893-78-9

Substance rating: H272, Ox. Liq. 2, H302, Acute Tox. 4 oral, H319, Eye Irrit. 2, H335, STOT SE 3, H410, Aquatic Chronic 1, EUH031, 031 not defined
Formula: C₃Cl₂N₃NaO₃
Pseudonym (de): 1,3-Dichlor-5H-(1,3,5)-triazin-2,4,6-trion
REACH Reg. No.: 01-2119489371-33-xxxx
EC No.: 220-767-7
Concentration: 3 - <10 %
acc. CLP (GHS): The criteria for classification are not fulfilled.
10 mL NH₄⁻3

Substance name: thymol
CAS No.: 89-83-8

Substance rating: H302, Acute Tox. 4 oral, H314, Skin Corr. 1B, H411, Aquatic Chronic 2
Formula: C₁₀H₁₄O₃
Pseudonym (de): 1-Methyl-3-hydroxy-4-isopropylbenzol
REACH Reg. No.: 01-211951177-46-xxxx
EC No.: 201-944-8
Concentration: 5 - <10 % acc.
acc. CLP (GHS): H314, Skin Corr. 1B, H412, Aquatic Chronic 3

30 mL NH₄⁺

Substance name: sodium nitroprusside
CAS No.: 13755-38-9

Substance rating: H301, Acute Tox. 3 oral
Formula: Na₂[Fe(CN)₅NO]·2H₂O
Pseudonym (de): Natriumpentacyanonitrosylferrat(II)
REACH Reg. No.: 01-211945710-43-xxxx
EC No.: 238-373-9
Concentration: 1 - <5 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

Substance name: ethanol
CAS No.: 64-17-5

Substance rating: H225, Flam. Liq. 2
Formula: C₂H₆O; C₂H₅OH
Pseudonym (de): Äthylalkohol, vergällter Spiritus
REACH Reg. No.: 01-2119457892-27-xxxx
EC No.: 200-578-6
Concentration: 35 - <55 %
acc. CLP (GHS): H226, Flam. Liq. 3

Substance name: sodium hydroxide solution
CAS No.: 1310-73-2

Substance rating: H314, Skin Corr. 1B
Formula: NaOH·H₂O
Pseudonym (de): Natronlauge
REACH Reg. No.: 01-2119457892-27-xxxx
EC No.: 215-185-5
Concentration: 5 - <10 %
acc. CLP (GHS): H314, Skin Corr. 1B

Substance name: tri-sodium citrate
CAS No.: 6132-04-3

Substance rating: No criteria for classification or naming of chemical not required.
Formula: C₆H₅Na₃O₇·2H₂O
Pseudonym (de): Na-citrat, E331
REACH Reg. No.: 01-2119457027-40-xxxx
EC No.: 200-675-3
Concentration: 10 - <20 %
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.
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
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 glucocorticosteroids 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 INHALATION administer aluminium oxide drug suspensions following the INGESTION of corrosive aerosols. In the event of RESPIRATORY DISTRESSES ensure that the patient inhales oxygen. ---

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

5.3 Advice for firefighters
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
Avoid contact of substance/mixture to 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.
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.

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): 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

2.5 g NH₄ -2
Chemical: sodium chloride
CAS No.: 7647-14-5

Chemical: dichloroisocyanuric acid, Na salt
NIOSH: not listed
OSHA: not listed

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

10 mL NH₄ -3
Chemical: thymol
CAS No.: 89-83-8
Chemical: sodium nitroprusside
CAS No.: 13755-38-9
Chemical: ethanol
CAS No.: 64-17-5

DNEL = Derived No-Effect Level (for workers)
PNEC = Predicted No Effect Concentration
TRGS 900 (DE):
200 mL/m³ / 380 mg/m³
E/e respirable

Short-term exposure factor: 4 (Il), Y
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 500 ppm / 960 mg/m³

NIOSH: [TWA] 1000 ppm / 1900 mg/m³
OSHA: [TWA] 1000 ppm / 1900 mg/m³

30 mL NH₄ -1
Chemical: sodium hydroxide solution
CAS No.: 1310-73-2

DNEL = Derived No-Effect Level (for workers)
TRGS 900 (DE):
2 mg/m³
E/e respirable

Short-term exposure factor: (=1=, Y)
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded
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 (e.x. 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

2.5 g NH₄ -2
a) State of aggregation: powder (solid)
b) Colour: colourless
c) Odor: chloric
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: 5-7
l) Kinematic viscosity: no data available
m) Solubility in water: no data available
n) Dispersion coefficient (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

10 mL NH₄ -3
a) State of aggregation: liquid
b) Colour: rose
c) Odor: organic
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: 23 °C
i) Flashing temperature: no data available
**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 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.

2.5 g NH₄⁻ -2

Chemical: \( \text{sodium chloride} \)  CAS No.: 7647-14-5
TSCA Inventory: listed
Korea Exist.Chem.Inventory: KE-31387
LD₅₀ orl rat : 3000 mg/kg

Chemical: \( \text{dichloroisocyanuric acid, Na salt} \)  CAS No.: 2893-78-9
TSCA Inventory: listed California Proposition 65 List: not listed
Australia NICNAS: not listed Canada CEPA 1999: DSL Yes
Japan CSCL/PRTR: not listed, Japan PDSC: not listed
Japan ISHL: not listed
South Korea TCCA: not listed
LD₅₀ orl rat : 550-1600 mg/kg
LC₅₀ Low orl hmn : 3570 mg/kg

10 mL NH₄⁺ -3

Chemical: \( \text{thymol} \)  CAS No.: 89-83-8
TSCA Inventory: listed
Korea Exist.Chem.Inventory: KE-24420
LD₅₀ orl rat : 980 mg/kg

Chemical: \( \text{sodium nitroprusside} \)  CAS No.: 13755-38-9
TSCA Inventory: listed (CAS 14402-89-2)
Korea Exist.Chem.Inventory: not listed
LD₅₀ orl rat : 99 mg/kg
LC₅₀ Low orl rat : 20 mg/kg

Chemical: \( \text{ethanol} \)  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 PDSC: 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
LC₅₀ Low lth gpg : 21,900 mg/L
LC₅₀ Low lth mm : 1400 mg/kg
LC₅₀ inh mouse : 123,4 mg/L/4H
LC₅₀ inh rat : 115,9-133,8 mg/L/4H
LD₅₀ orl mouse : 3450 mg/kg
TRGS 905 (DE): K5, M5, R r c

30 mL NH₄⁺ -1

Chemical: \( \text{sodium hydroxide solution} \)  CAS No.: 1310-73-2
TSCA Inventory: listed California Proposition 65 List: not listed
Exposure Routes: inhalation, ingestion, skin and/or eye contact
Target Organs: Eyes, skin, respiratory system
Symptoms: irritation eyes, skin, mucous membrane; pneumonitis; eye, skin burns; temporary loss of hair
Australia NICNAS: not listed Canada CEPA 1999: DSL yes
Japan CSCL/PRTR: not listed, Japan PDSC: not listed
Japan ISHL: listed ≥1,0%/≥1,0%, Article 57-2 (SDS required)
South Korea TCCA: not listed
Korea Exist.Chem.Inventory: KE-31487
LD50 orl rat: [40%] 1250 / [<25%] >2000 mg/kg
LD50 orl mus: 40 mg/kg

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

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.
2.5 g NH₄⁺-2
Chemical: sodium chloride
CAS No.: 7647-14-5
Water hazard class (DE): 1
Storage class (VCI): 12-13

Chemical: dichloroisocyanuric acid, Na salt
CAS No.: 2893-78-9
Water hazard class (DE): 3
Storage class (VCI): 13

10 mL NH₄⁺-3
Chemical: thymol
CAS No.: 89-83-8
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).
LC50 pimephales promelas/96h: 3.2 mg/L
EC50 daphnia/48h: 3.2 mg/L
Water hazard class (DE): 2
Storage class (VCI): 8 A

Chemical: sodium nitroprusside
CAS No.: 13755-38-9
Water hazard class (DE): 3
Storage class (VCI): 6.1 B

Chemical: ethanol
CAS No.: 64-17-5

PNEC = Predicted No Effected Concentration
LC50 daphnia magna/48h: >100 mg/L
LC50 pimephales promelas/96h: 13400 - 15100 mg/L
LC50 leuciscus idus/96h: [48h] 8140 mg/L
LC50 fish/96h: 13 g/L
EC50 daphnia/48h: 9.3-14.2 g/L
IC50 scenedesmus quadricauda/72h: [7d] 5000 mg/L
EC10 pseudomonas putida/16h: [EC5] 6500 mg/L
Water hazard class (DE): 1
Dispersion coefficient (o/w): -0.31
Storage class (VCI): 3

30 mL NH₄⁺-1
Chemical: sodium hydroxide solution
CAS No.: 1310-73-2
Avoid contact of substance/mixture to environment.
LC50 leuciscus idus/96h: 35-189 mg/L
LC50 fish/96h: 45.4 mg/L
EC50 daphnia/48h: >100 mg/L
Water hazard class (DE): 1
Storage class (VCI): 8 B
Safety Data Sheet
according to Regulations REACh 1907/2006/EC

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 putita/16h: EC50 ps. fluorescens/8h: >1.8-3.2 g/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
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 ICAO
PAX: 960  max. weight PAX: 10 KG
CAO: 960  max. weight CAO: 10 KG

Maritime transport IMDG
EmS: F-A, S-P  Storage category: A

Or use Alternative declaration for transportation:
UN No.: (see below) UN 1993 class 3 III, Excepted Quantities (≤30 mL/∑≤1 L) = ADR/ IATA E1
class 8 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: III

Road transport ADR
Classification code: F1
Limited Quantity: 5 L  Tunnel restriction code: D/E
Excepted Quantity: E 1  Special instructions: 640E
Air transport ICAO
Limited Quantity: LQ 7
Excepted Quantity: E 1
PAX: 355  max. weight PAX: 60 L
CAO: 366  max. weight CAO: 220 L

Maritime transport IMDG
Safety Data Sheet
according to Regulations REACh 1907/2006/EC

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

14.1 UN number: 3266  14.2 UN proper shipping name: Corrosive liquid, basic, inorganic, n.o.s. (sodium hydroxide solution)
14.3 Classification code: C5  14.4 Packing group:  II

Road transport ADR
14.1 Class: 8
14.2 UN proper shipping name: Corrosive liquid, basic, inorganic, n.o.s. (sodium hydroxide solution)
Limited Quantity: 1 L
Tunnel restriction code: E
Excepted Quantity: E 2

Air transport ICAO
Limited Quantity: LQ22
Excepted Quantity: E 2

Maritime transport IMDG
PAX: 851  max. weight PAX: 1 L
CAO: 855  max. weight CAO: 30 L

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
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: Okt 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

SECTION 16: Other information

16.1 Changes compared to the last version
Between versions 2.2.2.3 and 2.2.2.2 following changes were applied: - 1 substance data corrected

16.2 List of H and P phrases
16.2.1 List of relevant H phrases
H226  Flammable liquid and vapour.
H314  Causes severe skin burns and eye damage.
H412  Harmful to aquatic life with long lasting effects.

16.2.2 List of relevant P phrases
P260sh  Do not breathe dust/vapours.
16.4 Sources of key data

KÜHN, BRETTE, 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)

Regulation 669/2018/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress

Text (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)

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
Cor: corrosive
COD: chemical oxygen demand
CSCL: Chemical Substance Control Law (Jp)
Damm: damage
DNEL: Derived No-Effect Level (for workers)
 Derm: dermal
Dog: dog
EC10: Concentration causing a toxic effect in 10% of the test organisms
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.