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

1.1 Product identifier

REF 915210
Product name VISOCOLOR HE Calcium CA 20, refill pack

REACH Registration number(s): see SECTION 3.1/3.2 or
A registration number for the substance(s) does not exist because the annual tonnage does not require registration or the substance or its use is excluded from registration.

1 x 10 mL Ind. CA 20
1 x 25 mL Soda lye 10 %
1 x 100 mL TL CA 20

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



GHS02 GHS05 GHS07

Signal word DANGER

Hazard identification	Hazard classes/categories
H226	Flam. Liq. 3
H290	Met. Corr. 1
H314	Skin Corr. 1A
H315	Skin Irrit. 2
H319	Eye Irrit. 2

2.1 Classification of the substance or mixture

10 mL Ind. CA 20



GHS02 GHS07

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

Version: M V 4.12.0

Signal word WARNING

Hazard identification	Hazard classes/categories
H226	Flam. Liq. 3
H315	Skin Irrit. 2
H319	Eye Irrit. 2

25 mL Soda lye 10 %



GHS05

Signal word DANGER

Hazard identification	Hazard classes/categories
H290	Met. Corr. 1
H314	Skin Corr. 1A

100 mL TL CA 20

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).

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).
Metal corrosive solutions**do not have to** be labelled with GHS symbol, signal word, H and P phrases **until 125 mL** (EU 1272/2008 Annex I - 1.5.2.1.3).

10 mL Ind. CA 20



GHS02 GHS07

Signal word: WARNING

25 mL Soda lye 10 %



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.

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

100 mL TL CA 20

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. In the case of pH values are less than 5 or higher than 9 then it is irritant. Flammable properties. H290 "May be corrosive to metals." has only relevance for higher concentrations and larger amounts. The labelling GHS05 would be creating an "OVERLABELLING" (see GHS Directive 1272/2008/EC Annex I, chapter 1.5.2.1.3., until 125 mL no labelling necessary). ---

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

10 mL Ind. CA 20

Chemical: *triethanolamine* CAS No.: 102-71-6
Classification: H315, Skin Irrit. 2, H319, Eye Irrit. 2, H335, STOT SE 3
Formula: $C_6H_{15}NO_3$
Pseudonym: 2,2',2"-nitrilotriethanol; tris(2-hydroxyethyl)amine
TSCA Inventory: listed
REACH Reg. No.: 01-2119486482-31-xxxx
Dual-use: The application of this chemical is exempt from the regulation 2017/2268/EU (see IC350 remark 4).
EC No.: 203-049-8
RTECS: KL9275000
KE No.: KE-25940
Concentration: 10 - <20 %
acc. CLP (GHS): H315, Skin Irrit. 2, H319, Eye Irrit. 2

Chemical: *calconcarboxylic acid* CAS No.: 3737-95-9
Classification: No criteria for classification or naming of chemical not required.
Formula: $C_{21}H_{14}N_2O_7S^* 2H_2O$
Pseudonym: Patton and Reeder's reagent: 2-Hydroxy-1-(2-hydroxy-4-sulfo-1-naphthylazo)-3-naphthoic acid
TSCA Inventory: listed
EC No.: 223-117-0 MFCD: 00004078
Concentration: 0.1 - <1 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

Chemical: *ethanol* CAS No.: 64-17-5
(denatured with 1%IPA/1%MEK, acc.2016/1867/EU)
Classification: H225, Flam. Liq. 2
Formula: C_2H_6O; C_2H_5OH
Pseudonym: ethyl alcohol, methylated spirit
TSCA Inventory: listed
REACH Reg. No.: 01-2119457610-43-xxxx
EC No.: 200-578-6 Indice No.: 603-002-00-5
RTECS: KQ6300000 MFCD: 00003568
KE No.: KE-13217
Concentration: 35 - <55 %
acc. CLP (GHS): H226, Flam. Liq. 3

25 mL Soda lye 10 %

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

Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2
Classification: H290, Met. Corr. 1, H314, Skin Corr. 1B
Formula: $NaOH \cdot H_2O$
Pseudonym: soda lye
TSCA Inventory: listed
REACH Reg. No.: 01-2119457892-27-xxxx
EC No.: 215-185-5 Indice No.: 011-002-00-6
RTECS: WB4900000
KE No.: KE-31487
Concentration: 10 - <20 %
acc. CLP (GHS): H290, Met. Corr. 1, H314, Skin Corr. 1B

100 mL TL CA 20

Chemical: *ethylendinitrilo tetraacetic acid, di Na-salt (EDTA-Na)* CAS No.: 6381-92-6
Classification: H332, Acute Tox. 4 inh., H373, STOT RE 2
Formula: $C_{10}H_{14}N_2Na_2O_8 \cdot 2H_2O$
TSCA Inventory: listed (CAS 139-33-3)
EC No.: 205-358-3
RTECS: AH4410000; AH4375000 MFCD: 00150037
Concentration: 0.1 - <1 %
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. ---

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.

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

5.2 Special hazards arising from the substance or mixture

WARNING: Flammable (GHS regulation). May form explosive vapour-air mixtures. 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): 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. 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

10 mL Ind. CA 20
Chemical: *triethanolamine* CAS No.: 102-71-6
DNEL: [derm] 6.3; [inh] 5 mg/m³
DNEL = Derived No-Effect Level (for workers)
$PNEC_{(fresh\ water)}$: 0.32 mg/L
PNEC = Predicted No Effected Concentration
TRGS 900 (DE): - DFG: 5 E mg/m³
E/e respirable
Short-term exposure factor: I, (2)
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded
SUVA(CH) MAK value: [MAK] 5 e/[STEL] 10 e mg/m³
NIOSH: not listed
[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period
OSHA: not listed

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

Chemical: *calconcarboxylic acid* CAS No.: 3737-95-9

Chemical: *ethanol* CAS No.: 64-17-5
DNEL: [derm] 343 mg/kg; [inh] 950 mg/m³
DNEL = Derived No-Effect Level (for workers)
PNEC(fresh water) : 0.96 mg/L
PNEC = Predicted No Effected Concentration
TRGS 900 (DE): 200 mL/m³ / 380 mg/m³
E/e respirable
Short-term exposure factor: 4 (II), 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
[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period
OSHA: [TWA] 1000 ppm / 1900 mg/m³

25 mL Soda lye 10 %
Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2
DNEL: [inh] 1 mg/m³
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
SUVA(CH) MAK value: 2 e mg/m³
NIOSH: 2 mg/m³
[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period
OSHA: [TWA] 2 mg/m³

100 mL TL CA 20
Chemical: *ethylendinitrilo tetraacetic acid, di Na-salt (EDTA-Na)* CAS No.: 6381-92-6
DNEL: [inh] 1.5 mg/m³
DNEL = Derived No-Effect Level (for workers)
PNEC(fresh water) : 2.2 mg/L
PNEC = Predicted No Effected Concentration

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

10 mL Ind. CA 20
Appearance: liquid | Colour: colored | Odor: alcoholic
Flash point: 24 °C

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

25 mL Soda lye 10 %

Appearance: liquid	Colour: colourless	Odor: odorless
pH:	14	
Specific gravity:	1,11 g/cm³	
Solubility in water:	0-100 %	

100 mL TL CA 20

Appearance: liquid	Colour: colourless	Odor: odorless
pH:	9-10	
Specific gravity:	1,0 g/cm³	
Solubility in water:	0-100 %	

9.2 Other information

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

SECTION 10: Stability and reactivity

10.1 Reactivity

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.

10 mL Ind. CA 20

Chemical: *triethanolamine* CAS No.: 102-71-6
TSCA Inventory: listed California Proposition 65 List: not listed
Australia NICNAS: not listed Canada CEPA 1999: DSL Yes
Japan CSCL/PRTR: PAC Yes, 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-25940
$LD50_{orl\ rat}$: > 5000 mg/kg
$LD50_{drm\ rbt}$: > 2000 mg/kg

Chemical: *calconcarboxylic acid* CAS No.: 3737-95-9
TSCA Inventory: listed

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

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

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
$LC_Low_{ihl\ gpg}$:	21.9 g/m³
$LC_Low_{orl\ hmn}$:	1400 mg/kg
$LC50_{ihl\ mouse}$:	[4h] 39 g/m³
$LC50_{ihl\ rat}$:	[10h] 20 g/m³
$LD50_{drm\ rbt}$:	20 000 mg/kg
$LD50_{oral\ mouse}$:	3450 mg/kg
TRGS 905 (DE):	K5, M5, R_F C

25 mL Soda lye 10 %

Chemical: *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 PDSCL: 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
$LD50_{drm\ rbt}$:	not applicable
$LD50_{orl\ mus}$:	40 mg/kg

100 mL TL CA 20

Chemical: *ethylendinitrilo tetraacetic acid, di Na-salt (EDTA-Na)* CAS No.: 6381-92-6

TSCA Inventory:	listed (CAS 139-33-3)
$LD50_{orl\ rat}$:	2800 mg/kg

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

10 mL Ind. CA 20

Chemical: *triethanolamine* CAS No.: 102-71-6

$PNEC_{(fresh\ water)}$:	0.32 mg/L
PNEC = Predicted No Effected Concentration	
$LC50_{fish/96h}$:	>1000 mg/L
$EC50_{daphnia/48h}$:	$>1000_{24h}$ mg/L
Water hazard class (DE):	1 WGK No.: 0201
$Dispersion\ coefficient_{(octanol\text{-}water)}$:	-2.3
Storage class (VCI):	12

Chemical: *calconcarboxylic acid* CAS No.: 3737-95-9

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

$PNEC_{(fresh\ water)}$:	0.96 mg/L
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
$EC10_{pseudomonas\ putita/16h}$:	[EC5] 6500 mg/L
Water hazard class (DE):	1 WGK No.: 0096
$Dispersion\ coefficient_{(octanol\text{-}water)}$:	-0.31

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

Storage class (VCI): 3

25 mL Soda lye 10 %
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 WGK No.: 142
Storage class (VCI): 8 B

100 mL TL CA 20
Chemical: *ethylendinitrilo tetraacetic acid, di Na-salt (EDTA-Na)* CAS No.: 6381-92-6
$PNEC_{(fresh\ water)}$: 2.2 mg/L
PNEC = Predicted No Effected Concentration
$LC50_{fish/96h}$: [4d] 41-1592 mg/L
$EC50_{daphnia/48h}$: 140 mg/L
$IC50_{scenedesmus\ quadricauda/72h}$: [72h] 2.77-1000 mg/L
$EC10_{pseudomonas\ putita/16h}$: [EC10, 30h] 500 mg/L
Water hazard class (DE): 2
$Dispersion\ coefficient_{(octanol-water)}$: -4.3
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
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: 1824 14.2 UN proper shipping name: Sodium hydroxide solution
14.3 Class: 8 14.4 Packing group: II
Road transport
Classification code: C5

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

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:	A

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

H226	Flammable liquid and vapour.
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

16.1.2 List of relevant P phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
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.
P390	Absorb spillage to prevent material damage.

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

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

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

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.

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
2017-08 Adaption of new ethanol denaturation 2016/1867/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