

# Safety Data Sheet

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

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

### 1.1 Product identifier

REF 740327  
 Product name Buffer CB (100 mL)

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 100 mL CB

### 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  
 Valenciener Str. 11, 52355 Düren, GERMANY  
 Tel.: +49 2421 969 0

E-mail: [sds@mn-net.com](mailto:sds@mn-net.com) ([msds@mn-net.com](mailto: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

### 2.1 Classification of the substance or mixture

100 mL CB



GHS02 GHS05 GHS07 GHS09

Signal word

DANGER

**Hazard identification**

**Hazard classes/categories**

H226	Flam. Liq. 3
H302	Acute Tox. 4 oral
H315	Skin Irrit. 2
H318	Eye Dam. 1
H319	Eye Irrit. 2
H336	STOT SE 3
H411	Aquatic Chronic 2

### 2.2 Label elements

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).

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## 100 mL CB



GHS02

GHS05

GHS07

GHS09

Signal word: DANGER

H318

Causes serious eye damage.

P280sh, P305+351+338, P310

Wear protective gloves/eye protection. 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. In the case of pH values are less than 5 or higher than 9 then it is irritant. 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.

Cause after oral intake, impairments of health when ingested in small quantities. -

### Information pertaining to particular risks to the environment

PBT: not applicable

vPvB: not applicable

Other hazards

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances or 3.2 Mixtures

#### 100 mL CB

Chemical: *guanidine hydrochloride* CAS No.: 50-01-1  
 Classification: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2  
 Formula:  $\text{CH}_6\text{ClN}_3$   
 Pseudonym: guanidinium chloride  
 TSCA Inventory: listed  
 REACH Reg. No.: 01-2119977063-35-0005  
 EC No.: 200-002-3  
 RTECS: MF4300000  
 KE No.: KE-18111  
 Concentration: 10 - <18 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Indice No.: 607-148-00-0  
 MFCD: 00013026

Chemical: *2-propanol* CAS No.: 67-63-0  
 Classification: H225, Flam. Liq. 2, H319, Eye Irrit. 2, H336, STOT SE 3  
 Formula:  $\text{C}_3\text{H}_8\text{O}$   
 Pseudonym: isopropanol, IPA, propan-2-ol  
 TSCA Inventory: listed  
 REACH Reg. No.: 01-2119457558-25-XXXX  
 EC No.: 200-661-7  
 RTECS: NT8050000  
 KE No.: KE-29363  
 Concentration: 35 - <50 %  
 acc. CLP (GHS): H226, Flam. Liq. 3, H319, Eye Irrit. 2, H336, STOT SE 3

Indice No.: 603-117-00-0  
 MFCD: 00011674

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Chemical: Triton® X-114 CAS No.: 9036-19-5  
 Classification: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H318, Eye Dam. 1, H410, Aquatic Chronic 1  
 Formula: C<sub>30</sub> H<sub>54</sub> O<sub>9</sub>  
 Pseudonym: Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-  
 TSCA Inventory: listed  
**SVHC listed: listed**  
 EC No.: 232-658-1  
 RTECS: RI0720000  
 KE No.: KE-33567  
 Concentration: 15 - <25 %  
 acc. CLP (GHS): H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H318, Eye Dam. 1, H411, Aquatic Chronic 2

## 3.3 Remarks

When not listed, mixtures are added with water [CAS No. 7732-18-5] to 100%.

List of H and P phrases: see section 16.1

## 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. Rinse the affected skin or mucous membrane thoroughly under running water. (If possible) use soap.

#### 4.1.2 After EYE Contact

After contact with the eyes rinse thoroughly under running water with the eyelid wide open 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. ---

#### 4.1.4 After ORAL Intake

After oral intake lots of water should be drunk after it has been ingested. ---

### 4.2 Most important symptoms and effects, both acute and delayed

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### 4.3 Indication of any immediate medical attention and special treatment needed

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. ---

## 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

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.

### 5.4 Additional information

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## SECTION 6: Accidental release measures

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

Do not breathe vapours. 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

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## 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): 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

#### 100 mL CB

Chemical: *guanidine hydrochloride*

CAS No.: 50-01-1

DNEL: [inh] 3.5 mg/m<sup>3</sup>

DNEL = Derived No-Effect Level (for workers)

PNEC<sub>(fresh water)</sub>: -  
PNEC = Predicted No Effect Concentration

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

Chemical: *2-propanol*

CAS No.: 67-63-0

DNEL: [inh] 500 mg/m<sup>3</sup>

DNEL = Derived No-Effect Level (for workers)

PNEC<sub>(fresh water)</sub>: 140.9 mg/L  
PNEC = Predicted No Effect Concentration

TRGS 900 (DE): 200 ppm / 500 mg/m<sup>3</sup>  
E/e respirable

Short-term exposure factor: 2 (II), Y  
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 200 ppm / 500 mg/m<sup>3</sup>

TRGS 903 (DE): [Aceton B/b, U/b] 25 mg/L  
B blood, U urine, a no limitation, b end of exposition or shift

NIOSH: [TWA] 400 ppm / 980 mg/m<sup>3</sup>

NIOSH STEL: 500 ppm / 1225 mg/m<sup>3</sup>

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

OSHA: [TWA] 400 ppm / 980 mg/m<sup>3</sup>

Chemical: *Triton® X-114*

CAS No.: 9036-19-5

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## 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 (f.ex. from Ansell or KCL).

### 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 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

#### 100 mL CB

Appearance: liquid

Colour: colourless

Odor: alcoholic

pH:

5,5

Flash point:

18 °C

Specific gravity:

0,9393 g/cm<sup>3</sup>

### 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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## 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

Note: Can form very reactive substances with oxidizing agents. 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.

#### 100 mL CB

Chemical:	<i>guanidine hydrochloride</i>	CAS No.:	50-01-1
TSCA Inventory:	listed	California Proposition 65 List:	not listed
Australia NICNAS:	not listed	Canada CEPA 1999:	DSL yes
Japan CSCL/PRTR:	not listed, Japan PDSCL:		not listed
Japan ISHL:	not listed		
South Korea TCCA:	not listed		
Korea Exist.Chem.Inventory:	KE-18111		

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LD50<sub>orl rat</sub> : 475-907 mg/kg  
 LC50<sub>ihl rat</sub> : [4h] 3181-7655 µg/m³  
 LD50<sub>drm rbt</sub> : 2000 mg/kg

Chemical: *2-propanol* CAS No.: 67-63-0  
 TSCA Inventory: listed California Proposition 65 List: not listed  
 ACGIH: 1230 ppm  
 Exposure Routes: inhalation, ingestion, skin and/or eye contact  
 Target Organs: Eyes, skin, respiratory system  
 Symptoms: irritation eyes, nose, throat; drowsiness, dizziness, headache; dry cracking skin; in animals: narcosis  
 Australia NICNAS: Canada CEPA 1999: DSL yes  
 Japan CSCL/PRTR: PAC yes, Japan PDSCL: -  
 Japan ISHL: listed ≥1,0%/≥0,1%, Article 57-2 (SDS required)  
 South Korea TCCA:  
 Korea Exist.Chem.Inventory: KE-29363  
 LD50<sub>orl rat</sub> : 5045 mg/kg  
 LC<sub>LoWorl hmn</sub> : 3570 mg/kg  
 LC50<sub>ihl rat</sub> : 164h g/m³  
 LD50<sub>drm rbt</sub> : 12.8 g/kg  
 TRGS 905 (DE): R<sub>F</sub> C

Chemical: *Triton® X-114* CAS No.: 9036-19-5  
 TSCA Inventory: listed  
 Korea Exist.Chem.Inventory: KE-33567  
 Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

## SECTION 12: Ecological information

### 12.1 Toxicity

Following information is valid for pure substances.

#### 100 mL CB

Chemical: *guanidine hydrochloride* CAS No.: 50-01-1  
 PNEC<sub>(fresh water)</sub> : -  
 PNEC = Predicted No Effect Concentration  
 LC50<sub>leuciscus idus/96h</sub> : 1759 mg/L  
 LC50<sub>fish/96h</sub> : [4d] 690-1850; [48h] 1758-2420 mg/L  
 EC50<sub>daphnia/48h</sub> : 70.2 mg/L  
 EC10<sub>pseudomonas putita/16h</sub> : [72h] 11.8-33.5 mg/L  
 Water hazard class (DE): 1 WGK No.: 0788  
 Storage class (VCI): 12

Chemical: *2-propanol* CAS No.: 67-63-0  
 PNEC<sub>(fresh water)</sub> : 140.9 mg/L  
 PNEC = Predicted No Effect Concentration  
 LC50<sub>fish/96h</sub> : 1400 mg/L  
 EC50<sub>daphnia/48h</sub> : 13.3 g/L  
 IC50<sub>scenedesmus quadricauda/72h</sub> : >1000 mg/L  
 EC10<sub>pseudomonas putita/16h</sub> : EC5: 1050 mg/L  
 Water hazard class (DE): 1 WGK No.: 0135  
 Dispersion coefficient<sub>(octanol-water)</sub> : 0.05  
 Storage class (VCI): 3

Chemical: *Triton® X-114* CAS No.: 9036-19-5  
 Toxic to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment.  
 Environmental hazards must not be labelled with H and P phrases until 125 mL (EU 1272/2008 Annex I - 1.5.2).  
 Water hazard class (DE): 1  
 Storage class (VCI): 12-13

### 12.2 Persistence and degradability

not necessary

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- 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

<b>14.1 UN number:</b>	<b>1993</b>	<b>14.2 UN proper shipping name:</b>	<b>Flammable liquid, n.o.s. (2-propanol mixture)</b>
<b>14.3 Class:</b>	<b>3</b>	<b>14.4 Packing group:</b>	<b>II</b>
<i>Road transport</i>			
Classification code:	F1	Tunnel restriction code:	E
Limited Quantity:	1 L	Special instructions:	640C
Excepted Quantity:	E 2		
<i>Air transport</i>			
PAX:	353	max. weight PAX:	5 L
CAO:	364	max. weight CAO:	60 L
<i>Maritime transport</i>			
EmS:	F-E, S-E	Storage category:	B

- 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 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](http://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.

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H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

## 16.1.2 List of relevant P phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P260D	Do not breathe vapours.
P264W	Wash with water thoroughly after handling.
P273	Avoid release to the environment.
P280sh	Wear protective gloves/eye protection.
P301+312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
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.
P330	Rinse mouth.

## 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.

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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, 4<sup>th</sup> adaptation of CLP regulation to technical and scientific progress

Regulation 669/2018/EU, 4<sup>th</sup> adaptation of CLP regulation to technical and scientific progress

Regulation 1480/2018/EU, 4<sup>th</sup> 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

2017-11 Adaption of ECHA Registration dossier