

Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 744858.1 Buffer MC3 (900 mL) Page: 1/7
 Printing Date: 27.02.2020 Date of Issue: 01.04.2019

Section 1: Identification

1.1 Product Identifier / Product Name

REF 744858.1
 Product Name Buffer MC3 (900 mL)
 -
 1 x 1000 mL MC3

1.2 Relevant identified Uses of the Substance or Mixture and Uses advised against

Relevant identified uses
 Product for Analytical Use.
 The Exposure scenario is integrated into sections 1-16.
Uses advised against
 not described

1.3 Details of the Supplier and 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

For Chemical Emergency
 Spill, Leak, Fire, Exposure, or Accident
 Call CHEMTREC Day or Night (CCN685047)
 Within USA and Canada: **1-800-424-9300**
 Outside USA and Canada: **+1 703-527-3887** (collect calls accepted)

You find our current versions of SDS (22 languages) in Internet: <http://www.mn-net.com/SDS>

Section 2: Hazard(s) Identification

2.1 Classification of the Substance(s) or Mixture(s)

1000 mL MC3



Signal Word

WARNING

Hazard Identification	Hazard Classes/Categories
H226	Flam. Liq. 3
H302	Acute Tox. 4 oral

2.2 Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

According to the implementation of GHS immediate packages only must be labelled with product identifier(s), GHS symbol(s), signal word, manufacturer name and phone number (OSHA's interpretation of HCS 2012).

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) / **until 100 mL** (Canada WHMIS 2015). This labelling exemption does not apply to U.S.A.

1000 mL MC3



GHS02

GHS07

Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 744858.1	Buffer MC3 (900 mL)	Page: 2/7
Printing Date: 27.02.2020	Date of Issue: 01.04.2019	

Signal Word: WARNING

H226, H302
Flammable liquid and vapor. Harmful if swallowed.

P210, P264W, P301+312, P330
Keep away from heat/sparks/open flames/hot surfaces. No smoking. Wash with water thoroughly after handling. IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

2.3 Other Hazards

Possible Hazards from physicochemical Properties

Flammable properties. Vapor forms explosive mixtures with air. ---

Information pertaining to particular Risks to Human and possible Symptoms

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

Section 3: Composition/Information on Ingredients

3.1 Substances or 3.2 Mixtures

1000 mL MC3

Chemical: *ethanol* CAS No.: 64-17-5
(denatured with 1%IPA/1%MEK, acc.2016/1867/EU)

Classification:	H225, Flam. Liq. 2		
Chemical Formula:	C ₂ H ₆ O; C ₂ H ₅ OH		
Synonyms:	ethyl alcohol, methylated spirit		
TSCA Inventory:	listed		
RTECS:	KQ6300000	MFC:	00003568
EC No.:	200-578-6	Indice No.:	603-002-00-5
Weight Percent:	20 - <35 %		
acc. GHS:	H226, Flam. Liq. 3		

Chemical:	<i>sodium perchlorate</i>	CAS No.:	7601-89-0
Classification:	H271, Ox. Sol. 1, H302, Acute Tox. 4 oral		
Chemical Formula:	NaClO ₄		
TSCA Inventory:	listed		
RTECS:	SC9800000	MFC:	-
EC No.:	231-511-9	Indice No.:	017-010-00-6
Weight Percent:	15 - <40 %		
acc. GHS:	H302, Acute Tox. 4 oral		

3.3 Remarks

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

List of Hazard and Precaution 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.

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 with eye washing bottle, eye douche or running water (protect intact eye).

Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 744858.1

Buffer MC3 (900 mL)

Page: 3/7

Printing Date: 27.02.2020

Date of Issue: 01.04.2019

- 4.1.3 After INHALATION of Vapors**
After inhalation of foam or vapor fresh air should be inhaled. 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.
- 4.2 Most important Symptoms and Effects, both acute and delayed**

- 4.3 Indication of any immediate Medical Attention and Special Treatment needed**

Section 5: Fire-Fighting Measures

- 5.1 Extinguishable 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 WATER FOG, WATER SPRAY, alcohol-resistant FOAM, DRY CHEMICAL, CARBON DIOXIDE can be used.
- 5.2 Special Hazards arising from the Substance or Mixture**
WARNING: Flammable. May form explosive vapor-air mixtures. Formation of hazardous and caustic vapor-air mixtures possible. ---
- 5.3 Advice for Firefighters**
No, for listed product. The substance/mixture is flammable. Product package burns like paper or plastic. Cool any undamaged containers in water, and remove from the danger zone if possible. Heating will lead to an increase in pressure, and a danger of bursting. Spray any vapors 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 Procedure**
Do not breathe vapors. Wear suitable protective gloves (see 8.2.2). Keep product away from sources of ignition - No smoking. 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 hazards. Clean any contaminated equipment and floors with plenty of water. Collect small amounts of leaked liquid and flush with water into sewer.
- 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): 1
- 7.2.1 Conditions for Safe Storage, including any Incompatibilities**
Keep original product packages tightly closed during handling and storage.
- 7.3 Specific End Use(s)**
Product for analytical use.

Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 744858.1

Buffer MC3 (900 mL)

Page: 4/7

Printing Date: 27.02.2020

Date of Issue: 01.04.2019

Section 8: Exposure Controls/Personal Protection

8.1 Control Parameters

1000 mL MC3

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 Effect Concentration

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

Chemical: *sodium perchlorate*

CAS No.: 7601-89-0

DNEL: [derm] 2.16 mg/kg bw/day; [inh] 0.28 mg/m³
DNEL = Derived No-Effect Level (for workers)

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

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 (permeation time >30 min - level 2), consist of PVC.

8.2.3 Eye/Face Protection

Yes, Splash Goggles.

8.2.4 Skin Protection

Recommended to avoid contamination with these hazards.

8.2.5 Hygiene Measures

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

1000 mL MC3

a) Appearance: liquid	Color: colorless	b) Odor: alcoholic
c) Odor Threshold:	data not available	
d) pH:	4.5-5.5	
e) Melting Point:	data not available	
f) Boiling Point:	data not available	
g) Flash Point:	26 °C	
h) Evaporation Rate(ether=1) :	data not available	
i) Flammability (solid, gas):	data not available	
j) Explosive Limits:	data not available	
k) Vapor Pressure (68°F):	data not available	
l) Vapor Density(air=1) :	data not available	
m) Specific Gravity:	1.06 g/cm ³	
n) Soluble in Water:	data not available	
o) Partition Coefficient (o-w):	data not available	
p) Autoignition Temperature:	data not available	
q) Decomposition temperature:	data not available	
r) Viscosity:	data not available	
s) Explosive properties:	data not available	
t) Oxidizing properties:	---	

Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 744858.1

Buffer MC3 (900 mL)

Page: 5/7

Printing Date: 27.02.2020

Date of Issue: 01.04.2019

9.2 Other Information

Data for the other parameters of the mixtures are not available.

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

But avoid reactions with oxidizing agents. No further data available.

10.4 Conditions to avoid

Not necessary. But can form explosive gases/vapour with air. Use only in a well-ventilated working areas. ---

10.5 Incompatible Materials

Avoid contact with strong acids or alkalines. Avoid storage with oxidizing substances. ---

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 chemicals. Quantitative data on the toxicity of this product are not available.

1000 mL MC3

Chemical:	<i>ethanol</i>	CAS No.:	64-17-5
TSCA Inventory:	listed	California Prop. 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		
Canada CEPA 1999:	DSL yes		
LD50 _{orl rat} :	6200 mg/kg		
LC _{LoWihl} gpg :	21.9 g/m ³		
LC _{LoWorl} hmn :	1400 mg/kg		
LC50 _{ihl mouse} :	[4h] 39 g/m ³		
LC50 _{ihl rat} :	[10h] 20 g/m ³		
LD50 _{drm rbt} :	20 000 mg/kg		
LD50 _{oral mouse} :	3450 mg/kg		

Chemical:	<i>sodium perchlorate</i>	CAS No.:	7601-89-0
TSCA Inventory:	listed	California Prop. 65 List:	not listed
Canada CEPA 1999:	DSL Yes		
LD50 _{orl rat} :	2100 mg/kg		
LD50 _{ipr mus} :	551 mg/kg		
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 chemicals.

1000 mL MC3

Chemical:	<i>ethanol</i>	CAS No.:	64-17-5
PNEC(fresh water) :	0.96 mg/L		
PNEC = Predicted No Effect 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		

www.mn-net.com

Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 744858.1

Buffer MC3 (900 mL)

Page: 6/7

Printing Date: 27.02.2020

Date of Issue: 01.04.2019

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
Partition Coefficient (o-w):	-0.31

Chemical: *sodium perchlorate*

CAS No.: 7601-89-0

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 (RCRA Code D002/D003, EU waste code number 16 05 06).

13.1 Waste Treatment Methods

Normally it is possible to empty small amounts (diluted!) into drains.

Section 14: Transport Information

14.1. UN/NA: 1993 14.2. Proper Shipping Name: **Flammable liquid, n.o.s. (ethanol mixture)**

14.3. Hazard Class: 3 14.4. Packing Group: III

Transportation by Road

Classification code: F1

Limited Quantity: 5 L

Excepted Quantity: E 1

Air Transportation

PAX: 355

CAO: 366

Maritime Transport

EmS: F-E, S-E

Tunnel restriction code: E

Special instructions: 640E

max. weight PAX: 60 L

max. weight CAO: 220 L

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

U.S. Federal Regulations

OSHA "A Guide to The Globally Harmonized System of Classification and Labelling of Chemicals (GHS)"

<https://www.osha.gov/dsg/hazcom/ghs.html>

29 CFR 1910.1200 Hazard communication.

NIOSH Pocket Guide to Chemical Hazards

NIOSH Workplace Safety & Health Topics

TSCA Inventory

U.S. State Regulations

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986

Canada

Canada CEPA 1999 - Domestic Substances List (DSL), List of Toxic Substances (Schedule 1)

www.mn-net.com



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.comE-mail: sales-ch@mn-net.comE-mail: sales-fr@mn-net.comE-mail: sales-us@mn-net.com

Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 744858.1

Buffer MC3 (900 mL)

Page: 7/7

Printing Date: 27.02.2020

Date of Issue: 01.04.2019

MN Leaflet/User manual, also see www.mn-net.com

15.2 Chemical Safety Assessment

not necessary for these small amounts ---

Section 16: Other Information

16.1 List of Hazard and Precaution Phrases

16.1.1 List of relevant H Phrases

H226 Flammable liquid and vapor.
H302 Harmful if swallowed.

16.1.2 List of relevant P Phrases

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P264W Wash with water thoroughly after handling.
P301+312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
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!

Look about employee restrictions for pregnant women and nursing women!

An individual package of this product or test kit has a moderate hazardous potential.

16.4 Further Information

MACHEREY-NAGEL GmbH & Co. KG provides the information contained herein in good faith being up-to-date of own realizations at revision time. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose.

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

16.5 Sources of Key Data

GHS: EU Regulation 1272/2008/EC on Classification, Labelling and Packaging of Substances and Mixtures, amending and repealing EU Directives 67/548/EEC and 1999/45/EC, and amending EU Regulation 1907/2006/EC

SDS: EU Regulation 453/2010/EU REACH - Requirements for the Compilation of Safety Data Sheets

EU-Directive 1999/92/EC Minimum Requirements for Improving the Safety and Health Protection of Workers at Risk from potentially Explosive Atmospheres

KÜHN, BIRETT (German), Data Sheets of Hazardous Substances

Revisions/Updates

Reason for Revision: 2016-03 Adaptation of European Regulation 1221/2015/EU

You find our current Versions of SDS in Internet:

<http://www.mn-net.com/SDS> [U.S. English]