

Safety Data Sheet

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

REF: 744300.1

NucleoMag 96 Tissue (1x96)

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Printing date: 15.11.2021

Date of issue: 08.11.2021

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

1.1 Product identifier

REF 744300.1
Product name NucleoMag 96 Tissue (1x96)

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 3 mL B-Beads
1 x 45 mL MB2
1 x 75 mL MB3
1 x 75 mL MB4
1 x 125 mL MB5
1 x 30 mL MB6
1 x 8 mL PB
1 x 75 mg Proteinase K (lyo)
1 x 50 mL T1

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
Valenciennner 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



GHS07



GHS08

Signal word

DANGER

Hazard identification

H226
H302
H315
H319
H334

Hazard classes/categories

Flam. Liq. 3
Acute Tox. 4 oral
Skin Irrit. 2
Eye Irrit. 2
Resp. Sens. 1

2.1 Classification of the substance or mixture

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3 mL B-Beads

Signal word

Do not need labelling as hazardous

-

No hazard class

45 mL MB2



GHS02

GHS07

Signal word

WARNING

Hazard identification

Hazard classes/categories

H226

Flam. Liq. 3

H302

Acute Tox. 4 oral

75 mL MB3



GHS02

GHS07

Signal word

WARNING

Hazard identification

Hazard classes/categories

H226

Flam. Liq. 3

H302

Acute Tox. 4 oral

75 mL MB4



GHS02

GHS07

Signal word

WARNING

Hazard identification

Hazard classes/categories

H226

Flam. Liq. 3

H302

Acute Tox. 4 oral

125 mL MB5

Signal word

Do not need labelling as hazardous

-

No hazard class

30 mL MB6

Signal word

Do not need labelling as hazardous

-

No hazard class

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8 mL PB

Signal word

Do not need labelling as hazardous

No hazard class

75 mg Proteinase K (Iyo)



GHS07

GHS08

Signal word

DANGER

Hazard identification

Hazard classes/categories

H315

Skin Irrit. 2

H319

Eye Irrit. 2

H334

Resp. Sens. 1

50 mL T1

Signal word

Do not need labelling as hazardous

No hazard class

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). This labelling exemption is NOT valid for sensibilizing substances.

3 mL B-Beads

Do not need labelling as hazardous

Signal word: -

45 mL MB2



GHS02



GHS07

Signal word: WARNING

75 mL MB3



GHS02



GHS07

Signal word: WARNING

75 mL MB4



GHS02



GHS07

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Signal word: WARNING

125 mL MB5

Do not need labelling as hazardous

Signal word: -

30 mL MB6

Do not need labelling as hazardous

Signal word: -

8 mL PB

Do not need labelling as hazardous

Signal word: -

75 mg Proteinase K (Iyo)



GHS07 GHS08

Signal word: DANGER

H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

P261sh, P342+311

Avoid breathing dust/vapours. If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

50 mL T1

Do not need labelling as hazardous

Signal word: -

2.3 Other hazards

Possible hazards from physicochemical properties

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

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

Kit contains small amounts of enzymes: May cause allergy or asthma symptoms or breathing difficulties if inhaled. -

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

3 mL B-Beads

Chemical: *magnetic particles, suspended in water*

CAS No.: -

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

TSCA Inventory: listed (CAS 1309-38-2)

Concentration: 1 - <15 %

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

45 mL MB2

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

Chemical: *sodium perchlorate* CAS No.: 7601-89-0
Classification: H271, Ox. Sol. 1, H302, Acute Tox. 4 oral
Formula: $NaClO_4$
TSCA Inventory: listed
REACH Reg. No.: 01-2119540521-50-xxxx
EC No.: 231-511-9 Indice No.: 017-010-00-6
RTECS: SC9800000 MFCD: -
KE No.: KE-31569
Concentration: 15 - <40 %
acc. CLP (GHS): H302, Acute Tox. 4 oral

75 mL MB3

Chemical: *ethanol*
(denatured with 1%IPA/1%MEK, acc.2016/1867/EU) CAS No.: 64-17-5
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: 20 - <35 %
acc. CLP (GHS): H226, Flam. Liq. 3

Chemical: *sodium perchlorate* CAS No.: 7601-89-0
Classification: H271, Ox. Sol. 1, H302, Acute Tox. 4 oral
Formula: $NaClO_4$
TSCA Inventory: listed
REACH Reg. No.: 01-2119540521-50-xxxx
EC No.: 231-511-9 Indice No.: 017-010-00-6
RTECS: SC9800000 MFCD: -
KE No.: KE-31569
Concentration: 15 - <40 %
acc. CLP (GHS): H302, Acute Tox. 4 oral

75 mL MB4

Chemical: *ethanol*
(denatured with 1%IPA/1%MEK, acc.2016/1867/EU) CAS No.: 64-17-5
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: 20 - <35 %
acc. CLP (GHS): H226, Flam. Liq. 3

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Chemical:	sodium perchlorate	CAS No.:	7601-89-0
Classification:	H271, Ox. Sol. 1, H302, Acute Tox. 4 oral		
Formula:	NaClO ₄		
TSCA Inventory:	listed		
REACH Reg. No.:	01-2119540521-50-xxxx		
EC No.:	231-511-9	Indice No.:	017-010-00-6
RTECS:	SC9800000	MFCD:	-
KE No.:	KE-31569		
Concentration:	15 - <40 %		
acc. CLP (GHS):	H302, Acute Tox. 4 oral		

125 mL MB5

Chemical:	chemicals/mixture < 1%	CAS No.:	-
Classification:	No criteria for classification or naming of chemical not required.		
TSCA Inventory:	all listed, <1%		
KE No.:	listed		
Concentration:	0.1 - <1 %		
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

30 mL MB6

Chemical:	chemicals/mixture < 1%	CAS No.:	-
Classification:	No criteria for classification or naming of chemical not required.		
TSCA Inventory:	all listed, <1%		
KE No.:	listed		
Concentration:	0.1 - <1 %		
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

8 mL PB

Chemical:	glycerole	CAS No.:	56-81-5
Classification:	No criteria for classification or naming of chemical not required.		
Formula:	C ₃ H ₈ O ₃		
Pseudonym:	glycerin, 1,2,3-propanetriol		
TSCA Inventory:	listed (1,2,3-Propanetriol)		
REACH Reg. No.:	01-2119471987-18-xxxx		
EC No.:	200-289-5	Indice No.:	n/a
RTECS:	MA8050000	MFCD:	00004722
KE No.:	KE-29297		
Concentration:	10 - <50 %		
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

75 mg Proteinase K (Iyo)

Chemical:	proteinase K (origin: tritirachium album)	CAS No.:	39450-01-6
Classification:	H315, Skin Irrit. 2, H319, Eye Irrit. 2, H334, Resp. Sens. 1		
Formula:	Enzyme Comm. No. 3.4.21.64, origin: tritirachium album		
TSCA Inventory:	listed (CAS 102925-54-2)		
EC No.:	254-457-8	Indice No.:	647-014-00-9
RTECS:	-	MFCD:	00132129
KE No.:	not listed		
Concentration:	90 - <100 %		
acc. CLP (GHS):	H315, Skin Irrit. 2, H319, Eye Irrit. 2, H334, Resp. Sens. 1		

50 mL T1

Chemical:	chemicals/mixture < 2%	CAS No.:	-
Classification:	No criteria for classification or naming of chemical not required.		
TSCA Inventory:	all listed, <2%		
KE No.:	listed		
Concentration:	1 - <2 %		
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

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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. Take to a doctor, in a raised position if there are breathing difficulties.

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).

4.1.3 After INHALATION of vapours

After inhalation of foam or vapour fresh air should be inhaled. Keep airways free. Administer a Dexamethasone spray as soon as possible. Ensure quiet, warmth, and provide resuscitation if necessary. In the event of respiratory distress ensure that the patient inhales oxygen. Secure the breathing, heart and circulatory function. ---

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

Chronic Effects: May cause sensitization by skin contact, also in repeated contact of small amounts. May cause allergy or asthma symptoms or breathing difficulties if inhaled. ---

4.3 Indication of any immediate medical attention and special treatment needed

Inform patient respectively further measures and the possibility of long-term damages. ---

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

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapours. 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

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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. Use only in well-ventilated working areas.

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.

7.3 Specific end use(s)

Product for analytical use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

3 mL B-Beads

Chemical: *magnetic particles, suspended in water*

CAS No.: -

45 mL MB2

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

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

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)

TRGS 900 (DE): -

E/e respirable

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

75 mL MB3

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

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

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)

TRGS 900 (DE): -

E/e respirable

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

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OSHA: not listed

75 mL MB4

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

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

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)

TRGS 900 (DE): -

E/e respirable

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

125 mL MB5

Chemical: *chemicals/mixture < 1%*

CAS No.: -

30 mL MB6

Chemical: *chemicals/mixture < 1%*

CAS No.: -

8 mL PB

Chemical: *glycerole*

CAS No.: 56-81-5

DNEL: [inh] 56 mg/m³

DNEL = Derived No-Effect Level (for workers)

PNEC(fresh water): 0.885 mg/L

PNEC = Predicted No Effect Concentration

TRGS 900 (DE): 200 E mg/m³

E/e respirable

Short-term exposure factor: 2 (I), Y

skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 50 e* mg/m³

75 mg Proteinase K (Iyo)

Chemical: *proteinase K (origin: tritirachium album)*

CAS No.: 39450-01-6

SUVA(CH) MAK value: 0,00006_{15min} mg/m³

50 mL T1

Chemical: *chemicals/mixture < 2%*

CAS No.: -

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

Use for open access of these substances for example a protection filter, class A/AX. 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

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Yes, safety glasses according EN 166 with integrated side shields or wrap-around 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

3 mL B-Beads

Appearance: liquid

Colour: colourless

Odor: odorless

45 mL MB2

Appearance: liquid

Colour: colourless

Odor: alcoholic

pH:

5-6

Flash point:

24 °C

Specific gravity:

1.08 g/cm³

75 mL MB3

Appearance: liquid

Colour: colourless

Odor: alcoholic

pH:

4.5-5.5

Boiling point:

83,6 °C

Flash point:

26 °C

Specific gravity:

1.06 g/cm³

75 mL MB4

Appearance: liquid

Colour: colourless

Odor: alcoholic

pH:

4.5-5.5

Boiling point:

83,6 °C

Flash point:

26 °C

Specific gravity:

1.06 g/cm³

125 mL MB5

Appearance: liquid

Colour: colourless

Odor: odorless

pH:

8-9

Specific gravity:

1.0 g/cm³

30 mL MB6

Appearance: liquid

Colour: colourless

Odor: odorless

pH:

8-9

Specific gravity:

1.0 g/cm³

8 mL PB

Appearance: liquid

Colour: colourless

Odor: alcoholic

Specific gravity:

1.11 g/cm³

75 mg Proteinase K (Iyo)

Appearance: solid (Iyoph.)

Colour: slightly grey

Odor: odorless

50 mL T1

Appearance: liquid

Colour: colourless

Odor: odorless

pH:

7.5-8.5

Specific gravity:

1.02 g/cm³

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

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.

3 mL B-Beads

Chemical: *magnetic particles, suspended in water*
TSCA Inventory: listed (CAS 1309-38-2)

CAS No.: -

45 mL MB2

Chemical: *ethanol*
TSCA Inventory: 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
Japan CSCL/PRTR: not listed, Japan PDSC: not listed
Japan ISHL: listed $\geq 0,1\%$ / $\geq 0,1\%$, Article 57-2 (SDS required)
South Korea TCCA: not listed
Korea Exist.Chem.Inventory: KE-13217
LD50_{oral rat}: 6200 mg/kg
LC₅₀_{inhal mouse}: 21.9 g/m³
LC₅₀_{inhal mouse}: 1400 mg/kg
LC50_{inhal mouse}: [4h] 39 g/m³
LC50_{inhal rat}: [10h] 20 g/m³
LD50_{derm rabbit}: 20 000 mg/kg
LD50_{oral mouse}: 3450 mg/kg
TRGS 905 (DE): K5, M5, R_F C

CAS No.: 64-17-5

California Proposition 65 List: not listed

Canada CEPA 1999: DSL yes

Chemical: *sodium perchlorate*

TSCA Inventory: listed
Australia NICNAS: not listed
Japan CSCL/PRTR: not listed, Japan PDSC: not listed
Japan ISHL: not listed
South Korea TCCA: not listed
Korea Exist.Chem.Inventory: KE-31569
LD50_{oral rat}: 2100 mg/kg
LD50_{ipr mus}: 551 mg/kg

CAS No.: 7601-89-0

California Proposition 65 List: not listed

Canada CEPA 1999: DSL Yes

Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

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75 mL MB3

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
Japan CSCL/PRTR: not listed, Japan PDSCL: not listed
Japan ISHL: listed $\geq 0,1\%$ / $\geq 0,1\%$, Article 57-2 (SDS required)
South Korea TCCA: not listed
Korea Exist.Chem.Inventory: KE-13217
LD50_{orl rat}: 6200 mg/kg
LC_{LoWihl} gpg: 21.9 g/m³
LC_{Loworl} 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

Chemical: *sodium perchlorate* CAS No.: 7601-89-0
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-31569
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.

75 mL MB4

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
Japan CSCL/PRTR: not listed, Japan PDSCL: not listed
Japan ISHL: listed $\geq 0,1\%$ / $\geq 0,1\%$, Article 57-2 (SDS required)
South Korea TCCA: not listed
Korea Exist.Chem.Inventory: KE-13217
LD50_{orl rat}: 6200 mg/kg
LC_{LoWihl} gpg: 21.9 g/m³
LC_{Loworl} 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

Chemical: *sodium perchlorate* CAS No.: 7601-89-0
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-31569
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.

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125 mL MB5

Chemical: *chemicals/mixture < 1%*
TSCA Inventory: *all listed, <1%*
Korea Exist.Chem.Inventory: *listed*

CAS No.: -

30 mL MB6

Chemical: *chemicals/mixture < 1%*
TSCA Inventory: *all listed, <1%*
Korea Exist.Chem.Inventory: *listed*

CAS No.: -

8 mL PB

Chemical: *glycerole*
TSCA Inventory: *listed (1,2,3-Propanetriol)*
Exposure Routes: *inhalation, skin and/or eye contact*
Target Organs: *Eyes, skin, respiratory system, kidneys*
Symptoms: *irritation eyes, skin, respiratory system; headache, nausea, vomiting; kidney injury*
Japan CSCL/PRTR: *not listed, Japan PDSC: not listed*
Japan ISHL: *not listed*
Korea Exist.Chem.Inventory: *KE-29297*
LD50_{orl rat}: *12.6 g/kg*
LD50_{drm rbt}: *>18.7 g/kg*
TRGS 905 (DE): *R_F C*

CAS No.: 56-81-5

75 mg Proteinase K (Iyo)

Chemical: *proteinase K (origin: tritirachium album)*
TSCA Inventory: *listed (CAS 102925-54-2)*
Japan CSCL/PRTR: *not listed*
Japan ISHL: *not listed*
Korea Exist.Chem.Inventory: *not listed*

CAS No.: 39450-01-6

Acute Effects: Cause after impairments of health when ingested in small quantities.

Chronic Effects: May cause sensitization by skin contact, also in repeated contact of small amounts. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

50 mL T1

Chemical: *chemicals/mixture < 2%*
TSCA Inventory: *all listed, <2%*
Korea Exist.Chem.Inventory: *listed*

CAS No.: -

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

3 mL B-Beads

Chemical: *magnetic particles, suspended in water*
Storage class (VCI): *12*

CAS No.: -

45 mL MB2

Chemical: *ethanol*
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*
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* WGK No.: 0096
Dispersion coefficient_(octanol-water): *-0.31*

CAS No.: 64-17-5

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Storage class (VCI): 3

Chemical: *sodium perchlorate*

CAS No.: 7601-89-0

Water hazard class (DE): 1 WGK No.: 0382

Storage class (VCI): 12

75 mL MB3

Chemical: *ethanol*

CAS No.: 64-17-5

PNEC(fresh water): 0.96 mg/L

PNEC = Predicted No Effect Concentration

LC50daphnia magna/48h: >100 mg/L

LC50pimephales promelas/96h: 13400 - 15100 mg/L

LC50leuciscus idus/96h: [48h] 8140 mg/L

LC50fish/96h: 13 g/L

EC50daphnia/48h: 9.3-14.2 g/L

IC50scenedesmus quadricauda/72h: [7d] 5000 mg/L

EC10pseudomonas putida/16h: [EC5] 6500 mg/L

Water hazard class (DE): 1 WGK No.: 0096

Dispersion coefficient(octanol-water): -0.31

Storage class (VCI): 3

Chemical: *sodium perchlorate*

CAS No.: 7601-89-0

Water hazard class (DE): 1 WGK No.: 0382

Storage class (VCI): 12

75 mL MB4

Chemical: *ethanol*

CAS No.: 64-17-5

PNEC(fresh water): 0.96 mg/L

PNEC = Predicted No Effect Concentration

LC50daphnia magna/48h: >100 mg/L

LC50pimephales promelas/96h: 13400 - 15100 mg/L

LC50leuciscus idus/96h: [48h] 8140 mg/L

LC50fish/96h: 13 g/L

EC50daphnia/48h: 9.3-14.2 g/L

IC50scenedesmus quadricauda/72h: [7d] 5000 mg/L

EC10pseudomonas putida/16h: [EC5] 6500 mg/L

Water hazard class (DE): 1 WGK No.: 0096

Dispersion coefficient(octanol-water): -0.31

Storage class (VCI): 3

Chemical: *sodium perchlorate*

CAS No.: 7601-89-0

Water hazard class (DE): 1 WGK No.: 0382

Storage class (VCI): 12

125 mL MB5

Chemical: *chemicals/mixture < 1%*

CAS No.: -

Water hazard class (DE): 1

Storage class (VCI): 12-13

30 mL MB6

Chemical: *chemicals/mixture < 1%*

CAS No.: -

Water hazard class (DE): 1

Storage class (VCI): 12-13

8 mL PB

Chemical: *glycerole*

CAS No.: 56-81-5

PNEC(fresh water): 0.885 mg/L

PNEC = Predicted No Effect Concentration

LC50fish/96h: >5000_{24h} mg/L

EC50daphnia/48h: >10_{24h} g/L

IC50scenedesmus quadricauda/72h: IC50_{7d} >10 g/L

EC10pseudomonas putida/16h: EC5: >10 g/L

Water hazard class (DE): 0

Dispersion coefficient(octanol-water): -1.76

Storage class (VCI): 10

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75 mg Proteinase K (Iyo)

Chemical: *proteinase K (origin: tritirachium album)*

CAS No.: 39450-01-6

Water hazard class (DE): 1

Storage class (VCI): 13

50 mL T1

Chemical: *chemicals/mixture < 2%*

CAS No.: -

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

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.

SECTION 14: Transport information

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

Classification code: F1

Limited Quantity: 5 L

Excepted Quantity: E 1

Tunnel restriction code: E

Special instructions: 640E

Air transport

PAX: 355

max. weight PAX: 60 L

CAO: 366

max. weight CAO: 220 L

Maritime transport

EmS: F-E, S-E

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.

www.mn-net.com

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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.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.

16.1.2 List of relevant P phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P261sh	Avoid breathing dust/vapours.
P264W	Wash with water thoroughly after handling.
P280sh	Wear protective gloves/eye protection.
P301+312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P304+340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P330	Rinse mouth.
P342+311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

16.2 Training advice

Multiple safety training of staffs about danger and protection by using hazards in working area. Additionally training and introduction of staffs for using these products.

16.3 Recommended restriction on use

Only for professional user.

Look about employee restrictions for young people (f. ex. 94/33/EC or DE § 22 JArbSchG)!

Look about employee restrictions for pregnant women and nursing women (f.ex. 92/85/EEC or for DE §§ 11-13 MuSchG 2017)!

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

16.4 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, 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

TRGS 907, German engineering rules governing listing of substances and causes of sensitizations, updated November 2011

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