

# Safety Data Sheet

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

REF: 744300.4

NucleoMag 96 Tissue (4x96)

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Printing date: 15.11.2021

Date of issue: 29.10.2020

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

### 1.1 Product identifier

REF 744300.4  
Product name NucleoMag 96 Tissue (4x96)

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 12 mL B-Beads  
1 x 180 mL MB2  
1 x 300 mL MB3  
1 x 300 mL MB4  
1 x 500 mL MB5  
1 x 125 mL MB6  
1 x 15 mL PB  
4 x 75 mg Proteinase K (lyo)  
1 x 100 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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## 12 mL B-Beads

Signal word

Do not need labelling as hazardous

-

No hazard class

## 180 mL MB2



GHS02

GHS07

Signal word

WARNING

### Hazard identification

### Hazard classes/categories

H226

Flam. Liq. 3

H302

Acute Tox. 4 oral

## 300 mL MB3



GHS02

GHS07

Signal word

WARNING

### Hazard identification

### Hazard classes/categories

H226

Flam. Liq. 3

H302

Acute Tox. 4 oral

## 300 mL MB4



GHS02

GHS07

Signal word

WARNING

### Hazard identification

### Hazard classes/categories

H226

Flam. Liq. 3

H302

Acute Tox. 4 oral

## 500 mL MB5

Signal word

Do not need labelling as hazardous

-

No hazard class

## 125 mL MB6

Signal word

Do not need labelling as hazardous

-

No hazard class

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## 15 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

## 100 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.

### 12 mL B-Beads

Do not need labelling as hazardous

Signal word: -

### 180 mL MB2



GHS02



GHS07

Signal word: WARNING

H226, H302

Flammable liquid and vapour. 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.

### 300 mL MB3



GHS02



GHS07

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Signal word: WARNING

H226, H302

Flammable liquid and vapour. 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.

## 300 mL MB4



GHS02



GHS07

Signal word: WARNING

H226, H302

Flammable liquid and vapour. 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.

## 500 mL MB5

Do not need labelling as hazardous

Signal word: -

## 125 mL MB6

Do not need labelling as hazardous

Signal word: -

## 15 mL PB

Do not need labelling as hazardous

Signal word: -

## 75 mg Proteinase K (lyo)



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.

## 100 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. Vapour forms explosive mixtures with air. ---

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## 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

#### 12 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 - &lt;15 %

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

#### 180 mL MB2

Chemical: *ethanol*

CAS No.: 64-17-5

(denatured with 1%IPA/1%MEK, acc.2016/1867/EU)

Classification: H225, Flam. Liq. 2

Formula: C<sub>2</sub> H<sub>6</sub> O; C<sub>2</sub> H<sub>5</sub> OH

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 - &lt;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<sub>4</sub>

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 - &lt;40 %

acc. CLP (GHS): H302, Acute Tox. 4 oral

#### 300 mL MB3

Chemical: *ethanol*

CAS No.: 64-17-5

(denatured with 1%IPA/1%MEK, acc.2016/1867/EU)

Classification: H225, Flam. Liq. 2

Formula: C<sub>2</sub> H<sub>6</sub> O; C<sub>2</sub> H<sub>5</sub> OH

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 - &lt;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:  $\text{NaClO}_4$   
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

## 300 mL MB4

Chemical: *ethanol* CAS No.: 64-17-5  
(denatured with 1%IPA/1%MEK, acc.2016/1867/EU)  
Classification: H225, Flam. Liq. 2  
Formula:  $\text{C}_2\text{H}_6\text{O}$ ;  $\text{C}_2\text{H}_5\text{OH}$   
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:  $\text{NaClO}_4$   
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

## 500 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.

## 125 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.

## 15 mL PB

Chemical: *glycerole* CAS No.: 56-81-5  
Classification: No criteria for classification or naming of chemical not required.  
Formula:  $\text{C}_3\text{H}_8\text{O}_3$   
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.

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## 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

## 100 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

## 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 with activated charcoal supplement 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. 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 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.

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## 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). 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 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. 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

#### 12 mL B-Beads

Chemical: *magnetic particles, suspended in water*

CAS No.: -

#### 180 mL MB2

Chemical: *ethanol*

CAS No.: 64-17-5

DNEL: [derm] 343 mg/kg; [inh] 950 mg/m<sup>3</sup>

DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 0.96 mg/L

PNEC = Predicted No Effect Concentration

TRGS 900 (DE): 200 mL/m<sup>3</sup> / 380 mg/m<sup>3</sup>

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/m<sup>3</sup>

NIOSH: [TWA] 1000 ppm / 1900 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] 1000 ppm / 1900 mg/m<sup>3</sup>

Chemical: *sodium perchlorate*

CAS No.: 7601-89-0

DNEL: [derm] 2.16 mg/kg bw/day; [inh] 0.28 mg/m<sup>3</sup>

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

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## 300 mL MB3

Chemical: *ethanol*

CAS No.: 64-17-5

DNEL: [derm] 343 mg/kg; [inh] 950 mg/m<sup>3</sup>

DNEL = Derived No-Effect Level (for workers)

PNEC<sub>(fresh water)</sub>: 0.96 mg/L

PNEC = Predicted No Effect Concentration

TRGS 900 (DE): 200 mL/m<sup>3</sup> / 380 mg/m<sup>3</sup>  
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/m<sup>3</sup>

NIOSH: [TWA] 1000 ppm / 1900 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] 1000 ppm / 1900 mg/m<sup>3</sup>

Chemical: *sodium perchlorate*

CAS No.: 7601-89-0

DNEL: [derm] 2.16 mg/kg bw/day; [inh] 0.28 mg/m<sup>3</sup>

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

## 300 mL MB4

Chemical: *ethanol*

CAS No.: 64-17-5

DNEL: [derm] 343 mg/kg; [inh] 950 mg/m<sup>3</sup>

DNEL = Derived No-Effect Level (for workers)

PNEC<sub>(fresh water)</sub>: 0.96 mg/L

PNEC = Predicted No Effect Concentration

TRGS 900 (DE): 200 mL/m<sup>3</sup> / 380 mg/m<sup>3</sup>  
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/m<sup>3</sup>

NIOSH: [TWA] 1000 ppm / 1900 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] 1000 ppm / 1900 mg/m<sup>3</sup>

Chemical: *sodium perchlorate*

CAS No.: 7601-89-0

DNEL: [derm] 2.16 mg/kg bw/day; [inh] 0.28 mg/m<sup>3</sup>

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

## 500 mL MB5

Chemical: *chemicals/mixture < 1%*

CAS No.: -

## 125 mL MB6

Chemical: *chemicals/mixture < 1%*

CAS No.: -

## 15 mL PB

Chemical: *glycerole*

CAS No.: 56-81-5

DNEL: [inh] 56 mg/m<sup>3</sup>

DNEL = Derived No-Effect Level (for workers)

PNEC<sub>(fresh water)</sub>: 0.885 mg/L

PNEC = Predicted No Effect Concentration

TRGS 900 (DE): 200 E mg/m<sup>3</sup>  
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/m<sup>3</sup>

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## 75 mg Proteinase K (Iyo)

Chemical: *proteinase K (origin: tritirachium album)*  
SUVA(CH) MAK value: 0,00006<sub>15min</sub> mg/m<sup>3</sup>

CAS No.: 39450-01-6

## 100 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

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

#### 12 mL B-Beads

Appearance: liquid

Colour: colourless

Odor: odorless

#### 180 mL MB2

Appearance: liquid

Colour: colourless

Odor: alcoholic

pH:

5-6

Flash point:

24 °C

Specific gravity:

1.08 g/cm<sup>3</sup>

#### 300 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/cm<sup>3</sup>

#### 300 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/cm<sup>3</sup>

#### 500 mL MB5

Appearance: liquid

Colour: colourless

Odor: odorless

pH:

8-9

Specific gravity:

1.0 g/cm<sup>3</sup>

#### 125 mL MB6

Appearance: liquid

Colour: colourless

Odor: odorless

pH:

8-9

Specific gravity:

1.0 g/cm<sup>3</sup>

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## 15 mL PB

Appearance: liquid  
Specific gravity:

Colour: colourless  
1.11 g/cm<sup>3</sup>

Odor: alcoholic

## 75 mg Proteinase K (Iyo)

Appearance: solid (Iyoph.)

Colour: slightly grey

Odor: odorless

## 100 mL T1

Appearance: liquid  
pH:  
Specific gravity:

Colour: colourless  
7.5-8.5  
1.02 g/cm<sup>3</sup>

Odor: odorless

## 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

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

#### 12 mL B-Beads

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

CAS No.: -

#### 180 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 ISHL: listed ≥0,1%/≥0,1%, Article 57-2 (SDS required)  
South Korea TCCA: not listed  
Korea Exist.Chem.Inventory: KE-13217  
LD50<sub>rat</sub>: 6200 mg/kg  
LC<sub>50</sub><sub>rat</sub>: 21.9 g/m<sup>3</sup>  
LC<sub>50</sub><sub>rat</sub>: 1400 mg/kg  
LC50<sub>rat</sub>: [4h] 39 g/m<sup>3</sup>  
LC50<sub>rat</sub>: [10h] 20 g/m<sup>3</sup>  
California Proposition 65 List: not listed  
Canada CEPA 1999: DSL yes

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LD50<sub>drum</sub> rbt : 20 000 mg/kg  
LD50<sub>oral</sub> mouse : 3450 mg/kg

TRGS 905 (DE): K5, M5, R<sub>F</sub> 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<sub>oral</sub> rat : 2100 mg/kg  
LD50<sub>ipr</sub> mus : 551 mg/kg  
Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

## 300 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 ≥0,1%/≥0,1%, Article 57-2 (SDS required)  
South Korea TCCA: not listed  
Korea Exist.Chem.Inventory: KE-13217  
LD50<sub>oral</sub> rat : 6200 mg/kg  
LC<sub>Low</sub>ihl gpg : 21.9 g/m<sup>3</sup>  
LC<sub>Low</sub>orl hmn : 1400 mg/kg  
LC50<sub>ihl</sub> mouse : [4h] 39 g/m<sup>3</sup>  
LC50<sub>ihl</sub> rat : [10h] 20 g/m<sup>3</sup>  
LD50<sub>drum</sub> rbt : 20 000 mg/kg  
LD50<sub>oral</sub> mouse : 3450 mg/kg

TRGS 905 (DE): K5, M5, R<sub>F</sub> 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<sub>oral</sub> rat : 2100 mg/kg  
LD50<sub>ipr</sub> mus : 551 mg/kg  
Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

## 300 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 ≥0,1%/≥0,1%, Article 57-2 (SDS required)  
South Korea TCCA: not listed  
Korea Exist.Chem.Inventory: KE-13217  
LD50<sub>oral</sub> rat : 6200 mg/kg  
LC<sub>Low</sub>ihl gpg : 21.9 g/m<sup>3</sup>  
LC<sub>Low</sub>orl hmn : 1400 mg/kg  
LC50<sub>ihl</sub> mouse : [4h] 39 g/m<sup>3</sup>

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LC50<sub>ihl rat</sub> : [10h] 20 g/m<sup>3</sup>  
LD50<sub>drm rbt</sub> : 20 000 mg/kg  
LD50<sub>oral mouse</sub> : 3450 mg/kg

TRGS 905 (DE): K5, M5, R<sub>F</sub> 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 PDSC: not listed  
Japan ISHL: not listed  
South Korea TCCA: not listed  
Korea Exist.Chem.Inventory: KE-31569  
LD50<sub>orl rat</sub> : 2100 mg/kg  
LD50<sub>ipr mus</sub> : 551 mg/kg  
Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

## 500 mL MB5

Chemical: *chemicals/mixture < 1%* CAS No.: -  
TSCA Inventory: all listed, <1%  
Korea Exist.Chem.Inventory: listed

## 125 mL MB6

Chemical: *chemicals/mixture < 1%* CAS No.: -  
TSCA Inventory: all listed, <1%  
Korea Exist.Chem.Inventory: listed

## 15 mL PB

Chemical: *glycerole* CAS No.: 56-81-5  
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<sub>orl rat</sub> : 12.6 g/kg  
LD50<sub>drm rbt</sub> : >18.7 g/kg  
TRGS 905 (DE): R<sub>F</sub> C

## 75 mg Proteinase K (lyo)

Chemical: *proteinase K (origin: tritirachium album)* CAS No.: 39450-01-6  
TSCA Inventory: listed (CAS 102925-54-2)  
Japan CSCL/PRTR: not listed  
Japan ISHL: not listed  
Korea Exist.Chem.Inventory: not listed  
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.

## 100 mL T1

Chemical: *chemicals/mixture < 2%* CAS No.: -  
TSCA Inventory: all listed, <2%  
Korea Exist.Chem.Inventory: listed

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## SECTION 12: Ecological information

### 12.1 Toxicity

Following information is valid for pure substances.

#### 12 mL B-Beads

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

CAS No.: -

#### 180 mL MB2

Chemical: *ethanol*  
PNEC<sub>(fresh water)</sub>: 0.96 mg/L  
PNEC = Predicted No Effect Concentration  
LC50<sub>daphnia magna/48h</sub>: >100 mg/L  
LC50<sub>pimephales promelas/96h</sub>: 13400 - 15100 mg/L  
LC50<sub>leuciscus idus/96h</sub>: [48h] 8140 mg/L  
LC50<sub>fish/96h</sub>: 13 g/L  
EC50<sub>daphnia/48h</sub>: 9.3-14.2 g/L  
IC50<sub>scenedesmus quadricauda/72h</sub>: [7d] 5000 mg/L  
EC10<sub>pseudomonas putida/16h</sub>: [EC5] 6500 mg/L  
Water hazard class (DE): 1 WGK No.: 0096  
Dispersion coefficient<sub>(octanol-water)</sub>: -0.31  
Storage class (VCI): 3

CAS No.: 64-17-5

Chemical: *sodium perchlorate*  
Water hazard class (DE): 1 WGK No.: 0382  
Storage class (VCI): 12

CAS No.: 7601-89-0

#### 300 mL MB3

Chemical: *ethanol*  
PNEC<sub>(fresh water)</sub>: 0.96 mg/L  
PNEC = Predicted No Effect Concentration  
LC50<sub>daphnia magna/48h</sub>: >100 mg/L  
LC50<sub>pimephales promelas/96h</sub>: 13400 - 15100 mg/L  
LC50<sub>leuciscus idus/96h</sub>: [48h] 8140 mg/L  
LC50<sub>fish/96h</sub>: 13 g/L  
EC50<sub>daphnia/48h</sub>: 9.3-14.2 g/L  
IC50<sub>scenedesmus quadricauda/72h</sub>: [7d] 5000 mg/L  
EC10<sub>pseudomonas putida/16h</sub>: [EC5] 6500 mg/L  
Water hazard class (DE): 1 WGK No.: 0096  
Dispersion coefficient<sub>(octanol-water)</sub>: -0.31  
Storage class (VCI): 3

CAS No.: 64-17-5

Chemical: *sodium perchlorate*  
Water hazard class (DE): 1 WGK No.: 0382  
Storage class (VCI): 12

CAS No.: 7601-89-0

#### 300 mL MB4

Chemical: *ethanol*  
PNEC<sub>(fresh water)</sub>: 0.96 mg/L  
PNEC = Predicted No Effect Concentration  
LC50<sub>daphnia magna/48h</sub>: >100 mg/L  
LC50<sub>pimephales promelas/96h</sub>: 13400 - 15100 mg/L  
LC50<sub>leuciscus idus/96h</sub>: [48h] 8140 mg/L  
LC50<sub>fish/96h</sub>: 13 g/L  
EC50<sub>daphnia/48h</sub>: 9.3-14.2 g/L  
IC50<sub>scenedesmus quadricauda/72h</sub>: [7d] 5000 mg/L  
EC10<sub>pseudomonas putida/16h</sub>: [EC5] 6500 mg/L  
Water hazard class (DE): 1 WGK No.: 0096  
Dispersion coefficient<sub>(octanol-water)</sub>: -0.31  
Storage class (VCI): 3

CAS No.: 64-17-5

Chemical: *sodium perchlorate*  
Water hazard class (DE): 1 WGK No.: 0382  
Storage class (VCI): 12

CAS No.: 7601-89-0

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## 500 mL MB5

Chemical: *chemicals/mixture < 1%*  
Water hazard class (DE): 1  
Storage class (VCI): 12-13

CAS No.: -

## 125 mL MB6

Chemical: *chemicals/mixture < 1%*  
Water hazard class (DE): 1  
Storage class (VCI): 12-13

CAS No.: -

## 15 mL PB

Chemical: *glycerole*  
PNEC(fresh water): 0.885 mg/L  
PNEC = Predicted No Effect Concentration  
LC50<sub>fish/96h</sub>: >5000<sub>24h</sub> mg/L  
EC50<sub>daphnia/48h</sub>: >10<sub>24h</sub> g/L  
IC50<sub>scenedesmus quadricauda/72h</sub>: IC50<sub>7d</sub> >10 g/L  
EC10<sub>pseudomonas putida/16h</sub>: EC5: >10 g/L  
Water hazard class (DE): 0  
Dispersion coefficient(octanol-water): -1.76  
Storage class (VCI): 10

CAS No.: 56-81-5

## 75 mg Proteinase K (Iyo)

Chemical: *proteinase K (origin: tritirachium album)*  
Water hazard class (DE): 1  
Storage class (VCI): 13

CAS No.: 39450-01-6

## 100 mL T1

Chemical: *chemicals/mixture < 2%*  
Water hazard class (DE): 1  
Storage class (VCI): 12-13

CAS No.: -

## 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

Air transport

PAX: 355

CAO: 366

Tunnel restriction code: E

Special instructions: 640E

max. weight PAX: 60 L

max. weight CAO: 220 L

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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](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.  
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, 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  
 Regulation 849/2021/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  
 TRGS 907, German engineering rules governing listing of substances and causes of sensitizations, updated November 2011  
 Directive 1999/92/EC Minimum requirements for improving the safety and health protection of workers at risk from potentially explosive atmospheres  
 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