

Safety Data Sheet

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

REF: 740422.10 NucleoBond Xtra Midi Plus EF (10) Page: 1/22

Printing date: 12.05.2021 Date of issue: 17.02.2021

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

1.1 **Product identifier**

REF 740422.10

Product name NucleoBond Xtra Midi Plus EF (10)

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 60 mL ELU-EF 1 x 400 mL ENDO-EF 1 x 200 mL EQU-EF 1 x 60 mL FIL-EF 1 x 100 mL LYS-EF 1 x 100 mL NEU-EF 1 x 100 mL RES-EF

1 x 0.6-100 mg RNase A (Iyo)

1 x 30 mL TE-EF 1 x 200 mL WASH-EF 1 x 30 mL H₂ O-EF

1 x 9 mL H₂ O-EF (for 70% ethanol)

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses

Product for analytical use

Exposure Scenario Classification according REACh, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0

The exposure scenario is integrated into sections 1-16.

Uses advised against

not described

1.3 Details of the supplier of the safety data sheet

Manufactured by:

MACHEREY-NAGEL GmbH & Co. KG Valencienner Str. 11, 52355 Düren, GERMANY

Tel.: +49 2421 969 0 E-mail: sds@mn-net.com (msds@mn-net.com)

1.4 **Emergency telephone number**

Outside Germany (DE): Call your regional Poisons Information Service or call local Life Saving Service. DE: Gemeinsames Giftinformationszentrum (GGIZ) 99089 Erfurt tel. +49 361 730 730

You find our current versions of SDS (22 languages) in Internet:

http://www.mn-net.com/SDS

SECTION 2: Hazard identification

2.0 Classification of the complete product







GHS02

GHS07 GHS08

Signal word **DANGER**

Hazard identification	Hazard classes/categories
H226	Flam. Lig. 3
H315	Skin Irrit. 2
H319	Eye Irrit. 2
H334	Resp. Sens. 1
H412	Aquatic Chronic 3

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DE/international: CH: FR:

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2.1 Classification of the substance or mixture

60 mL ELU-EF





Signal word WARNING

Hazard identification Hazard classes/categories

H226 Flam. Liq. 3 H319 Eye Irrit. 2

400 mL ENDO-EF



Signal word WARNING

Hazard identification Hazard classes/categories

H226 Flam. Liq. 3 H412 Aquatic Chronic 3

200 mL EQU-EF



Signal word WARNING

Hazard identification Hazard classes/categories H226 Flam. Liq. 3 H412 Aquatic Chronic 3

60 mL FIL-EF

Do not need labelling as hazardous

Signal word

No hazard class

100 mL LYS-EF



Signal word WARNING

Hazard identification Hazard classes/categories

H315 Skin Irrit. 2 H319 Eye Irrit. 2

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100 mL NEU-EF

Do not need labelling as hazardous

Signal word

No hazard class

100 mL RES-EF

Do not need labelling as hazardous

Signal word

No hazard class

0.6-100 mg RNase A (Iyo)

Signal word **DANGER**

Hazard identification Hazard classes/categories

H334 Resp. Sens. 1

30 mL TE-EF

Do not need labelling as hazardous

Signal word

No hazard class

200 mL WASH-EF

Signal word WARNING

Hazard identification Hazard classes/categories

H226 Flam. Liq. 3

30 mL H₂ O-EF

Do not need labelling as hazardous

Signal word

No hazard class

9 mL H₂ O-EF (for 70% ethanol)

Do not need labelling as hazardous

Signal word

No hazard class

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2.2 Label elements

According CLP directive inner packages must be only labelled with GHS symbol(s) and product identificator(s) (EU 1272/2008 Annex I - 1.5.1.2).

Harmful chemicals/mixtures with signal word: WARNING and highly flammable chemicals/mixtures must not be labelled with H and P phrases until 125 mL (EU 1272/2008 Annex I - 1.5.2). This labelling exemption is NOT valid for sensibilizing substances.





GHS02

Signal word: WARNING

400 mL ENDO-EF



GHS02

Signal word: WARNING

Flammable liquid and vapour. Harmful to aquatic life with long lasting effects.

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Avoid release to the environment.

200 mL EQU-EF



Signal word: WARNING

Flammable liquid and vapour. Harmful to aquatic life with long lasting effects.

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Avoid release to the environment.

Do not need labelling as hazardous Signal word: -

100 mL LYS-EF



Signal word: WARNING

100 mL NEU-EF

Do not need labelling as hazardous

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Signal word: -

100 mL RES-EF

Do not need labelling as hazardous Signal word: -

0.6-100 mg RNase A (Iyo)



Signal word: DANGER

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.

30 mL TE-EF

Do not need labelling as hazardous Signal word: -

200 mL WASH-EF



Signal word: WARNING

H226

Flammable liquid and vapour.

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

30 mL H₂ O-EF

Do not need labelling as hazardous Signal word: -

9 mL H₂ O-EF (for 70% ethanol)

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

Information pertaining to particular risks to human and possible symptoms

Cause after 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

Harmful to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment.

PBT: not applicable vPvB: not applicable

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Other hazards

SECTION 3: Composition/information on ingredients

3.1 Substances or 3.2 Mixtures

60 mL ELU-EF

CAS No.: 67-63-0 Chemical: 2-propanol

Classification: H225, Flam. Liq. 2, H319, Eye Irrit. 2, H336, STOT SE 3

C₃ H₈ O Formula:

isopropanol, IPA, propan-2-ol Pseudonym:

TSCA Inventory: listed

REACH Reg. No.: 01-2119457558-25-XXXX

EC No.: 200-661-7 Indice No.: 603-117-00-0 RTECS: NT8050000 MFCD: 00011674

KE No.: KE-29363 Concentration: 10 - < 15 %

acc. CLP (GHS): H226, Flam. Liq. 3, H319, Eye Irrit. 2

Chemical: potassium chloride CAS No.: 7447-40-7

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

Formula: KCI

TSCA Inventory: listed

REACH Reg. No.: 01-2119539416-36-xxxx

231-211-8 EC No.:

RTECS: TS8050000 MFCD: 00011360

KE-29086 KE No.: Concentration: 1 - <10 %

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

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.

400 mL ENDO-EF

ethanol (diluted < 20 %) CAS No.: 64-17-5d Chemical:

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

Classification: H225, Flam. Liq. 2 Formula: C₂ H₆ O; C₂ H₅ OH

Pseudonym: ethyl alcohol, methylated spirit

TSCA Inventory: listed

REACH Reg. No.: 01-2119457610-43-xxxx

EC No.: 200-578-6 603-002-00-5 Indice No.: KQ6300000 RTECS: MFCD: 00003568

KE-13217 KE No.: Concentration: 5 - < 20 % acc. CLP (GHS): H226, Flam. Liq. 3

Chemical: potassium chloride CAS No.: 7447-40-7

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

Formula: TSCA Inventory: listed

REACH Reg. No.: 01-2119539416-36-xxxx

EC No.: 231-211-8

RTECS: TS8050000 MFCD: 00011360 KE No.: KE-29086

Concentration: 1 - <10 %

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

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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: $C_{30} H_{54} O_9$

Pseudonym: Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-

TSCA Inventory: listed | listed | listed | listed | listed | | |
EC No.: 232-658-1 | RTECS: RI0720000 | KE No.: KE-33567 | Concentration: 0.25 - <2.5 %

acc. CLP (GHS): H412, Aquatic Chronic 3

Chemical: chemicals/mixture < 1% CAS No.: -

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

TSCA Inventory: all listed, <1% listed
Concentration: 0.1 - <1 %

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

200 mL EQU-EF

Chemical: ethanol (diluted < 20 %) CAS No.: 64-17-5d

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

Classification: H225, Flam. Liq. 2 Formula: $C_2 H_6 O$; $C_2 H_5 OH$

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: 5 - <20 % acc. CLP (GHS): H226, Flam. Lig. 3

Chemical: potassium chloride CAS No.: 7447-40-7

Classification:

No criteria for classification or naming of chemical not required.

Formula:

KCI

Formula: KCI TSCA Inventory: listed

REACH Reg. No.: 01-2119539416-36-xxxx

EC No.: 231-211-8

RTECS: TS8050000 MFCD: 00011360

KE No.: KE-29086 Concentration: 1 - <10 %

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

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: $C_{30} H_{54} O_9$

Pseudonym: Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-

TSCA Inventory: listed | listed | listed | listed | EC No.: 232-658-1 | RTECS: RI0720000 | KE No.: KE-33567 | Concentration: 0.25 - <2.5 %

acc. CLP (GHS): H412, Aquatic Chronic 3

Chemical: chemicals/mixture < 1% CAS No.: -

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

TSCA Inventory: all listed, <1% listed
Concentration: 0.1 - <1 %

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

60 mL FIL-EF

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CAS No.: 7447-40-7

00011360

CAS No .: -

US:

CAS No.: 1310-73-2d

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> Chemical: potassium chloride Classification:

No criteria for classification or naming of chemical not required. Formula: **KCI**

TSCA Inventory: listed

REACH Reg. No.: 01-2119539416-36-xxxx

EC No.: 231-211-8 RTFCS TS8050000

KE-29086 KE No .:

Concentration: 1 - <10 % acc. CLP (GHS): The criteria for classification are not fulfilled

chemicals/mixture < 1% 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.

100 mL LYS-EF

Chemical:

sodium hydroxide solution (diluted < 2 %) Chemical

H314, Skin Corr. 1B Classification: Formula: NaOH•H2O Pseudonym: diluted soda lye

TSCA Inventory: listed

REACH Reg. No.: 01-2119457892-27-xxxx

215-185-5 011-002-00-6 FC No: Indice No :

RTECS: WB4900000 KE No.: KE-31487 Concentration: 0.5 - <1 %

acc. CLP (GHS): H315, Skin Irrit. 2, H319, Eye Irrit. 2

Chemical: dodecyl sulfate, sodium salt CAS No.: 151-21-3

Classification: H228, Flam. Sol. 1, H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H318, Eye Dam. 1, H332, Acute

MFCD:

Tox. 4 inh., H335, STOT SE 3, H412, Aquatic Chronic 3

Formula: C₁₂ H₂₅ NaO₄ S

sodium lauryl sulfate, sulfuric acid monododecyl ester sodium salt Pseudonym:

TSCA Inventory: listed

01-2119489461-32-xxxx REACH Reg. No.:

EC No.: 205-788-1

RTECS: WT1050000 MFCD: 00036175

KE No.: KE-21884 Concentration: 01-<1%

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

Chemical: indicator dye(s) CAS No .: -

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

all listed. <1% TSCA Inventory < 0.10 % Concentration:

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

100 mL NEU-EF

Chemical: acetate buffer solution CAS No .: -

Classification: No criteria for classification or naming of chemical not required. CH $_3$ COOH/K/Na $^{\bullet}H_2$ O Formula:

TSCA Inventory: all listed KE No.: listed Concentration: 25 - <45 %

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

100 mL RES-EF

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.

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0.6-100 mg RNase A (Iyo) Chemical: RN

CAS No.: 9001-99-4

Classification: H334, Resp. Sens. 1

Formula: Enzyme Comm. No. 3.1.27.5, origin: bovine pancreas (controlled population)

Pseudonym: Nuclease, ribo-TSCA Inventory: listed EC No.: 232-646-6 RF0760000 RTECS: KE No.: KE-30341 Concentration: 90 - <100 % acc. CLP (GHS): H334, Resp. Sens. 1

30 mL TE-EF

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.

200 mL WASH-EF

ethanol (diluted < 20 %) CAS No.: 64-17-5d Chemical:

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

Classification: H225, Flam. Liq. 2 Formula: C₂ H₆ O; C₂ H₅ 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: 5 - < 20 % acc. CLP (GHS): H226, Flam. Liq. 3

potassium chloride Chemical: CAS No.: 7447-40-7

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

Formula: TSCA Inventory: listed

REACH Reg. No.: 01-2119539416-36-xxxx

EC No.: 231-211-8

RTECS: TS8050000 MFCD: 00011360

KE No.: KE-29086 Concentration: 1 - <10 %

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

Chemical: chemicals/mixture < 1% CAS No .: -

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

all listed, <1% TSCA Inventory: KF No . listed Concentration: 0.1 - <1 %

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

30 mL H₂ O-EF

Chemical: CAS No.: 7732-18-5

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

Formula: H₂ O TSCA Inventory: listed

REACH Reg. No.: exempt, Annex IV 231-791-2 EC No.: RTECS: ZC0110000 KE No .: KE-35400 90 - <100 % Concentration:

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

9 mL H₂ O-EF (for 70% ethanol)

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> Chemical: CAS No.: 7732-18-5 water

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

Formula: H_2O TSCA Inventory: listed

REACH Reg. No.: exempt, Annex IV EC No.: 231-791-2 RTFCS ZC0110000 KE No .: KE-35400 Concentration: 90 - <100 %

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

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. 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.

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. 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, 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

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): Water hazard class (DE): 2

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

60 mL ELU-EF

CAS No.: 67-63-0 Chemical: 2-propanol

[inh] 500 mg/m3 DNEL = Derived No-Effect Level (for workers) PNEC (fresh water): 140.9 mg/L
PNEC = Predicted No Effected Concentration

TRGS 900 (DE): 200 ppm / 500 mg/m³

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/m³ [Aceton B/b, U/b] 25 mg/L B blood, U urine, a no limitation, b end of exposition or shift TRGS 903 (DE):

[TWA] 400 ppm / 980 mg/m³ NIOSH:

NIOSH STEL: 500 ppm / 1225 mg/m³ [TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

[TWA] 400 ppm / 980 mg/m³ OSHA:

Chemical: potassium chloride CAS No.: 7447-40-7

Chemical: chemicals/mixture < 1% CAS No : -

400 mL ENDO-EF

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

DNEL: [derm] 343 mg/kg; [inh] 950 mg/m³ DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): U.90 HI9/L PNEC = Predicted No Effected Concentration

TRGS 900 (DE): 200 ppm / 380 mg/m³

Short-term exposure factor: 4 (II), Y

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

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> SUVA(CH) MAK value: 500 ppm / 960 mg/m³

NIOSH:

i: [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

1000 ppm / 1900 mg/m³

CAS No.: 7447-40-7 Chemical: potassium chloride

Chemical: Triton® X-114 CAS No.: 9036-19-5

Chemical: chemicals/mixture < 1% CAS No .: -

200 mL EQU-EF

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

[derm] 343 mg/kg; [inh] 950 mg/m³ DNEL = Derived No-Effect Level (for workers) DNEL:

PNEC (fresh water): 0.96 mg/L PNEC = Predicted No Effected Concentration

TRGS 900 (DE): 200 ppm / 380 mg/m³

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

[TWA] 1000 ppm / 1900 mg/m³ NIOSH:

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

OSHA: 1000 ppm / 1900 mg/m³

Chemical: potassium chloride CAS No.: 7447-40-7

Chemical: Triton® X-114 CAS No.: 9036-19-5

Chemical: chemicals/mixture < 1% CAS No .: -

60 mL FIL-EF

Chemical: potassium chloride CAS No.: 7447-40-7

Chemical: chemicals/mixture < 1% CAS No .: -

100 mL LYS-EF

sodium hydroxide solution CAS No.: 1310-73-2d Chemical:

Chemical: dodecyl sulfate, sodium salt CAS No.: 151-21-3

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: indicator dye(s) CAS No · -

100 mL NEU-EF

Chemical: acetate buffer solution CAS No .: -

100 mL RES-EF

Chemical: chemicals/mixture < 1% CAS No .: -

0.6-100 mg RNase A (Iyo)

Chemical: RNase CAS No.: 9001-99-4

30 mL TE-EF

Chemical: chemicals/mixture < 1% CAS No .: -

200 mL WASH-EF

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

[derm] 343 mg/kg; [inh] 950 mg/m³ Level (for workers)

PNEC_(fresh water): 0.96 mg/L PNEC = Predicted No Effected Concentration

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> TRGS 900 (DE): 200 ppm / 380 mg/m³

4 (II), Y Short-term exposure factor:

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: 1000 ppm / 1900 mg/m³

Chemical: potassium chloride CAS No.: 7447-40-7

CAS No · -Chemical: chemicals/mixture < 1%

30 mL H₂ O-EF

Chemical: water CAS No.: 7732-18-5

9 mL H₂ O-EF (for 70% ethanol)

Chemical: CAS No.: 7732-18-5

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

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

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

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

60 mL ELU-EF

Appearance: liquid Colour: colourless Odor: alcoholic

8 5-9 5 pH: 30 °C Flash point: Specific gravity: 1.04 g/cm³

400 mL ENDO-EF

Appearance: liquid Colour: colourless Odor: alcoholic

6-7 39 °C Flash point: Specific gravity: 1.04 g/cm³

200 mL EQU-EF

Odor: alcoholic Colour: colourless Appearance: liquid

6-7 39 °C pH: Flash point: Specific gravity: 1.04 g/cm³

60 mL FIL-EF

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Odor: odorless

Appearance: liquid

6-7 Specific gravity: 1.06 g/cm³

100 mL LYS-EF

Appearance: liquid Colour: blue Odor: odorless

Specific gravity: 1.008 g/cm³

100 mL NEU-EF

Appearance: liquid Colour: colourless Odor: acetic

Colour colourless

pH: 4-5 63 °C Flash point: Specific gravity: 1.19 g/cm³

100 mL RES-EF

Colour: colourless Odor: odorless Appearance: liquid

7.5 - 8.5pH: Specific gravity: 1.01 g/cm³

0.6-100 mg RNase A (Iyo)

Odor: odorless Appearance: solid (lyoph.) Colour: colourless

Solubility in water: 0-100 %

30 mL TE-EF

Appearance: liquid Colour: colourless Odor: odorless

7.2-7.7 Specific gravity: 1.0 g/cm³

200 mL WASH-EF

Odor: alcoholic Appearance: liquid Colour: colourless

pH: 6-7 39 °C Flash point: Specific gravity: 1.04 g/cm³

30 mL H₂ O-EF

Appearance: liquid Colour: colourless Odor: odorless

6-8 Specific gravity: 1.0 g/cm³

9 mL H₂ O-EF (for 70% ethanol)

Colour: colourless Appearance: liquid Odor: odorless

6-8 Specific gravity: 1.0 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**

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.

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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.

60 mL ELU-EF

Chemical: 2-propanol CAS No.: 67-63-0

TSCA Inventory listed California Proposition 65 List: not listed

ACGIH: 1230 ppm

inhalation, ingestion, skin and/or eye contact **Exposure Routes:**

Target Organs: Eves, skin, respiratory system

irritation eyes, nose, throat; drowsiness, dizziness, headache; dry cracking skin; in animals: narcosis Symptoms:

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_{orl rat}: 5045 mg/kg LC_Loworl hmn: 3570 mg/kg LC50_{ihl rat}: 16_{4h} g/m³ LD50_{drm rbt}: 12.8 g/kg

TRGS 905 (DE): R_F C

Chemical: potassium chloride CAS No.: 7447-40-7

TSCA Inventory: listed Korea Exist.Chem.Inventory: KE-29086 LD50_{orl rat}: 2600 mg/kg

Chemical: chemicals/mixture < 1% CAS No .: -

all listed, <1% TSCA Inventory:

Korea Exist.Chem.Inventory: listed

400 mL ENDO-EF

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

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

not listed, Japan PDSCL: not listed Japan CSCL/PRTR:

Japan ISHL: listed ≥0,1%/≥0,1%, Article 57-2 (SDS required)

South Korea TCCA: not listed Korea Exist.Chem.Inventory: KE-13217 LD50_{orl rat}: 6200 mg/kg LC_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

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> potassium chloride CAS No.: 7447-40-7 Chemical:

TSCA Inventory: listed Korea Exist.Chem.Inventory: KE-29086 LD50_{orl rat}: 2600 mg/kg

Triton® X-114 Chemical: CAS No.: 9036-19-5

TSCA Inventory: listed Korea Exist.Chem.Inventory: KE-33567

chemicals/mixture < 1% Chemical: CAS No.: -

TSCA Inventory: all listed. <1%

Korea Exist.Chem.Inventory: listed

200 mL EQU-EF

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

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

not listed, Japan PDSCL: not listed Japan CSCL/PRTR:

Japan ISHL: listed ≥0,1%/≥0,1%, Article 57-2 (SDS required)

South Korea TCCA: Korea Exist.Chem.Inventory: KE-13217 LD50_{orl rat}: 6200 mg/kg 21.9 g/m³ LC_Lowihl gpg: LC_Loworl hmn: 1400 mg/kg LC50_{ihl mouse}: [4h] 39 g/m³ LC50_{ihl rat}: [10h] 20 g/m³ 20 000 mg/kg LD50_{drm rbt}: LD50_{oral mouse}: 3450 mg/kg

TRGS 905 (DE): K5, M5, R_F C

Chemical: potassium chloride CAS No.: 7447-40-7

TSCA Inventory: listed Korea Exist.Chem.Inventory: KE-29086 LD50_{orl rat}: 2600 mg/kg

Chemical: Triton® X-114 CAS No.: 9036-19-5

TSCA Inventory: listed Korea Exist.Chem.Inventory: KE-33567

Chemical: chemicals/mixture < 1% CAS No.: -

TSCA Inventory: all listed, <1%

Korea Exist.Chem.Inventory: listed

60 mL FIL-EF

potassium chloride Chemical: CAS No.: 7447-40-7

TSCA Inventory: listed Korea Exist.Chem.Inventory: KE-29086 LD50_{orl rat}: 2600 mg/kg

chemicals/mixture < 1% CAS No.: -Chemical:

TSCA Inventory: all listed. <1%

Korea Exist.Chem.Inventory: listed

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100 mL LYS-EF

Chemical: sodium hydroxide solution CAS No.: 1310-73-2d

TSCA Inventory: listed California Proposition 65 List: not listed

Exposure Routes: inhalation, ingestion, skin and/or eye contact

Target Organs: Eyes, skin, respiratory system

Symptoms: -

Japan CSCL/PRTR: not listed, Japan PDSCL: not listed Japan ISHL: not listed ≥1,0%/≥1,0% SDS required

Korea Exist.Chem.Inventory: KE-31487 LD50 $_{
m orl}$ rat: [< 1%] > 50 g/kg LD50 $_{
m drm}$ rbt: not applicable LD50 $_{
m orl}$ mus: [< 1%] > 4 g/kg

Chemical: dodecyl sulfate, sodium salt CAS No.: 151-21-3

TSCA Inventory: listed California Proposition 65 List: not listed Australia NICNAS: not listed Canada CEPA 1999: DSL yes

Japan CSCL/PRTR: PRTR - Class I Designated Chemical Substance, Japan PDSCL: not listed

 Japan ISHL:
 not listed

 South Korea TCCA:
 not listed

 Korea Exist.Chem.Inventory:
 KE-21884

 LD50_{orl rat}:
 1288 mg/kg

 LC50_{inh rat}:
 3900_{1h} mg/m³

 LD50_{drm rbt}:
 10 g/kg

Chemical: indicator dye(s) CAS No.: -

TSCA Inventory: all listed, <1%

100 mL NEU-EF

Chemical: acetate buffer solution CAS No.: -

TSCA Inventory: all listed Korea Exist.Chem.Inventory: listed

100 mL RES-EF

Chemical: chemicals/mixture < 1% CAS No.: -

TSCA Inventory: all listed, <1%

Korea Exist.Chem.Inventory: listed

0.6-100 mg RNase A (Iyo)

Chemical: RNase CAS No.: 9001-99-4

TSCA Inventory: listed
Japan CSCL/PRTR: not listed
Japan ISHL: not listed
Korea Exist.Chem.Inventory: KE-30341
LD50intraperitonaeal rat: 392 mg/kg

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.

30 mL TE-EF

Chemical: chemicals/mixture < 1% CAS No.: -

TSCA Inventory: all listed, <1%

Korea Exist.Chem.Inventory: listed

200 mL WASH-EF

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

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

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> 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_{orl rat}: 6200 mg/kg LC_Lowinl 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

potassium chloride Chemical: CAS No.: 7447-40-7

TSCA Inventory: listed Korea Exist.Chem.Inventory: KE-29086 LD50_{orl rat}: 2600 mg/kg

Chemical: chemicals/mixture < 1% CAS No .: -

TSCA Inventory: all listed, <1%

Korea Exist.Chem.Inventory: listed

30 mL H₂ O-EF

Chemical: CAS No.: 7732-18-5 water

TSCA Inventory: listed Korea Exist.Chem.Inventory: KE-35400

9 mL H₂ O-EF (for 70% ethanol)

Chemical: CAS No : 7732-18-5

TSCA Inventory: listed Korea Exist.Chem.Inventory: KE-35400

SECTION 12: Ecological information

12.1

Following information is valid for pure substances.

60 mL ELU-EF

Chemical: CAS No.: 67-63-0 2-propanol

PNEC(fresh water):
PNEC = Predicted No Effected Concentration 140.9 mg/L

 $LC50_{fish/96h}$: 1400 ma/L EC50_{daphnia/48h}: 13.3 g/L IC50_{scenedesmus} quadricauda/72h: >1000 mg/L EC10_{pseudomonas putita/16h}: EC5: 1050 mg/L

Water hazard class (DE): $Dispersion\ coefficient \ (octanol-water)\ .$ 0.05 Storage class (VCI):

Chemical: CAS No.: 7447-40-7 potassium chloride

WGK No.: 0135

Water hazard class (DE): Storage class (VCI): 12-13

CAS No .: -Chemical: chemicals/mixture < 1%

Water hazard class (DE): Storage class (VCI): 12-13

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CAS No.: 64-17-5d

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400 mL ENDO-EF

ethanol Chemical:

PNEC_(fresh water):
PNEC = Predicted No Effected Concentration 0.96 mg/L

LC50_{daphnia magna/48h}: >100 g/L LC50_{pimephales} promelas/96h : 13.4-15.1 g/L LC50_{leuciscus idus/96h}: [48h] 8.14 g/L LC50fish/96h: 13 g/L 9.3-14.2 g/L EC50daphnia/48h: IC50_{scenedesmus} quadricauda/72h: [7d] 5000 mg/L EC10_{pseudomonas} putita/16h : Water hazard class (DE): [EC5] 6500 mg/L

Dispersion coefficient_(octanol-water): -0.31 Storage class (VCI):

potassium chloride CAS No.: 7447-40-7

WGK No.: 0096

Water hazard class (DE): Storage class (VCI): 12-13

Triton® X-114 CAS No.: 9036-19-5

Harmful to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment.

Environmental hazards must not be labelled with P phrases until 125 mL (EU 1272/2008 Annex I - 1.5.2). Water hazard class (DE):

Storage class (VCI): 12-13

chemicals/mixture < 1% CAS No .: -

Water hazard class (DE): Storage class (VCI): 12-13

200 mL EQU-EF

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

0.96 mg/L

PNEC (fresh water):
PNEC = Predicted No Effected Concentration

LC50_{daphnia magna/48h}: >100 g/L LC50pimephales promelas/96h 13.4-15.1 g/L LC50_{leuciscus} idus/96h [48h] 8.14 g/L LC50_{fish/96h}: 13 g/L 9.3-14.2 g/L EC50daphnia/48h: IC50_{scenedesmus} quadricauda/72h: [7d] 5000 mg/L EC10_{pseudomonas} putita/16h : Water hazard class (DE): [EC5] 6500 mg/L WGK No.: 0096

Dispersion coefficient_(octanol-water): -0.31 Storage class (VCI):

Chemical: potassium chloride CAS No.: 7447-40-7

Water hazard class (DE): Storage class (VCI): 12-13

CAS No.: 9036-19-5 Chemical: Triton® X-114

Harmful to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment. Environmental hazards must not be labelled with P phrases until 125 mL (EU 1272/2008 Annex I - 1.5.2).

Water hazard class (DE): Storage class (VCI): 12-13

chemicals/mixture < 1% CAS No .: -

Water hazard class (DE): Storage class (VCI): 12-13

60 mL FIL-EF

potassium chloride CAS No.: 7447-40-7 Chemical:

Water hazard class (DE): Storage class (VCI): 12-13

CAS No .: chemicals/mixture < 1%

Water hazard class (DE): Storage class (VCI): 12-13

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100 mL LYS-EF

Chemical: sodium hydroxide solution CAS No.: 1310-73-2d

LC50_{leuciscus idus/96h}: 35-189 mg/L LC50_{fish/96h}: 45.4 mg/L EC50_{daphnia/48h}: >100 mg/L

Water hazard class (DE): nwg WGK No.: 0142

Storage class (VCI): 12-13

Chemical: dodecyl sulfate, sodium salt CAS No.: 151-21-3

LC50_{daphnia magna/48h}: 6.3 mg/L LC50_{fish/96h}: 1.31-22.5 mg/L

Water hazard class (DE): 2
Dispersion coefficient_(octanol-water): 1.6
Storage class (VCI): 12-13

Chemical: indicator dye(s) CAS No.: -

Storage class (VCI): 12-13

100 mL NEU-EF

Chemical: acetate buffer solution CAS No.: -

Storage class (VCI): 12

100 mL RES-EF

Chemical: chemicals/mixture < 1% CAS No.: -

Water hazard class (DE): 1 Storage class (VCI): 12-13

0.6-100 mg RNase A (Iyo)

Chemical: RNase CAS No.: 9001-99-4

Water hazard class (DE): 1 Storage class (VCI): 13

30 mL TE-EF

Chemical: chemicals/mixture < 1% CAS No.: -

Water hazard class (DE): 1

Storage class (VCI): 12-13

200 mL WASH-EF

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

PNEC_(fresh water): 0.96 mg/L PNEC = Predicted No Effected Concentration

LC50daphnia magna/48h : >100 g/L

LC50pimephales promelas/96h: 13.4-15.1 g/L
LC50leuciscus idus/96h: [48h] 8.14 g/L
LC50fish/96h: 13 g/L
EC50daphnia/48h: 9.3-14.2 g/L
IC50scenedesmus quadricauda/72h: [7d] 5000 mg/L
EC10pseudomonas putita/16h: [EC5] 6500 mg/L
Water hazard class (DE): 1 WGK No.: 0096

Dispersion coefficient_(octanol-water): -0.31 Storage class (VCI): 3

Chemical: potassium chloride CAS No.: 7447-40-7

Water hazard class (DE): 1
Storage class (VCI): 12-13

Chemical: chemicals/mixture < 1% CAS No.: -

Water hazard class (DE): 1
Storage class (VCI): 12-13

30 mL H₂ O-EF

Chemical: water CAS No.: 7732-18-5

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Safety Data Sheet

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

REF: 740422.10 NucleoBond Xtra Midi Plus EF (10) Page: 21/22

Printing date: 12.05.2021 Date of issue: 17.02.2021

9 mL H₂ O-EF (for 70% ethanol)

CAS No : 7732-18-5 Chemical:

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

UN 1993 class 3 III, Excepted Quantities (≤30 mL/∑≤1 L) = ADR/ IATA E1

14.2 UN proper shipping name: Flammable liquid, n.o.s. (2-propanol mixture) 14.1 UN number: 14.3 Class: 14.4 Packing group:

Road transport Classification code:

5 L Tunnel restriction code: F

Limited Quantity Special instructions: 640E **Excepted Quantity:** F 1

366

Air transport PAX: 355 max. weight PAX: 60 L

CAO: Maritime transport

F-E, S-E Α FmS: Storage category:

14.5 **Environmental hazards**

none, contains only small quantities of hazardous substances, contains only small amounts of these substances

220 I

14.6 Special precautions for user

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

max. weight CAO:

not applicable

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

German act governing protection from hazardous substances (Chemicals Act / Chemikaliengesetz- ChemG), revised on August 2013 German order governing protection from hazardous substances (Ordinance on Hazardous Substances / Gefahrstoffverordnung -GefStoffV), revised on November 2010, according to Directive 98/24/EC

TRGS 200, German engineering rules governing the classification and labelling of hazardous substances, preparations and products, updated October 2011

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

Look for your country-specific regulations.

15.2 Chemical safety assessment

not necessary for these small amounts ---

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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.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H412 Harmful 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.

P261sh Avoid breathing dust/vapours.
P273 Avoid release to the environment.
P280sh Wear protective gloves/eye protection.

P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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/EÉC 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^{th} adaptation of CLP regulation to technical and scientific progress Regulation 669/2018/EU, 4^{th} adaptation of CLP regulation to technical and scientific progress

Regulation 1480/2018/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

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

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