

Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 740771.20 NucleoSpin Plant II Midi (20) Page: 1/18 Date of Issue: 03.03.2023 Printing Date: 04.04.2023 Version: 2.4.7.11

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

1.1 **Product Identifier / Product Name**

RFF 740771.20 **Product Name** NucleoSpin Plant II Midi (20)

> 1 x 75 mL PL1 1 x 60 mL PL2

1 x 60 mL PC UFI: 60EV-03C8-D201-X08S

1 x 10 mL PL3 1 x 30 mL PW1 UFI: MMPT-631A-V206-GNTN

1 x 25 mL PW2 1 x 13 mL PE

1 x 0.6-20 mg RNase A (lyo) UFI: WWJV-U3PV-U207-MFGF

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 and of the Safety Data Sheet

Manufactured by:

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

Phone: +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. USA: American Association Of Poison Control Centers

Rockville, MD 20857. tel. 1-800-222-1222, https://www.poisonhelp.org

DE: Gemeinsames Giftinformationszentrum (GGIZ) 99089 Erfurt tel. +49 361 730 730

https://www.ggiz-erfurt.de

You find our current versions of SDS in Internet:

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

SECTION 2: Hazard(s) Identification

2.0 Classification of the complete Product







GHS02

GHS07

GHS08

Signal Word DANGER

Hazard Identification	Hazard Classes/Categories
H226	Flam. Liq. 3
H302	Acute Tox. 4 oral
H315	Skin Irrit. 2
H319	Eye Irrit. 2
H334	Resp. Sens. 1
H336	STOT SE 3

2.1 Classification of the substance or mixture



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60 mL PL2

Do not need labelling as hazardous

Signal Word

No Hazard Class

60 mL PC





GHS02

3HS0/

Signal Word WARNING

Hazard IdentificationHazard Classes/CategoriesH226Flam. Liq. 3H302Acute Tox. 4 oralH315Skin Irrit. 2H319Eye Irrit. 2

30 mL PW1





GHS02

GHS07

Signal Word V	VARNING
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Hazard Identification	Hazard Classes/Categories
H226	Flam. Liq. 3
H302	Acute Tox. 4 oral
H315	Skin Irrit. 2
H319	Eye Irrit. 2
H336	STOT SE 3

75 mL PL1

Do not need labelling as hazardous

Signal Word

No Hazard Class

0.6-20 mg RNase A (Iyo)



GHS08

Signal Word DANGER

Hazard Identification Hazard Classes/Categories
H334 Resp. Sens. 1

25 mL PW2

Do not need labelling as hazardous



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Signal Word

No Hazard Class

13 mL PE

Do not need labelling as hazardous

Signal Word

No Hazard Class

10 mL PL3

Do not need labelling as hazardous

Signal Word

No Hazard Class

List of H phrases: see section 16.2

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

According the implementation of GHS immediate packages only must be labelled with product identificator(s), GHS symbol(s), signal word, manufacturer name and phone number (OSHA's interpretation of HCS 2012). Harmful chemicals/mixtures with signal word: **WARNING** and highly flammable chemicals/mixtures must not be labelled with H and P phrases **until 125 mL** (EU 1272/2008 Annex I - 1.5.2) / **until 100 mL** (Canada WHMIS 2015). This labelling exemption does not apply to U.S.A. This labelling exemption is NOT valid for sensibilizing substances.

60 mL PL2

Do not need labelling as hazardous Signal Word: -

60 mL PC





GHS02

GHS07

Signal Word: WARNING

30 mL PW1





GHS02

GHS07

Signal Word: WARNING

75 mL PL1

Do not need labelling as hazardous Signal Word: -

0.6-20 mg RNase A (Iyo)



GHS08

Signal Word: DANGER

H334

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

P261sh, P342+311

Avoid breathing dust/vapors.lf experiencing respiratory symptoms: Call a POISON CENTER/doctor.

25 mL PW2

Do not need labelling as hazardous



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Signal Word: -

13 mL PE

Do not need labelling as hazardous

Signal Word: -

10 mL PL3

Do not need labelling as hazardous

Signal Word: -

Label elements of the complete product







Signal Word: DANGER

H334

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

P261sh, P342+311

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

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

Kit contains small amounts of enzymes, which may cause sensitization by direct and repeated contact.

Information pertaining to particular Risks to the Environment

not applicable PBT: vPvB: not applicable

Possible endocrine disrupting effects

data not available

SECTION 3: Composition/Information on Ingredients

3.1 Substances or 3.2 Mixtures

60 ml PC

Substance name: guanidine hydrochloride

CAS No.: 50-01-1

H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2 Substance rating:

Chemical Formula: CH₆ CIN₃ Synonyms (de): Guanidiniumchlorid REACH Reg. No.: 01-2119977063-35-0005

EC No.: 200-002-3 Indice No.: 607-148-00-0 Concentration: 24 - <36 %

acc. GHS: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2

Substance name: ethanol CAS No.: 64-17-5

(denatured with 1% 2-butanone)

Substance rating: H225, Flam. Liq. 2 Chemical Formula: C 2 H 6 O; C 2 H 5 OH Synonyms (de):

Äthylalkohol, vergällter Spiritus REACH Reg. No.: 01-2119457610-43-xxxx

EC No.: 200-578-6 Indice No.: 603-002-00-5

Concentration: 35 - < 55 % H226, Flam. Liq. 3 acc. GHS:



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0.6-20 mg RNase A (Iyo)

Substance name: RNase CAS No.: 9001-99-4

Substance rating: H334, Resp. Sens. 1

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

 Synonyms (de):
 RNase A

 EC No.:
 232-646-6

 Concentration:
 90 - <100 %</td>

 acc. GHS:
 H334, Resp. Sens. 1

30 mL PW1

Substance name: 2-propanol CAS No.: 67-63-0

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

Chemical Formula: C₃H₈O

Synonyms (de): Isopropanol, IPA, Propan-2-ol REACH Reg. No.: 01-2119457558-25-XXXX

EC No.: 200-661-7 Indice No.: 603-117-00-0

Concentration: 20 - <35 %

acc. GHS: H226, Flam. Liq. 3, H319, Eye Irrit. 2, H336, STOT SE 3

Substance name: guanidine hydrochloride

CAS No.: 50-01-1

Substance rating: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2

Chemical Formula: CH ₆ CIN ₃ Synonyms (de): Guanidiniumchlorid

Synonyms (de): Guanidiniumchlorid REACH Reg. No.: 01-2119977063-35-0005

EC No.: 200-002-3 Indice No.: 607-148-00-0

Concentration: 36 - <50 %

acc. GHS: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2

60 mL PL2

Substance name: sodium chloride CAS No.: sodium chloride

Substance rating: No criteria for classification or naming of chemical is not required.

Chemical Formula: NaCl
Synonyms (de): Kochsalz
REACH Reg. No.: exempt, Annex V
EC No.: 231-598-3
Concentration: 1 - < 5 %

acc. GHS: The criteria for classification are not fulfilled.

Substance name: chemicals/mixture until 2%

CAS No.:

Substance rating: No criteria for classification or naming of chemical is not required.

Concentration: 1 - <2 %

acc. GHS: The criteria for classification are not fulfilled.

Substance name: dodecyl sulfate, sodium salt

CAS No.: 151-21-3

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

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

Chemical Formula: C ₁₂ H ₂₅ NaO ₄ S Synonyms (de): Natriumlaurylsulfat REACH Reg. No.: 01-2119489461-32-xxxx

EC No.: 205-788-1 Concentration: 1 - <2,5 %

acc. GHS: The criteria for classification are not fulfilled



Software: M2 V 6.1.1.5

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25 mL PW2

Substance name: chemicals/mixture until 1%

CAS No.:

Substance rating: No criteria for classification or naming of chemical is not required.

Concentration: 0,1 - <1 %

acc. GHS: The criteria for classification are not fulfilled.

13 mL PE

Substance name: chemicals/mixture until 1%

CAS No.:

Substance rating: No criteria for classification or naming of chemical is not required.

Concentration: 0,1 - <1 %

acc. GHS: The criteria for classification are not fulfilled

75 mL PL1

Substance name: sodium chloride CAS No.: sodium chloride

Substance rating: No criteria for classification or naming of chemical is not required.

Chemical Formula: NaCl
Synonyms (de): Kochsalz
REACH Reg. No.: exempt, Annex V
EC No.: 231-598-3
Concentration: 5 - <10 %

acc. GHS: The criteria for classification are not fulfilled

10 mL PL3

Substance name: acetate buffer solution

CAS No.:

Substance rating: No criteria for classification or naming of chemical is not required.

Chemical Formula: CH ₃ COOH/K/Na•H ₂ O

Concentration: 45 - <60 %

acc. 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 Hazard and Precaution phrases: see section 16.2.

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 Vapors

After inhalation of foam or vapor 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

May cause allergy or asthma symptoms or breathing difficulties if inhaled. Chronic effects: Repeated contact, even in small amounts, can lead to sensitization.



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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: Fire-Fighting Measures

5.1 Extinguishable Media

5.1.1 Suitable 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.

5.1.2 Unsuitable extinguishing media

data not available

5.2 Special Hazards arising from the Substance or Mixture

WARNING: Flammable. May form explosive vapor-air mixtures. Formation of hazardous and caustic vapor-air mixtures possible.

5.3 Advice for Firefighters

No, for listed product. Product package burns like paper or plastic.

5.4 Additional Information

SECTION 6: Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedure

Do not breathe vapors. 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

PBT: not applicable vPvB: not applicable

6.3 Methods and Material for Containment and Cleaning up

Bind any escaping liquid with inert absorbent.

And dispose in accordance to local regulations for the disposal of hazards. Clean any contaminated equipment and floors with plenty of water. Collect small amounts of leaked liquid and flush with water into sewer.

6.4 Reference to other Sections

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 allows a safe storage. Storage class (German chemical industry): see chapter 12.1

Storage class (VCI): 3 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 PC

Chemical: guanidine hydrochloride
DNEL: [inh] 3.5 mg/m³

DNEL = Derived No-Effect Level (for workers)



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> NIOSH: not listed

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

OSHA: not listed

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

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

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

[TWA] 1000 ppm / 1900 mg/m³ NIOSH:

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

OSHA: 1000 ppm / 1900 mg/m³

0.6-20 mg RNase A (Iyo)

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

30 mL PW1

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

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

NIOSH: [TWA] 400 ppm / 980 mg/m³

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

OSHA: [TWA] 400 ppm / 980 mg/m³

Chemical: guanidine hydrochloride CAS No.: 50-01-1

DNEL: [inh] 3.5 mg/m³ DNEL = Derived No-Effect Level (for workers) PNEC (fresh water): PNEC = Predicted No Effected Concentration

not listed NIOSH:

[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

60 mL PL2

Chemical: sodium chloride CAS No.: 7647-14-5

Chemical: chemicals/mixture until 2% CAS No : -

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

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

25 mL PW2

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

13 mL PE

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

75 mL PL1

Chemical: sodium chloride CAS No.: 7647-14-5

10 mL PL3

Chemical: acetate buffer solution 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.



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8.2.1 **Respiratory Protection**

Use for open access of these substances for example a vapor/dust respirator, class A/AX. No additional recommendations.

8.2.2 Skin protection / Hand protection

Yes, gloves (permeation time >30 min - level 2), consist of PVC, Natural latex, Neopren, or Nitril. Use for short times chemical

resistant Latex gloves f.ex. with code EN 374-3 level 1.

8.2.3 Eye / Face Protection

Yes, Splash Goggles.

8.2.4 **Skin Protection**

Recommended to avoid contamination with these hazards.

8.2.5 Hygiene Measures

> Eating, drinking, smoking, taking snuff and storage of food in work areas and at outdoor workplaces is prohibited. Avoid contact with the skin, eyes and clothing. Rinse any clothing on which the substance has been spilled, and soak it in water. Wash hands thoroughly with soap and water when stopping work and before eating, and then apply protective skin cream.

8.2.6 Thermal hazards

data not available

8.3 Limitation and monitoring of environmental exposure

Do not release product into environment.

SECTION 9: Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

60 mL PC

a) State of aggregation: liquid b) Color: yellow c) Odor: alcoholic d) Melting Point: data not available e) Boiling Point: data not available f) Flammability: data not available g) Explosive Limits (lower / upper): data not available 23 °C h) Flash Point: i) Autoignition Temperature: data not available j) Decomposition Temperature: data not available k) pH Value: 5-7 I) Kinematic Viscosity: data not available m) Soluble in Water: data not available n) Partition Coefficient (o/w): data not available o) Vapor Pressure (68°F): data not available p) Specific Gravity 1.01 g/cm³ q) Relative Vapor Density (air=1): data not available r) Particle Size: data not available

0.6-20 mg RNase A (lyo)

a) State of aggregation: solid (lyophilized) b) Color: colorless c) Odor: odorless d) Melting Point: data not available e) Boiling Point: data not available f) Flammability: data not available g) Explosive Limits (lower / upper): data not available h) Flash Point: data not available i) Autoignition Temperature: data not available j) Decomposition Temperature: data not available k) pH Value: data not available I) Kinematic Viscosity: data not available 0-100 % m) Soluble in Water: n) Partition Coefficient (o/w): data not available o) Vapor Pressure (68°F): data not available p) Specific Gravity: data not available q) Relative Vapor Density (air=1): data not available r) Particle Size: data not available



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30 mL PW1

a) State of aggregation: liauid b) Color: colorless c) Odor: alcoholic d) Melting Point: data not available e) Boiling Point: f) Flammability: data not available data not available g) Explosive Limits (lower / upper): data not available 25 °C h) Flash Point:

i) Autoignition Temperature: data not available j) Decomposition Temperature: data not available 7-8 k) pH Value:

I) Kinematic Viscosity: data not available m) Soluble in Water: data not available n) Partition Coefficient (o/w): data not available o) Vapor Pressure (68°F): data not available p) Specific Gravity: 1.06 g/cm³ q) Relative Vapor Density (air=1): data not available r) Particle Size: data not available

60 mL PL2

a) State of aggregation: liquid colorless b) Color: odorless

c) Odor: d) Melting Point: data not available e) Boiling Point: data not available f) Flammability: data not available g) Explosive Limits (lower / upper):

data not available h) Flash Point:

data not available i) Autoignition Temperature: data not available j) Decomposition Temperature: data not available k) pH Value: 7.5-8.5

I) Kinematic Viscosity: data not available m) Soluble in Water: data not available n) Partition Coefficient (o/w): data not available o) Vapor Pressure (68°F): data not available p) Specific Gravity: q) Relative Vapor Density (air=1): 1.03 g/cm³

data not available r) Particle Size: data not available

25 mL PW2

a) State of aggregation: liquid b) Color: colorless c) Odor: odorless d) Melting Point: data not available

e) Boiling Point: data not available f) Flammability: data not available g) Explosive Limits (lower / upper): data not available

h) Flash Point: data not available i) Autoignition Temperature: data not available j) Decomposition Temperature: data not available k) pH Value:

I) Kinematic Viscosity: data not available m) Soluble in Water: data not available n) Partition Coefficient (o/w): data not available o) Vapor Pressure (68°F): data not available p) Specific Gravity 1.00 g/cm³

q) Relative Vapor Density (air=1): data not available r) Particle Size: data not available

13 mL PE

a) State of aggregation: liquid b) Color: colorless c) Odor: odorless d) Melting Point: 0°C



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> e) Boiling Point: data not available f) Flammability: data not available g) Explosive Limits (lower / upper): data not available h) Flash Point: data not available i) Autoignition Temperature: data not available j) Decomposition Temperature: data not available k) pH Value: 8-9 I) Kinematic Viscosity: data not available m) Soluble in Water: data not available n) Partition Coefficient (o/w): data not available o) Vapor Pressure (68°F): data not available p) Specific Gravity: 1.0 g/cm³ q) Relative Vapor Density (air=1): data not available r) Particle Size: data not available

75 mL PL1

a) State of aggregation: liquid b) Color: colorless c) Odor: odorless d) Melting Point: data not available e) Boiling Point: data not available f) Flammability: data not available g) Explosive Limits (lower / upper): data not available h) Flash Point: data not available i) Autoignition Temperature: data not available j) Decomposition Temperature: data not available k) pH Value: 7.5-8.5 I) Kinematic Viscosity: data not available m) Soluble in Water: data not available n) Partition Coefficient (o/w): data not available o) Vapor Pressure (68°F): data not available p) Specific Gravity: 1.06 g/cm3 q) Relative Vapor Density (air=1): data not available r) Particle Size: data not available

10 mL PL3

liquid a) State of aggregation: b) Color: colorless c) Odor: acetic d) Melting Point: data not available e) Boiling Point: data not available f) Flammability: data not available g) Explosive Limits (lower / upper): data not available h) Flash Point: data not available i) Autoignition Temperature: data not available j) Decomposition Temperature: data not available k) pH Value: 5-6 I) Kinematic Viscosity: data not available m) Soluble in Water: data not available n) Partition Coefficient (o/w): data not available o) Vapor Pressure (68°F): data not available p) Specific Gravity: 1.19 g/cm³ q) Relative Vapor Density (air=1): data not available r) Particle Size: data not available

9.2 **Further Information**

No data is available for the other parameters for the mixtures, since no registration and no chemical safety report is required. Properties relevant to substance groups



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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

Can form very reactive substances with oxidizing agents. No further data available.

10.4 Conditions to avoid

No more required.

10.5 Incompatible Materials

10.6 Hazardous Decomposition Products

In the original package all parts/all reagents are safety and separated stored. Decompositions are not observed during the expiration period under recommended conditions.

SECTION 11: Toxicological Information

11.1 Information on Toxicological Effects

Following information is valid for pure chemicals. Quantitative data on the toxicity of this product are not available.

60 mL PC

Chemical: guanidine hydrochloride CAS No.: 50-01-1

TSCA Inventory: listed California Prop. 65 List: not listed

Canada CEPA 1999: DSL yes LD50 orl rat: 475-907 mg/kg LC50 ihl rat: 3181-7655 µg/m³/4H

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

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

TSCA Inventory: listed California Prop. 65 List: not listed

ACGIH: 1000 ppm

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

Target Organs: Eyes, skin, respiratory system, central nervous system, liver, blood, reproductive system

Symptoms: irritation eyes, skin, nose; headache, drowsiness, lassitude (weakness, exhaustion), narcosis; cough;

liver damage; anemia; reproductive, teratogenic

 Canada CEPA 1999:
 DSL yes

 LD50 orl rat :
 6200 mg/kg

 LC_Low ihl gpg :
 21,900 mg/L

 LC_Low orl hmn :
 1400 mg/kg

 LC50 ihl mus :
 123,4 mg/L/4H

 LC50 ihl rat :
 115,9-133,8 mg/L/4H

LD50 _{orl mus}: 3450 mg/kg

0.6-20 mg RNase A (Iyo)

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

TSCA Inventory: 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.

30 mL PW1

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

TSCA Inventory: listed California Prop. 65 List: not listed

ACGIH: 1230 ppm

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

Target Organs: Eyes, skin, respiratory system

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

 Canada CEPA 1999:
 DSL yes

 LD50 orl rat :
 5045 mg/kg

 LC_Low orl hmn :
 3570 mg/kg

 LC50 ihl rat :
 25 mg/L/4H



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> Chemical: guanidine hydrochloride CAS No.: 50-01-1

TSCA Inventory: California Prop. 65 List: not listed listed

Canada CEPA 1999: DSL yes LD50 orl rat: 475-907 mg/kg LC50 ihl rat: 3181-7655 µg/m³/4H

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

60 mL PL2

Chemical: sodium chloride CAS No.: 7647-14-5

TSCA Inventory: listed 3000 mg/kg LD50 orl rat:

Chemical: chemicals/mixture until 2% CAS No .: -

TSCA Inventory: all listed, <2%

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

TSCA Inventory: listed California Prop. 65 List: not listed

Canada CEPA 1999: DSL yes LD50 orl rat: 1288 mg/kg LC50 ihl rat: 3,900 mg/L/1H

25 mL PW2

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

TSCA Inventory: all listed. <1%

13 mL PE

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

TSCA Inventory: all listed, <1%

75 mL PL1

Chemical: sodium chloride CAS No.: 7647-14-5

TSCA Inventory: listed LD50 orl rat : 3000 mg/kg

10 mL PL3

acetate buffer solution CAS No.: -Chemical:

TSCA Inventory: all listed

11.2 Other Hazards

Possible endocrine disrupting effects

data not available

Other Information

no additional data available

SECTION 12: Ecological Information

12.1 **Toxicity**

Following information is valid for pure chemicals.

60 mL PC

CAS No.: 50-01-1 Chemical: guanidine hydrochloride

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

LC50 leuciscus idus/96h: 1759 mg/L

LC50 fish/96h: [4d] 690-1850; [48h] 1758-2420 mg/L

EC50 daphnia/48h: 70.2 ma/L

[72h] 11.8-33.5 mg/L EC10 pseudomonas putita/16h

Chemical: CAS No.: 64-17-5

0.96 mg/L

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

>100 g/L LC50 daphnia magna/48h: 13.4-15.1 g/L LC50 pimephales promelas/96h: LC50 leuciscus idus/96h: [48h] 8.14 g/L LC50 fish/96h: 13 g/L EC50 daphnia/48h: 9.3-14.2 g/L



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> [7d] 5000 mg/L IC50 scenedesmus quadricauda/72h: [EC5] 6500 mg/L EC10 pseudomonas putita/16h:

Partition Coefficient (o/w): -0,31

0.6-20 mg RNase A (Iyo)

Chemical: CAS No.: 9001-99-4

30 mL PW1

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

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

LC50 fish/96h: 1400 mg/L

EC50 daphnia/48h: 13.3 g/L IC50 scenedesmus quadricauda/72h: >1000 mg/L EC5: 1050 mg/L EC10 pseudomonas putita/16h : Partition Coefficient (o/w) :

0.05

Chemical: guanidine hydrochloride CAS No.: 50-01-1

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

LC50 leuciscus idus/96h: 1759 mg/L

LC50 fish/96h: [4d] 690-1850; [48h] 1758-2420 mg/L

EC50 daphnia/48h: 70.2 mg/L

EC10 pseudomonas putita/16h: [72h] 11.8-33.5 mg/L

60 mL PL2

Chemical: sodium chloride CAS No.: 7647-14-5

Chemical: chemicals/mixture until 2% CAS No .: -

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

Partition Coefficient (o/w): 16

25 mL PW2

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

13 mL PE

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

75 mL PL1

sodium chloride CAS No.: 7647-14-5 Chemical:

10 mL PL3

Chemical: acetate buffer solution 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

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

12.6 **Endocrine disrupting properties**

data not available



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12.7 Other Adverse Effects

no additional data available

SECTION 13: Disposal Considerations

Please observe local regulations for collection and disposal of hazardous waste and contact waste disposal company, where you will obtain information on laboratory waste disposal (RCRA Code D002/D003, EU waste code number 16 05 06).

13.1 Waste Treatment Methods

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

SECTION 14: Transport Information

14.1. UN/NA: 1993 14.2. Proper Shipping Name: Flammable liquid, n.o.s. (2-propanol, ethanol mixture)

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

Transportation by Road

Classification code: F1

Limited Quantity: 5 L Tunnel restriction code: D/E Excepted Quantity: E 1 Special instructions: 640E

Air Transportation

Limited Quantity: LQ 7 Excepted Quantity: E 1

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 Carriage of bulk cargo by sea in accordance with IMO instruments

Not applicable.

SECTION 15: Regulatory Information

15.1 Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture U.S. Federal Regulations

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

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

29 CFR 1910.1200 Hazard communication.

NIOSH Pocket Guide to Chemical Hazards

NIOSH Workplace Safety & Health Topics

TSCA Inventory

U.S. State Regulations

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

Canada

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

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

15.2 Chemical Safety Assessment

not necessary for these small amounts

SECTION 16: Other Information

16.1 Changes compared to the last version

Between versions 2.4.7.11 and 2.2.2.2 following changes were applied: - 2 product component data corrected - 5 composition data corrected - 9 substance data corrected



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16.2 List of Hazard and Precaution Phrases

16.2.1 List of relevant H Phrases

Flammable liquid and vapor. Harmful if swallowed. H302 H315 Causes skin irritation. Causes serious eye irritation. H319

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

May cause drowsiness or dizziness. H336

16.2.2 List of relevant P Phrases

Avoid breathing dust/vapors. P261sh

If experiencing respiratory symptoms: Call a POISON CENTER/doctor. P342+311

16.3 **Recommended Restriction on Use**

Only for Professional User.

Look about employee restrictions for young people!

Look about employee restrictions for pregnant women and nursing women!

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

16.4 Sources of Key Data

KÜHN, BIRETT, Leaflets on hazardous materials, 2021

Directive 1999/92/EG Minimum requirements to improve the safety and health protection of workers at risk from potentially explosive atmospheres

SUVA .CH, limit values in the air at work 2009, revised on 01/2009

Regulation 790/2009/EU, adaptation of Regulation 1272/2008/EU to technical and scientific progress (1st ATP)

Regulation 453/2010/EU, adaptation of the REACH regulation 1907/2006/EG

TRGS 907, German technical rules for listing substances and causes of sensitization, updated November 2011 Regulation

487/2013/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (4th ATP)

Regulation 1221/2015/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (7th ATP) Regulation 776/2017/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (10th ATP)

Regulation 669/2018/EU, adaptation of Regulation 1272/2008/EC to technical and scientific progressText (11th ATP)

Regulation 1480/2018/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (13th ATP)

Regulation 521/2019/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (12th ATP)

TRGS 900, German rules of technology on limit values in the air at work, as of 03/2019
Regulation 217/2020/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (14th ATP)

Regulation 878/2020/EU, adaptation of Annex II of the REACH regulation 1907/2006/EG

Regulation 1182/2020/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (15th ATP) Regulation 643/2021/EU, adaptation of Annex VI, Part 1, of Regulation 1272/2008/EC to technical and scientific progress (16th ATP) Regulation 849/2021/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (17th ATP)

revisions/updates

Reason for revision: 2014-02 Corrected structure of the sections according to Regulation 453/2010/EU, if necessary

2014-04 adjustment according Regulation 487/2013/EU 2016-03 adjustment according Regulation 1221/2015/EU

2017–08 adjustment according the Ordinance on Ethanol Denaturation 2016/1867/EU

2017-11 adjustment according the ECHA registration dossier 2022-11 adjustment according Regulation 878/2020/EU

16.5 **Further Information**

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16.6 Legend / Abbreviations

acc: according

ADR: Convention concerning the International Carriage of Dangerous Goods by Road

Act: acute

biological workplace tolerance value BAT.

Cargo Aircraft Only CAO. Carc: carcinogen

CAS: Chemical Abstracts Service

Classification, Labelling and Packaging regulation CLP:

CMR: carcinogen, mutagen, reproduction toxic



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Corr: corrosive

COD: chemical oxigen demand

CSCL: Chemical Substance Control Law (Jp)

Dam: damage

DNEL: Derived No-Effect Level (for workers)

derm: dermal dog: dog

EC10: Concentration causing a toxic effect in 10% of the test organisms

EC: European Community

EC-Nr: Substance number of the EC substance inventory EmS: Guide to accident management measures on ships

EU: European Union fish: fish (not specified)

GHS: Global Harmonized System of Classification and Labeling of Chemicals

gpg: guinea pig ICAO: Internation

ICAO: International Civil Aviation Organization

ihl: inhaled

IMDG: International Maritime Dangerous Goods Code

intrav: intravenous ipt: intraperitonaeal

İSHL: Industrial Safety and Health Law (Jp)

LC50: letale concentration 50% LD50: letale dosis 50%

leuciscus idus: fisch, ide, orfe
MAK: maximum workplace concentration

Met: Metall mus: mouse Muta: mutagen

NIOSH: National Institute for Occupational Safety and Health (US)

NRD: Non-rapidly degradable

onchorhynchus mykiss: fish, rainbow trout

orl: oral

OSHA: Occupational Safety and Health Administration PAX: transport on passenger planes allowed PBT: persistent, bioaccumulating, toxic substance

pH: pH value

pimephales promelas: fish, fathead minnow PNEC: Predicted No Effected Concentration PROC 15: Process category 'for laboratory use'

PRTR: Law for PRTR and Promotion of Chemical Management (Jp)

PVC: polyvinyl chloride quail: bird, quail rat: rat rbt: rabbit

RD: rapidly degradable

RE: repeated

REACh: Registration, Evaluation, Authorisation and Restriction of Chemicals

REF: item number, reference number

Reg.No.: rRegistration number Repr: harmful to reproduction

Resp: respiratory scu: sub cutan

RIP: REACH Implementations Projects

SDS: safety data sheet sensitisation

STEL: short term exposure limit
STOT: Specific Target Organ Toxicity
SVHC: Substance of Very High Concern

t/a: tons per year TCCA: Toxic Chemic

TCCA: Toxic Chemicals Control Act (S. Korea)

Tox: toxic

TSCA: The Toxic Substances Control Act (US)

TWA: time weighted average TRGS: technical regulations (DE)

vPvB: very persistent, very bioaccumulating substance



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16.7 **Training Advice**

Regular safety training. 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.

