

Safety Data Sheet

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

REF: 740772.10	NucleoSpin Plant II Maxi (10)	Page: 1/15
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

REF 740772.10
 Product name NucleoSpin Plant II Maxi (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 125 mL PC
- 1 x 30 mL PE
- 1 x 75 mL PL1
- 1 x 60 mL PL2
- 1 x 10 mL PL3
- 1 x 75 mL PW1
- 1 x 50 mL PW2
- 1 x 0.6-20 mg RNase A (lyo)

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



Signal word DANGER

Hazard identification	Hazard classes/categories
H226	Flam. Liq. 3
H302	Acute Tox. 4 oral
H319	Eye Irrit. 2
H334	Resp. Sens. 1
H336, H335	STOT SE 3

2.1 Classification of the substance or mixture

125 mL PC

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GHS02

GHS07

Signal word

WARNING

Hazard identification

Hazard classes/categories

H226
H302

Flam. Liq. 3
Acute Tox. 4 oral

30 mL PE

Signal word

Do not need labelling as hazardous
-

No hazard class

75 mL PL1

Signal word

Do not need labelling as hazardous
-

No hazard class

60 mL PL2

Signal word

Do not need labelling as hazardous
-

No hazard class

10 mL PL3

Signal word

Do not need labelling as hazardous
-

No hazard class

75 mL PW1



GHS02

GHS07

Signal word

WARNING

Hazard identification

Hazard classes/categories

H226
H302
H319
H336, H335

Flam. Liq. 3
Acute Tox. 4 oral
Eye Irrit. 2
STOT SE 3

50 mL PW2

Signal word

Do not need labelling as hazardous
-

No hazard class

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0.6-20 mg RNase A (Iyo)



GHS08

Signal word

DANGER

Hazard identification

Hazard classes/categories

H334

Resp. Sens. 1

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 sensiblizing substances. The irritant hazard should be eliminated, because of buffer chemicals inside.

125 mL PC



GHS02



GHS07

Signal word: WARNING

30 mL PE

Do not need labelling as hazardous
Signal word: -

75 mL PL1

Do not need labelling as hazardous
Signal word: -

60 mL PL2

Do not need labelling as hazardous
Signal word: -

10 mL PL3

Do not need labelling as hazardous
Signal word: -

75 mL PW1



GHS02



GHS07

Signal word: WARNING

50 mL PW2

Do not need labelling as hazardous
Signal word: -

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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/vapours. 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.

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

125 mL PC

Chemical:	<i>guanidine hydrochloride</i>	CAS No.:	50-01-1
Classification:	H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2		
Formula:	CH ₆ ClN ₃		
Pseudonym:	guanidinium chloride		
TSCA Inventory:	listed		
REACH Reg. No.:	01-2119977063-35-0005		
EC No.:	200-002-3	Indice No.:	607-148-00-0
RTECS:	MF4300000	MFCD:	00013026
KE No.:	KE-18111		
Concentration:	24 - <36 %		
acc. CLP (GHS):	H302, Acute Tox. 4 oral		

Chemical:	<i>ethanol</i>	CAS No.:	64-17-5
	(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:	35 - <55 %		
acc. CLP (GHS):	H226, Flam. Liq. 3		

30 mL PE

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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.

75 mL PL1

Chemical: *sodium chloride* CAS No.: 7647-14-5
 Classification: No criteria for classification or naming of chemical not required.
 Formula: NaCl
 Pseudonym: salt
 TSCA Inventory: listed
 REACH Reg. No.: exempt, Annex V
 EC No.: 231-598-3
 RTECS: VZ4725000
 KE No.: KE-31387
 Concentration: 5 - <10 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

60 mL PL2

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 Tox. 4 inh., H335, STOT SE 3, H412, Aquatic Chronic 3
 Formula: C₁₂H₂₅NaO₄S
 Pseudonym: sodium lauryl sulfate, sulfuric acid monododecyl ester sodium salt
 TSCA Inventory: listed
 REACH Reg. No.: 01-2119489461-32-xxxx
 EC No.: 205-788-1
 RTECS: WT1050000 MFCD: 00036175
 KE No.: KE-21884
 Concentration: 1 - <2.5 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Chemical: *sodium chloride* CAS No.: 7647-14-5
 Classification: No criteria for classification or naming of chemical not required.
 Formula: NaCl
 Pseudonym: salt
 TSCA Inventory: listed
 REACH Reg. No.: exempt, Annex V
 EC No.: 231-598-3
 RTECS: VZ4725000
 KE No.: KE-31387
 Concentration: 1 - <5 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

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.

10 mL PL3

Chemical: *acetate buffer solution* CAS No.: -
 Classification: No criteria for classification or naming of chemical not required.
 Formula: CH₃COOH/K/Na•H₂O
 TSCA Inventory: all listed
 KE No.: listed
 Concentration: 45 - <60 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

75 mL PW1



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Chemical: *guanidine hydrochloride* CAS No.: 50-01-1
 Classification: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2
 Formula: CH_6ClN_3
 Pseudonym: guanidinium chloride
 TSCA Inventory: listed
 REACH Reg. No.: 01-2119977063-35-0005
 EC No.: 200-002-3
 RTECS: MF4300000
 KE No.: KE-18111
 Concentration: 36 - <50 %
 acc. CLP (GHS): H302, Acute Tox. 4 oral, H319, Eye Irrit. 2

Indice No.: 607-148-00-0
 MFCD: 00013026

Chemical: *2-propanol* CAS No.: 67-63-0
 Classification: H225, Flam. Liq. 2, H319, Eye Irrit. 2, H336, STOT SE 3
 Formula: $\text{C}_3\text{H}_8\text{O}$
 Pseudonym: isopropanol, IPA, propan-2-ol
 TSCA Inventory: listed
 REACH Reg. No.: 01-2119457558-25-XXXX
 EC No.: 200-661-7
 RTECS: NT8050000
 KE No.: KE-29363
 Concentration: 20 - <35 %
 acc. CLP (GHS): H226, Flam. Liq. 3, H319, Eye Irrit. 2, H336, STOT SE 3

Indice No.: 603-117-00-0
 MFCD: 00011674

50 mL PW2

Chemical: *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.

CAS No.: -

0.6-20 mg RNase A (Iyo)

Chemical: *RNase*
 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
 RTECS: RF0760000
 KE No.: KE-30341
 Concentration: 90 - <100 %
 acc. CLP (GHS): H334, Resp. Sens. 1

CAS No.: 9001-99-4

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. ---

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- 4.1.4 After ORAL Intake**
After oral intake lots of water should be drunk after it has been ingested. ---
- 4.2 Most important symptoms and effects, both acute and delayed**
Chronic Effects: May cause sensitization by skin contact, also in repeated contact of small amounts. May cause allergy or asthma symptoms or breathing difficulties if inhaled. ---
- 4.3 Indication of any immediate medical attention and special treatment needed**
Inform patient respectively further measures and the possibility of long-term damages. ---

SECTION 5: Firefighting measures

- 5.1 Extinguishing media**
Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.
- 5.2 Special hazards arising from the substance or mixture**
WARNING: Flammable (GHS regulation). May form explosive vapour-air mixtures. Formation of hazardous and caustic vapour-air mixtures possible. ---
- 5.3 Advice for firefighters**
No, for listed product. Product package burns like paper or plastic.
- 5.4 Additional information**

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures**
Do not breathe vapours. Regular staff training is necessary, indicating hazards and precautions on the basis of operating instructions. Restrictions on activity must be observed.
- 6.2 Environmental precautions**
not necessary
- 6.3 Methods and material for containment and cleaning up**
Bind any escaping liquid with inert absorbent. And dispose in accordance to local regulations for the disposal of hazardous chemicals. Clean any contaminated equipment and floors with plenty of water. Collect small amounts of leaked liquid and flush with water into drains.
- 6.4 Reference to other sections**

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): 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

125 mL PC

Chemical: *guanidine hydrochloride*

DNEL: [inh] 3.5 mg/m³

DNEL = Derived No-Effect Level (for workers)

PNEC(fresh water): -

CAS No.: 50-01-1

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PNEC = Predicted No Effect Concentration

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

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

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

TRGS 900 (DE): 200 mL/m³ / 380 mg/m³
 E/e respirable

Short-term exposure factor: 4 (II), Y
 skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

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

NIOSH: [TWA] 1000 ppm / 1900 mg/m³
 [TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: [TWA] 1000 ppm / 1900 mg/m³

30 mL PE

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

75 mL PL1

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

60 mL PL2

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**

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

Chemical: *chemicals/mixture < 2%* CAS No.: -

10 mL PL3

Chemical: *acetate buffer solution* CAS No.: -

75 mL PW1

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 Effect Concentration

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

DNEL: [inh] 500 mg/m³
 DNEL = Derived No-Effect Level (for workers)

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

TRGS 900 (DE): 200 ppm / 500 mg/m³
 E/e respirable

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

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

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

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50 mL PW2

Chemical: *chemicals/mixture < 1%*

CAS No.: -

0.6-20 mg RNase A (lyo)

Chemical: *RNase*

CAS No.: 9001-99-4

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

125 mL PC

Appearance: liquid	Colour: yellow	Odor: alcoholic
pH:	5-7	
Flash point:	23 °C	
Specific gravity:	1.01 g/cm ³	

30 mL PE

Appearance: liquid	Colour: colourless	Odor: odorless
pH:	8-9	
Specific gravity:	1.0 g/cm ³	

75 mL PL1

Appearance: liquid	Colour: colourless	Odor: odorless
pH:	7.5-8.5	
Specific gravity:	1.06 g/cm ³	

60 mL PL2

Appearance: liquid	Colour: colourless	Odor: odorless
pH:	7.5-8.5	
Specific gravity:	1.03 g/cm ³	

10 mL PL3

Appearance: liquid	Colour: colourless	Odor: acetic
pH:	5-6	
Specific gravity:	1.19 g/cm ³	

75 mL PW1

Appearance: liquid	Colour: colourless	Odor: alcoholic
pH:	7-8	
Flash point:	25 °C	
Specific gravity:	1.06 g/cm ³	

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50 mL PW2

Appearance: liquid

Colour: colourless

Odor: odorless

pH:

7-8

Specific gravity:

1.00 g/cm³

0.6-20 mg RNase A (lyo)

Appearance: solid (lyoph.)

Colour: colourless

Odor: odorless

Solubility in water:

0-100 %

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

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

10.4 Conditions to avoid

Not necessary. ---

10.5 Incompatible materials

Avoid contact with strong acids or alkalines.

10.6 Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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

125 mL PC

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

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-18111

LD50_{orl rat}: 475-907 mg/kg

LC50_{ihl rat}: [4h] 3181-7655 µg/m³

LD50_{drm rbt}: 2000 mg/kg

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 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_{orl rat}: 6200 mg/kg

LC_{LoWhl} gpg: 21.9 g/m³

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LC₅₀_{oral} hm_n : 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

30 mL PE

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

CAS No.: -

75 mL PL1

Chemical: *sodium chloride*
 TSCA Inventory: listed
 Korea Exist.Chem.Inventory: KE-31387
 LD50_{orl} rat : 3000 mg/kg
 LD50_{drm} rbt : 10 g/kg

CAS No.: 7647-14-5

60 mL PL2

Chemical: *dodecyl sulfate, sodium salt*
 TSCA Inventory: listed
 Australia NICNAS: not listed
 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

CAS No.: 151-21-3

California Proposition 65 List: not listed
 Canada CEPA 1999: DSL yes

Chemical: *sodium chloride*
 TSCA Inventory: listed
 Korea Exist.Chem.Inventory: KE-31387
 LD50_{orl} rat : 3000 mg/kg
 LD50_{drm} rbt : 10 g/kg

CAS No.: 7647-14-5

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

CAS No.: -

10 mL PL3

Chemical: *acetate buffer solution*
 TSCA Inventory: all listed
 Korea Exist.Chem.Inventory: listed

CAS No.: -

75 mL PW1

Chemical: *guanidine hydrochloride*
 TSCA Inventory: listed
 Australia NICNAS: not listed
 Japan CSCL/PRTR: not listed, Japan PDSCL: not listed
 Japan ISHL: not listed
 South Korea TCCA: not listed
 Korea Exist.Chem.Inventory: KE-18111
 LD50_{orl} rat : 475-907 mg/kg
 LC50_{ihl} rat : [4h] 3181-7655 µg/m³
 LD50_{drm} rbt : 2000 mg/kg

CAS No.: 50-01-1

California Proposition 65 List: not listed
 Canada CEPA 1999: DSL yes

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

Chemical:	<i>2-propanol</i>	CAS No.:	67-63-0
TSCA Inventory:	listed	California Proposition 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		
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 _{LoW_{orl} hmn} :	3570 mg/kg		
LC50 _{ihl rat} :	164h g/m ³		
LD50 _{drm rbt} :	12.8 g/kg		
TRGS 905 (DE):	R _F C		

50 mL PW2

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

0.6-20 mg RNase A (Iyo)

Chemical:	<i>RNase</i>	CAS No.:	9001-99-4
TSCA Inventory:	listed		
Japan CSCL/PRTR:	not listed		
Japan ISHL:	not listed		
Korea Exist.Chem.Inventory:	KE-30341		
LD50 _{intrapitoneal 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.			

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

125 mL PC

Chemical:	<i>guanidine hydrochloride</i>	CAS No.:	50-01-1
PNEC _(fresh water) :	-		
PNEC = Predicted No Effect 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		
Water hazard class (DE):	1	WGK No.:	0788
Storage class (VCI):	12		

Chemical:	<i>ethanol</i>	CAS No.:	64-17-5
PNEC _(fresh water) :	0.96 mg/L		
PNEC = Predicted No Effect Concentration			
LC50 _{daphnia magna/48h} :	>100 mg/L		
LC50 _{pimephales promelas/96h} :	13400 - 15100 mg/L		
LC50 _{leuciscus idus/96h} :	[48h] 8140 mg/L		
LC50 _{fish/96h} :	13 g/L		
EC50 _{daphnia/48h} :	9.3-14.2 g/L		
IC50 _{scenedesmus quadricauda/72h} :	[7d] 5000 mg/L		
EC10 _{pseudomonas putita/16h} :	[EC5] 6500 mg/L		
Water hazard class (DE):	1	WGK No.:	0096
Dispersion coefficient _(octanol-water) :	-0.31		

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Storage class (VCI): 3

30 mL PE

Chemical: *chemicals/mixture < 1%* CAS No.: -
 Water hazard class (DE): 1
 Storage class (VCI): 12-13

75 mL PL1

Chemical: *sodium chloride* CAS No.: 7647-14-5
 Water hazard class (DE): 1
 Storage class (VCI): 12-13

60 mL PL2

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: *sodium chloride* CAS No.: 7647-14-5
 Water hazard class (DE): 1
 Storage class (VCI): 12-13

Chemical: *chemicals/mixture < 2%* CAS No.: -
 Water hazard class (DE): 1
 Storage class (VCI): 12-13

10 mL PL3

Chemical: *acetate buffer solution* CAS No.: -
 Storage class (VCI): 12

75 mL PW1

Chemical: *guanidine hydrochloride* CAS No.: 50-01-1
 PNEC_(fresh water): -
 PNEC = Predicted No Effect 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
 Water hazard class (DE): 1 WGK No.: 0788
 Storage class (VCI): 12

Chemical: *2-propanol* CAS No.: 67-63-0
 PNEC_(fresh water): 140.9 mg/L
 PNEC = Predicted No Effect Concentration
 LC50_{fish/96h}: 1400 mg/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): 1 WGK No.: 0135
 Dispersion coefficient_(octanol-water): 0.05
 Storage class (VCI): 3

50 mL PW2

Chemical: *chemicals/mixture < 1%* CAS No.: -
 Water hazard class (DE): 1
 Storage class (VCI): 12-13

0.6-20 mg RNase A (lyo)

Chemical: *RNase* CAS No.: 9001-99-4
 Water hazard class (DE): 1
 Storage class (VCI): 13



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- 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, 2-propanol mixture)
14.3 Class: 3	14.4 Packing group: III
<i>Road transport</i>	
Classification code: F1	Tunnel restriction code: E
Limited Quantity: 5 L	Special instructions: 640E
Excepted Quantity: E 1	
<i>Air transport</i>	
PAX: 355	max. weight PAX: 60 L
CAO: 366	max. weight CAO: 220 L
<i>Maritime transport</i>	
EmS: F-E, S-E	Storage category: A

- 14.5 Environmental hazards**
none, contains only small quantities of hazardous substances
- 14.6 Special precautions for user**
not necessary
- 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code**
not applicable

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
German act governing protection from hazardous substances (Chemicals Act / Chemikaliengesetz- ChemG), revised on August 2013
German order governing protection from hazardous substances (Ordinance on Hazardous Substances / Gefahrstoffverordnung - GefStoffV), revised on November 2010, according to Directive 98/24/EC
TRGS 200, German engineering rules governing the classification and labelling of hazardous substances, preparations and products, updated October 2011
MN Leaflet/User manual, also see www.mn-net.com
Look for your country-specific regulations.
- 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.
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H336	May cause drowsiness or dizziness.

16.1.2 List of relevant P phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P260D	Do not breathe vapours.
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

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16.5 Sources of key data

Regulation 453/2010/EU REACH - REQUIREMENTS FOR THE COMPILATION OF SAFETY DATA SHEETS

Regulation 487/2013/EU, 4th adaptation of CLP regulation to technical and scientific progress

Regulation 669/2018/EU, 4th adaptation of CLP regulation to technical and scientific progress

Regulation 1480/2018/EU, 4th adaptation of CLP regulation to technical and scientific progress

TRGS 900, German engineering rules governing limits in air at work, updated 03/2019

SUVA .CH, Limits in air at work 2009, revised on 01.2009

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

KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)

Revisions/Updates

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

2017-08 Adaption of new ethanol denaturation 2016/1867/EU

2017-11 Adaption of ECHA Registration dossier