Safety Data Sheet

SDS acc. Hazard Communication Standard

Section 1: Identification

1.1 Product Identifier / Product Name

REF 740491.4
Product Name NucleoSpin 96 Plasmid T.-grade (4x96)
-

1 x 150 mL A1
1 x 150 mL A2 (with LyseControl)
1 x 200 mL A3
1 x 125 mL AE
2 x 100 mL AQ
1 x 400 mL ERB
1 x 25-100 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.
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
Neumann-Neander-Str. 6-8, 52355 Dueren, GERMANY
Tel.: +49 2421 969 0 E-mail: sds@mn-net.com (msds@mn-net.com)

1.4 Emergency Telephone Number

For Chemical Emergency
Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night (CCN685047)
Within USA and Canada: **1-800-424-9300**
Outside USA and Canada: **+1 703-527-3887** (collect calls accepted)

You find our current versions of SDS (22 languages) 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(s) or Mixture(s)

150 mL A1

Do not need labelling as hazardous

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Signal Word -

No Hazard Class

150 mL A2 (with LyseControl)

GHS07

Signal Word WARNING

Hazard Identification	Hazard Classes/Categories
H315	Skin Irrit. 2
H319	Eye Irrit. 2

200 mL A3

GHS07

Signal Word WARNING

Hazard Identification	Hazard Classes/Categories
H302	Acute Tox. 4 oral
H319	Eye Irrit. 2

125 mL AE

Do not need labelling as hazardous

Signal Word -

No Hazard Class

100 mL AQ

Do not need labelling as hazardous

Signal Word -

No Hazard Class

400 mL ERB

GHS02 GHS07

Signal Word WARNING

Hazard Identification	Hazard Classes/Categories
H226	Flam. Liq. 3
H319	Eye Irrit. 2
H336	STOT SE 3

25-100 mg RNase A (lyo)

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GHS08

Signal Word DANGER

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

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.

150 mL A1

Do not need labelling as hazardous
Signal Word: -

150 mL A2 (with LyseControl)

GHS07

Signal Word: WARNING

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

P280sh
Wear protective gloves/eye protection.

200 mL A3

GHS07

Signal Word: WARNING

H302, H319
Harmful if swallowed. Causes serious eye irritation.

P264W, P280sh, P301+312, P330
Wash with water thoroughly after handling. Wear protective gloves/eye protection. IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

125 mL AE

Do not need labelling as hazardous
Signal Word: -

100 mL AQ

Do not need labelling as hazardous
Signal Word: -

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400 mL ERB

GHS02 GHS07

Signal Word: WARNING

H226, H319, H336
Flammable liquid and vapor. Causes serious eye irritation. May cause drowsiness or dizziness.

P210, P260D, P280sh
Keep away from heat/sparks/open flames/hot surfaces. No smoking. Do not breathe vapors. Wear protective gloves/eye protection.

25-100 mg RNase A (lyo)

GHS08

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. Vapor forms explosive mixtures with air. ---

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. May cause drowsiness or dizziness.
Kit contains small amounts of enzymes, which may cause sensitization by direct and repeated contact. -

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

150 mL A1

Chemical: *chemicals/mixture < 1%* CAS No.: -
Classification: No criteria for classification or naming of chemical is not required.
TSCA Inventory: all listed, <1%
Weight Percent: 0,1 - <1 %
acc. GHS: The criteria for classification are not fulfilled.

150 mL A2 (with LyseControl)

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Chemical: *sodium hydroxide solution* (diluted < 2 %) CAS No.: 1310-73-2d
Classification: H314, Skin Corr. 1B
Chemical Formula: $NaOH \cdot H_2O$
Synonyms: diluted soda lye
TSCA Inventory: listed
RTECS: WB4900000
EC No.: 215-185-5 Indice No.: 011-002-00-6
Weight Percent: 0,5 - <1 %
acc. 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 Tox. 4 inh., H335, STOT SE 3, H412, Aquatic Chronic 3
Chemical Formula: $C_{12}H_{25}NaO_4S$
Synonyms: sodium lauryl sulfate, sulfuric acid monododecyl ester sodium salt
TSCA Inventory: listed
RTECS: WT1050000 MFCD: 00036175
EC No.: 205-788-1
Weight Percent: 0,1 - <1 %
acc. GHS: The criteria for classification are not fulfilled.

Chemical: *indicator dye(s)* CAS No.: -
Classification: No criteria for classification or naming of chemical is not required.
TSCA Inventory: all listed, <1%
Weight Percent: < 0,01 %
acc. GHS: The criteria for classification are not fulfilled.

200 mL A3

Chemical: *guanidine hydrochloride* CAS No.: 50-01-1
Classification: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2
Chemical Formula: CH_6ClN_3
Synonyms: guanidinium chloride
TSCA Inventory: listed
RTECS: MF4300000 MFCD: 00013026
EC No.: 200-002-3 Indice No.: 607-148-00-0
Weight Percent: 36 - <50 %
acc. GHS: H302, Acute Tox. 4 oral, H319, Eye Irrit. 2

125 mL AE

Chemical: *chemicals/mixture < 1%* CAS No.: -
Classification: No criteria for classification or naming of chemical is not required.
TSCA Inventory: all listed, <1%
Weight Percent: 0,1 - <1 %
acc. GHS: The criteria for classification are not fulfilled.

100 mL AQ

Chemical: *inorganic salts, declaration not necessary* CAS No.: -
Classification: No criteria for classification or naming of chemical is not required.
Synonyms: not hazardous
TSCA Inventory: all listed
Weight Percent: 1 - <3 %
acc. GHS: The criteria for classification are not fulfilled.

400 mL ERB

Chemical: *triethanolamine* CAS No.: 102-71-6
Classification: H315, Skin Irrit. 2, H319, Eye Irrit. 2, H335, STOT SE 3
Chemical Formula: $C_6H_{15}NO_3$
Synonyms: 2,2',2"-nitrilotriethanol; tris(2-hydroxyethyl)amine
TSCA Inventory: listed
RTECS: KL9275000
EC No.: 203-049-8
Weight Percent: 1 - <10 %
acc. GHS: The criteria for classification are not fulfilled.

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Chemical: *2-propanol* CAS No.: 67-63-0
Classification: H225, Flam. Liq. 2, H319, Eye Irrit. 2, H336, STOT SE 3
Chemical Formula: $C_3 H_8 O$
Synonyms: isopropanol, IPA, propan-2-ol
TSCA Inventory: listed
RTECS: NT8050000 MFCD: 00011674
EC No.: 200-661-7 Indice No.: 603-117-00-0
Weight Percent: 35 - <50 %
acc. GHS: H226, Flam. Liq. 3, H319, Eye Irrit. 2, H336, STOT SE 3

25-100 mg RNase A (lyo)
Chemical: *RNase* CAS No.: 9001-99-4
Classification: H334, Resp. Sens. 1
Chemical Formula: Enzyme Comm. No. 3.1.27.5, origin: bovine pancreas (controlled population)
Synonyms: Nuclease, ribo-
TSCA Inventory: listed
RTECS: RF0760000
EC No.: 232-646-6
Weight Percent: 90 - <100 %
acc. GHS: H334, Resp. Sens. 1

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 16.1

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 immediately. Rinse the affected skin or mucous membrane thoroughly for min. 15 minutes under running water. (If possible) use soap. Avoid neutralisation. Then apply a loose bandage.

4.1.2 After EYE Contact
After contact with the eyes rinse thoroughly under running water with the eyelid wide open for min. 10 minutes with eye washing bottle, eye douche or running water (protect intact eye). Before (if possible) apply eye drops Proxymetacaine 0.5%, if the opening the eyelid convulsion is painful. Further treatment to be carried out by an eye specialist.

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 with activated charcoal supplement should be drunk after it has been ingested. Do not induce vomiting under any circumstances. Do not make any efforts to neutralize it. Contact medical advice for possible consequences.

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

After SKIN CONTACT rinse with water for a long time. Apply glucocorticosteroides following inflammatory reactions. After EYE CONTACT rinse immediately with plenty of water for a long time. Eyelid convulsion measures. Name the corrosive substance. Further treatment must to be carried out by an eye specialist. Inform patient respectively further measures and the possibility of long-term damages. ---

Section 5: Fire-Fighting Measures

5.1 Extinguishable 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 WATER FOG, WATER SPRAY, alcohol-resistant FOAM, DRY CHEMICAL, CARBON DIOXIDE can be used.

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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. The substance/mixture is flammable. Product package burns like paper or plastic. Cool any undamaged containers in water, and remove from the danger zone if possible. Heating will lead to an increase in pressure, and a danger of bursting. Spray any vapors released with water. Retent fire water. Use only acid-resistant safety equipment.
For great amount - if necessary - protective breathing apparatus which is independent of the ambient air (isolated equipment), and sealed protective clothing is necessary in the event of a large-scale formation of toxic substances.

5.4 Additional Information

Danger for environment **only in the event of a large-scale leakage** or formation of hazardous substances. ---

Section 6: Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedure

Do not breathe vapors. Wear suitable protective gloves (see 8.2.2). Wear eye protection. Keep product away from sources of ignition - No smoking. Regular staff training is necessary, indicating hazards and precautions on the basis of operating instructions. Restrictions on activity must be observed.

6.2 Environmental Precautions

not necessary

6.3 Methods and Material for Containment and Cleaning up

Bind any escaping liquid with inert absorbent.
And dispose in accordance to local regulations for the disposal of 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

see information in section 5.4 ---

Section 7: Handling and Storage

7.1 Precautions for Safe Handling

Handling in accordance with the test instruction, that comes with the product. Use only in well-ventilated working areas.

7.2 Conditions for Safe Storage, including any Incompatibilities

The original product package of MACHEREY-NAGEL allows a safe storage.
Storage class (VCI): 3
Water hazard class (DE): 2

7.2.1 Conditions for Safe Storage, including any Incompatibilities

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

150 mL A1
Chemical: *chemicals/mixture < 1%* CAS No.: -

150 mL A2 (with LyseControl)
Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2d

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

200 mL A3

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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
NIOSH: not listed
[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period
OSHA: not listed

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

100 mL AQ
Chemical: *inorganic salts, declaration not necessary* CAS No.: -

400 mL ERB
Chemical: *triethanolamine* CAS No.: 102-71-6
DNEL: [derm] 6.3; [inh] 5 mg/m³
DNEL = Derived No-Effect Level (for workers)
PNEC(fresh water) : 0.32 mg/L
PNEC = Predicted No Effected 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 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

25-100 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 vapor/dust respirator, class A/AX. No additional recommendations.

8.2.2 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.

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Section 9: Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

150 mL A1

a)	Appearance: liquid	Color: colorless	b) Odor: odorless
c)	Odor Threshold:	data not available	
d)	pH:	7.5-8.5	
e)	Melting Point:	data not available	
f)	Boiling Point:	data not available	
g)	Flash Point:	data not available	
h)	Evaporation Rate$_{(ether=1)}$:	data not available	
i)	Flammability (solid, gas):	data not available	
j)	Explosive Limits:	data not available	
k)	Vapor Pressure (68°F):	data not available	
l)	Vapor Density$_{(air=1)}$:	data not available	
m)	Specific Gravity:	1.00 g/cm³	
n)	Soluble in Water:	data not available	
o)	Partition Coefficient (o-w):	data not available	
p)	Autoignition Temperature:	data not available	
q)	Decomposition temperature:	data not available	
r)	Viscosity:	data not available	
s)	Explosive properties:	data not available	
t)	Oxidizing properties:	---	

150 mL A2 (with LyseControl)

a)	Appearance: liquid	Color: blue	b) Odor: odorless
c)	Odor Threshold:	data not available	
d)	pH:	13	
e)	Melting Point:	data not available	
f)	Boiling Point:	data not available	
g)	Flash Point:	data not available	
h)	Evaporation Rate$_{(ether=1)}$:	data not available	
i)	Flammability (solid, gas):	data not available	
j)	Explosive Limits:	data not available	
k)	Vapor Pressure (68°F):	data not available	
l)	Vapor Density$_{(air=1)}$:	data not available	
m)	Specific Gravity:	1.008 g/cm³	
n)	Soluble in Water:	data not available	
o)	Partition Coefficient (o-w):	data not available	
p)	Autoignition Temperature:	data not available	
q)	Decomposition temperature:	data not available	
r)	Viscosity:	data not available	
s)	Explosive properties:	data not available	
t)	Oxidizing properties:	---	

200 mL A3

a)	Appearance: liquid	Color: colorless	b) Odor: acetic
c)	Odor Threshold:	data not available	
d)	pH:	4-4.5	
e)	Melting Point:	data not available	
f)	Boiling Point:	data not available	
g)	Flash Point:	data not available	
h)	Evaporation Rate$_{(ether=1)}$:	data not available	
i)	Flammability (solid, gas):	data not available	
j)	Explosive Limits:	data not available	
k)	Vapor Pressure (68°F):	data not available	
l)	Vapor Density$_{(air=1)}$:	data not available	
m)	Specific Gravity:	1.14 g/cm³	
n)	Soluble in Water:	data not available	
o)	Partition Coefficient (o-w):	data not available	
p)	Autoignition Temperature:	data not available	
q)	Decomposition temperature:	data not available	
r)	Viscosity:	data not available	
s)	Explosive properties:	data not available	
t)	Oxidizing properties:	---	

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125 mL AE

a)	Appearance: liquid	Color: colorless	b) Odor: odorless
c)	Odor Threshold:	data not available	
d)	pH:	8-9	
e)	Melting Point:	data not available	
f)	Boiling Point:	data not available	
g)	Flash Point:	data not available	
h)	Evaporation Rate$_{(ether=1)}$:	data not available	
i)	Flammability (solid, gas):	data not available	
j)	Explosive Limits:	data not available	
k)	Vapor Pressure (68°F):	data not available	
l)	Vapor Density$_{(air=1)}$:	data not available	
m)	Specific Gravity:	1.0 g/cm³	
n)	Soluble in Water:	data not available	
o)	Partition Coefficient (o-w):	data not available	
p)	Autoignition Temperature:	data not available	
q)	Decomposition temperature:	data not available	
r)	Viscosity:	data not available	
s)	Explosive properties:	data not available	
t)	Oxidizing properties:	---	

100 mL AQ

a)	Appearance: liquid	Color: colorless	b) Odor: odorless
c)	Odor Threshold:	data not available	
d)	pH:	7.5-8	
e)	Melting Point:	data not available	
f)	Boiling Point:	data not available	
g)	Flash Point:	data not available	
h)	Evaporation Rate$_{(ether=1)}$:	data not available	
i)	Flammability (solid, gas):	data not available	
j)	Explosive Limits:	data not available	
k)	Vapor Pressure (68°F):	data not available	
l)	Vapor Density$_{(air=1)}$:	data not available	
m)	Specific Gravity:	1.01 g/cm³	
n)	Soluble in Water:	data not available	
o)	Partition Coefficient (o-w):	data not available	
p)	Autoignition Temperature:	data not available	
q)	Decomposition temperature:	data not available	
r)	Viscosity:	data not available	
s)	Explosive properties:	data not available	
t)	Oxidizing properties:	---	

400 mL ERB

a)	Appearance: liquid	Color: colorless	b) Odor: alcoholic
c)	Odor Threshold:	data not available	
d)	pH:	5.5-6.5	
e)	Melting Point:	data not available	
f)	Boiling Point:	data not available	
g)	Flash Point:	24 °C	
h)	Evaporation Rate$_{(ether=1)}$:	data not available	
i)	Flammability (solid, gas):	data not available	
j)	Explosive Limits:	data not available	
k)	Vapor Pressure (68°F):	data not available	
l)	Vapor Density$_{(air=1)}$:	data not available	
m)	Specific Gravity:	data not available	
n)	Soluble in Water:	0-100 %	
o)	Partition Coefficient (o-w):	data not available	
p)	Autoignition Temperature:	data not available	
q)	Decomposition temperature:	data not available	
r)	Viscosity:	data not available	
s)	Explosive properties:	data not available	
t)	Oxidizing properties:	---	

25-100 mg RNase A (lyo)

a)	Appearance: solid (lyoph.)	Color: colorless	b) Odor: odorless

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c)	Odor Threshold:	data not available
d)	pH:	data not available
e)	Melting Point:	data not available
f)	Boiling Point:	data not available
g)	Flash Point:	data not available
h)	Evaporation Rate$_{(ether=1)}$:	data not available
i)	Flammability (solid, gas):	data not available
j)	Explosive Limits:	data not available
k)	Vapor Pressure (68°F):	data not available
l)	Vapor Density$_{(air=1)}$:	data not available
m)	Specific Gravity:	data not available
n)	Soluble in Water:	0-100 %
o)	Partition Coefficient (o-w):	data not available
p)	Autoignition Temperature:	data not available
q)	Decomposition temperature:	data not available
r)	Viscosity:	data not available
s)	Explosive properties:	data not available
t)	Oxidizing properties:	---

9.2 Other Information

Data for the other parameters of the mixtures are not available.

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

10.4 Conditions to avoid

Not necessary. But can form explosive gases/vapour with air. Use only in a well-ventilated working areas. ---

10.5 Incompatible Materials

Avoid contact with strong acids or alkalines. Avoid storage with oxidizing 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 chemicals. Quantitative data on the toxicity of this product are not available.

150 mL A1

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

150 mL A2 (with LyseControl)

Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2d
TSCA Inventory: listed California Prop. 65 List: not listed
Exposure Routes: inhalation, ingestion, skin and/or eye contact
Target Organs: Eyes, skin, respiratory system
Symptoms: -
$LD50_{orl\ rat}$: [< 1%] > 50 g/kg
$LD50_{orl\ mus}$: [< 1%] > 4 g/kg

Chemical: *dodecyl sulfate, sodium salt* CAS No.: 151-21-3
TSCA Inventory: listed California Prop. 65 List: not listed
Canada CEPA 1999: DSL yes
$LD50_{orl\ rat}$: 1288 mg/kg

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$LC50_{inh\ rat}$: 3900_{1h} mg/m³
$LD50_{drm\ rbt}$: 10 g/kg

Chemical: *indicator dye(s)* CAS No.: -
TSCA Inventory: all listed, <1%

200 mL A3

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
$LC50_{ihl\ rat}$: [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.

125 mL AE

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

100 mL AQ

Chemical: *inorganic salts, declaration not necessary* CAS No.: -
TSCA Inventory: all listed

400 mL ERB

Chemical: *triethanolamine* CAS No.: 102-71-6
TSCA Inventory: listed California Prop. 65 List: not listed
Canada CEPA 1999: DSL Yes
$LD50_{orl\ rat}$: > 5000 mg/kg
$LD50_{drm\ rbt}$: > 2000 mg/kg

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
$LC50_{ihl\ rat}$: 16_{4h} g/m³
$LD50_{drm\ rbt}$: 12.8 g/kg

25-100 mg RNase A (lyo)

Chemical: *RNase* CAS No.: 9001-99-4
TSCA Inventory: listed
$LD50_{intraperitonaeal\ rat}$: 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 chemicals.

150 mL A1

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

150 mL A2 (with LyseControl)

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

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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): 1.6

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

200 mL A3
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

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

100 mL AQ
Chemical: *inorganic salts, declaration not necessary* CAS No.: -

400 mL ERB
Chemical: *triethanolamine* CAS No.: 102-71-6
$PNEC_{(fresh\ water)}$: 0.32 mg/L
PNEC = Predicted No Effected Concentration
$LC50_{fish/96h}$: >1000 mg/L
$EC50_{daphnia/48h}$: $>1000_{24h}$ mg/L
Partition Coefficient (o-w): -2.3

Chemical: *2-propanol* CAS No.: 67-63-0
$PNEC_{(fresh\ water)}$: 140.9 mg/L
PNEC = Predicted No Effected 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
Partition Coefficient (o-w): 0.05

25-100 mg RNase A (lyo)
Chemical: *RNase* CAS No.: 9001-99-4

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 (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.

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Section 14: Transport Information

14.1 - 14.4: No dangerous goods according the Transport regulations

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

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 List of Hazard and Precaution Phrases

16.1.1 List of relevant H Phrases

H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
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 vapors.
P261sh	Avoid breathing dust/vapors.
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!
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 Further Information

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16.5 Sources of Key Data

GHS: EU Regulation 1272/2008/EC on Classification, Labelling and Packaging of Substances and Mixtures, amending and repealing EU Directives 67/548/EEC and 1999/45/EC, and amending EU Regulation 1907/2006/EC
SDS: EU Regulation 453/2010/EU REACH - Requirements for the Compilation of Safety Data Sheets
EU-Directive 1999/92/EC Minimum Requirements for Improving the Safety and Health Protection of Workers at Risk from potentially Explosive Atmospheres
KÜHN, BIRETT (German), Data Sheets of Hazardous Substances

Revisions/Updates
Reason for Revision: 2016-03 Adaptation of European Regulation 1221/2015/EU

You find our current Versions of SDS in Internet:
http://www.mn-net.com/SDS [U.S. English]

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