Safety Data Sheet

SDS acc. Hazard Communication Standard

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

1.1 Product Identifier / Product Name

REF 740625.1
Product Name NucleoSpin 96 Plasmid (1x96)

1 x 100 mL A3	UFI: PFPT-53NJ-8206-5YNH
1 x 100 mL A4	
1 x 0.6-100 mg RNase A (lyo)	UFI: WWJV-U3PV-U207-MFGF
1 x 75 mL A1	
1 x 75 mL A2 (with LyseControl)	UFI: H8PT-538R-N207-U9GD
1 x 100 mL AW	UFI: MMPT-631A-V206-GNTN

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

75 mL A2 (with LyseControl)

GHS07

Signal Word WARNING

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

100 mL A3

GHS07

Signal Word WARNING

Hazard Identification	Hazard Classes/Categories
H302	Acute Tox. 4 oral
H315	Skin Irrit. 2
H319	Eye Irrit. 2

100 mL AW

GHS02 GHS07

Signal Word WARNING

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

0.6-100 mg RNase A (lyo)

GHS08

Signal Word DANGER

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

75 mL A1

Do not need labelling as hazardous

Signal Word -

No Hazard Class

100 mL A4

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.

75 mL A2 (with LyseControl)

GHS07

Signal Word: WARNING

100 mL A3

GHS07

Signal Word: WARNING

100 mL AW

GHS02 GHS07

Signal Word: WARNING

0.6-100 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.

75 mL A1

Do not need labelling as hazardous
Signal Word: -

100 mL A4

Do not need labelling as hazardous
Signal Word: -

Label elements of the complete product

GHS02 GHS07 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.

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
PBT: not applicable
vPvB: not applicable

Possible endocrine disrupting effects
data not available

SECTION 3: Composition/Information on Ingredients

3.1 Substances or 3.2 Mixtures

0.6-100 mg RNase A (lyo)

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 %
acc. GHS: H334, Resp. Sens. 1

100 mL AW

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: C_3H_8O
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_6ClN_3
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

75 mL A1

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.

100 mL A4

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.

100 mL A3

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_6ClN_3
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

75 mL A2 (with LyseControl)

Substance name: *sodium hydroxide solution*
CAS No.: 1310-73-2

Substance rating: H314, Skin Corr. 1A
Chemical Formula: $NaOH \cdot H_2O$
Synonyms (de): verdünnte Natronlauge
REACH Reg. No.: 01-2119457892-27-xxxx
EC No.: 215-185-5 Indice No.: 011-002-00-6
Concentration: 0,5 - <1 %
acc. GHS: H315, Skin Irrit. 2, H319, Eye Irrit. 2

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: $C_{12}H_{25}NaO_4S$
Synonyms (de): Natriumlaurylsulfat
REACH Reg. No.: 01-2119489461-32-xxxx
EC No.: 205-788-1
Concentration: 0,1 - <1 %
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.

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

0.6-100 mg RNase A (lyo)
Chemical: *RNase* CAS No.: 9001-99-4

100 mL AW
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

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

75 mL A1
Chemical: *chemicals/mixture until 1%* CAS No.: -

100 mL A4
Chemical: *chemicals/mixture until 1%* CAS No.: -

100 mL A3
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

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

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

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 **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

0.6-100 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
l) Kinematic Viscosity:	data not available
m) Soluble in Water:	0-100 %
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

100 mL AW

a) State of aggregation:	liquid
b) Color:	colorless
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
h) Flash Point:	25 °C
i) Autoignition Temperature:	data not available
j) Decomposition Temperature:	data not available
k) pH Value:	7-8
l) 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

75 mL A1

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
l) 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

100 mL A4

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:	7-8
l) 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

100 mL A3

a) State of aggregation:	liquid
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:	4-4.5
l) 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:	1.14 g/cm³
q) Relative Vapor Density $_{(air=1)}$:	data not available
r) Particle Size:	data not available

75 mL A2 (with LyseControl)

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:	> 12
l) 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:	1.008 g/mL
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

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.

0.6-100 mg RNase A (lyo)
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.

100 mL AW
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

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.

75 mL A1
Chemical: *chemicals/mixture until 1%* CAS No.: -
TSCA Inventory: all listed, <1%

100 mL A4
Chemical: *chemicals/mixture until 1%* CAS No.: -
TSCA Inventory: all listed, <1%

100 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 : 3181-7655 µg/m³/4H
Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

75 mL A2 (with LyseControl)
Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2
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%] > 50000 mg/kg
LD50 orl mus : [< 1%] > 4000 mg/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
LC50 ihl rat : 3,900 mg/L/1H

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.

0.6-100 mg RNase A (lyo)
Chemical: *RNase* CAS No.: 9001-99-4

100 mL AW
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

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

75 mL A1
Chemical: *chemicals/mixture until 1%* CAS No.: -

100 mL A4
Chemical: *chemicals/mixture until 1%* CAS No.: -

100 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

75 mL A2 (with LyseControl)
Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2
LC50 leuciscus idus/96h : 35-189 mg/L
LC50 fish/96h : 45.4 mg/L
EC50 daphnia/48h : >100 mg/L

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

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

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 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 2.3.12.9 and 2.2.2.2 following changes were applied: - 1 product component data corrected - 10 composition data corrected - 7 substance data corrected

16.2 List of Hazard and Precaution Phrases

16.2.1 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.

16.2.2 List of relevant P Phrases

P261sh	Avoid breathing dust/vapors.
P342+311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

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

2017-11 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
BAT:	biological workplace tolerance value
CAO:	Cargo Aircraft Only
Carc:	carcinogen
CAS:	Chemical Abstracts Service
CLP:	Classification, Labelling and Packaging regulation
CMR:	carcinogen, mutagen, reproduction toxic
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:	International Civil Aviation Organization
ihl:	inhaled
IMDG:	International Maritime Dangerous Goods Code
intrav:	intravenous
ipt:	intraperitonaeal
ISHL:	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
Sens:	sensitisation
STEL:	short term exposure limit
STOT:	Specific Target Organ Toxicity
SVHC:	Substance of Very High Concern
t/a:	tons per year
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

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.