

Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 740787.4	NucleoSpin 96 Soil (4x96)	Page: 1/18
Printing Date: 04.04.2023	Date of Issue: 03.03.2023	Version: 2.3.7.11

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

1.1 Product Identifier / Product Name

REF	740787.4	
Product Name	NucleoSpin 96 Soil (4x96)	
1 x 300 mL SW1		UFI: MMPT-631A-V206-GNTN
2 x 100 mL SW2		
1 x 125 mL SE		
2 x 150 mL SL1		
2 x 150 mL SL2		
2 x 50 mL SL3		
2 x 50 mL SX		UFI: V8PV-K3MC-S20H-ES6Y
1 x 500 mL SB		UFI: 1A6V-H3H9-G20E-ACTR
4 x 96 NucleoSpin® Bead Tubes (ceramic beads)		

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

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
H412	Aquatic Chronic 3



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2.1 Classification of the substance or mixture

150 mL SL2

Signal Word Do not need labelling as hazardous
-
No Hazard Class

300 mL SW1



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

500 mL SB



GHS07

Signal Word WARNING

Hazard Identification	Hazard Classes/Categories
H302	Acute Tox. 4 oral
H412	Aquatic Chronic 3

50 mL SX



GHS07

Signal Word WARNING

Hazard Identification	Hazard Classes/Categories
H319	Eye Irrit. 2

125 mL SE

Signal Word Do not need labelling as hazardous
-
No Hazard Class

100 mL SW2

Do not need labelling as hazardous



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Signal Word -
No Hazard Class

50 mL SL3

Do not need labelling as hazardous
Signal Word -
No Hazard Class

150 mL SL1

Do not need labelling as hazardous
Signal Word -
No Hazard Class

96 NucleoSpin® Bead Tubes (ceramic beads)

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 identifier(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.

150 mL SL2
Do not need labelling as hazardous
Signal Word: -

300 mL SW1



Signal Word: WARNING
H226, H302, H315, H319, H336
Flammable liquid and vapor. Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness.
P210, P260D, P264W, P280sh, P301+312, P330
Do not breathe vapors. Wash with water thoroughly after handling. IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Wear protective gloves/eye protection. Rinse mouth.

500 mL SB



Signal Word: WARNING
H302, H412
Harmful if swallowed. Harmful to aquatic life with long lasting effects.
P264W, P273, P301+312, P330
Wash with water thoroughly after handling. IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Avoid release to the environment. Rinse mouth.



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50 mL SX



GHS07

Signal Word: WARNING

125 mL SE

Do not need labelling as hazardous

Signal Word: -

100 mL SW2

Do not need labelling as hazardous

Signal Word: -

50 mL SL3

Do not need labelling as hazardous

Signal Word: -

150 mL SL1

Do not need labelling as hazardous

Signal Word: -

96 NucleoSpin® Bead Tubes (ceramic beads)

Do not need labelling as hazardous

Signal Word: -

Label elements of the complete product



GHS02



GHS07

Signal Word: WARNING

H226, H302, H315, H319, H336, H412

Flammable liquid and vapor. Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Harmful to aquatic life with long lasting effects.

P210, P260D, P264W, P273, P280sh, P301+312, P330

Do not breathe vapors. Wash with water thoroughly after handling. IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Avoid release to the environment. Wear protective gloves/eye protection. Rinse mouth.

2.3 Other Hazards

Possible Hazards from physicochemical Properties

In the case of pH values are less than 5 or higher than 9 then it is irritant. Flammable properties. Vapour forms explosive mixtures with air. For guanidine thiocyanate CAS 593-84-0: The properties H314, H332 "Causes severe skin burns and eye damage. Harmful if inhaled." are not relevant, because the mixture solution is buffered to pH 4-9 (see GHS Directive 1272/2008/EC Annex I, chapter 3.2.3.1.2.).

Information pertaining to particular Risks to Human and possible Symptoms

Cause after oral intake, impairments of health when ingested in small quantities. May cause drowsiness or dizziness.

Information pertaining to particular Risks to the Environment

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

PBT: not applicable

vPvB: not applicable

Possible endocrine disrupting effects

data not available

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SECTION 3: Composition/Information on Ingredients

3.1 Substances or 3.2 Mixtures

300 mL SW1

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

Substance rating: H225, Flam. Liq. 2, H319, Eye Irrit. 2, H336, STOT SE 3
 Chemical Formula: C₃H₈O
 Synonyms (de): Isopropanol, IPA, Propan-2-ol
 REACH Reg. No.: 01-2119457558-25-XXXX
 EC No.: 200-661-7
 Concentration: 20 - <35 %
 acc. GHS: H226, Flam. Liq. 3, H319, Eye Irrit. 2, H336, STOT SE 3

Indice No.: 603-117-00-0

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: CH₆CIN₃
 Synonyms (de): Guanidiniumchlorid
 REACH Reg. No.: 01-2119977063-35-0005
 EC No.: 200-002-3
 Concentration: 36 - <50 %
 acc. GHS: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2

Indice No.: 607-148-00-0

50 mL SX

Substance name: *ethylendinitrilo tetraacetic acid (EDTA)*
 CAS No.: 60-00-4

Substance rating: H319, Eye Irrit. 2
 Chemical Formula: C₁₀H₁₆N₂O₈
 Synonyms (de): Ethylendiamintetraessigsäure, Titriplex® II
 REACH Reg. No.: 01-2119486399-18-xxxx
 Concentration: 10 - <25 %
 acc. GHS: H319, Eye Irrit. 2

150 mL SL2

Substance name: *sodium acetate*
 CAS No.: 127-09-3

Substance rating: No criteria for classification or naming of chemical is not required.
 Chemical Formula: C₂H₃NaO₂
 Synonyms (de): NaAc, E262a
 REACH Reg. No.: 01-2119485123-42-0007
 EC No.: 204-823-8
 Concentration: 1 - <10 %
 acc. GHS: The criteria for classification are not fulfilled.

100 mL SW2

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.

125 mL SE

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.



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150 mL SL1

Substance name: *chemicals/mixture until 2%*
CAS No.: -

Substance rating: No criteria for classification or naming of chemical is not required.
Concentration: 1 - <2 %
acc. GHS: The criteria for classification are not fulfilled.

96 NucleoSpin® Bead Tubes (ceramic beads)

Substance name: *Ceramic particles*
CAS No.: -

Substance rating: No criteria for classification or naming of chemical is not required.
Concentration: 95 - <100 %
acc. GHS: The criteria for classification are not fulfilled.

50 mL SL3

Substance name: *acetate buffer solution*
CAS No.: -

Substance rating: No criteria for classification or naming of chemical is not required.
Chemical Formula: $\text{CH}_3\text{COOH}/\text{K}/\text{Na}\cdot\text{H}_2\text{O}$
Concentration: 45 - <60 %
acc. GHS: The criteria for classification are not fulfilled.

500 mL SB

Substance name: *guanidinium thiocyanate*
CAS No.: 593-84-0

Substance rating: H302, Acute Tox. 4 oral, H312, Acute Tox. 4 derm., H314, Skin Corr. 1C, H332, Acute Tox. 4 inh., H412, Aquatic Chronic 3
Chemical Formula: $\text{C}_2\text{H}_6\text{N}_4\text{S}$
Synonyms (de): Guanidiniumrhodanid
REACH Reg. No.: 01-2120735072-65-0001
EC No.: 209-812-1
Concentration: 45 - <60 %
acc. GHS: H302, Acute Tox. 4 oral, H412, Aquatic Chronic 3

Indice No.: 615-004-00-3

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.

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.

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



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Causes serious eye irritation.

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. ---

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. 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 vapours 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

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

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

see information in section 5.4,7,8 and 13

SECTION 7: Handling and Storage

7.1 Precautions for Safe Handling

Handling in accordance with the test instruction, that comes with the product.

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): 3

7.2.1 Requirements for stock rooms and containers



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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

300 mL SW1

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

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 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

50 mL SX

Chemical: *ethylenedinitrilo tetraacetic acid (EDTA)* CAS No.: 60-00-4

DNEL: 1.5 mg/m³

DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 2.2 mg/L

PNEC = Predicted No Effect Concentration

150 mL SL2

Chemical: *sodium acetate* CAS No.: 127-09-3

100 mL SW2

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

125 mL SE

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

150 mL SL1

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

96 NucleoSpin® Bead Tubes (ceramic beads)

Chemical: *Ceramic particles* CAS No.: -

50 mL SL3

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

500 mL SB

Chemical: *guanidinium thiocyanate* CAS No.: 593-84-0

DNEL: [inh] 1092 µg/m³

DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 42.4 µg/L

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



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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

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

300 mL SW1

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/cm ³
q) Relative Vapor Density (air=1) :	data not available
r) Particle Size:	data not available

50 mL SX

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



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r) Particle Size: data not available

150 mL SL2

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:	data not available
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:	1.02 g/cm ³
q) Relative Vapor Density (air=1) :	data not available
r) Particle Size:	data not available

100 mL SW2

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/cm ³
q) Relative Vapor Density (air=1) :	data not available
r) Particle Size:	data not available

125 mL SE

a) State of aggregation:	liquid
b) Color:	colorless
c) Odor:	odorless
d) Melting Point:	0 °C
e) Boiling Point:	data not available
f) Flammability:	data not available
g) Explosive Limits (lower / upper):	data not available
h) Flash Point:	data not available
i) Autoignition Temperature:	data not available
j) Decomposition Temperature:	data not available
k) pH Value:	8-9
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:	1.0 g/cm ³
q) Relative Vapor Density (air=1) :	data not available
r) Particle Size:	data not available



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150 mL SL1

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:	data not available
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:	1.02 g/cm ³
q) Relative Vapor Density (air=1) :	data not available
r) Particle Size:	data not available

96 NucleoSpin® Bead Tubes (ceramic beads)

a) State of aggregation:	solid
b) Color:	white
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:	data not available
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:	0.6-0.8 mm

50 mL SL3

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:	5-6
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:	1.19 g/cm ³
q) Relative Vapor Density (air=1) :	data not available
r) Particle Size:	data not available

500 mL SB

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



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e) Boiling Point:	data not available
f) Flammability:	data not available
g) Explosive Limits (lower / upper):	data not available
h) Flash Point:	data not available
i) Autoignition Temperature:	data not available
j) Decomposition Temperature:	data not available
k) pH Value:	6.5-7.5
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:	1.13 g/cm ³
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

But avoid reactions with oxidizing agents. Can form very reactive substances with oxidizing agents. Possibility: &H:EUH031& No further data available.

10.4 Conditions to avoid

But formation of explosive gases/vapours with air is possible. Use only in well ventilated rooms. No more required.

10.5 Incompatible Materials

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.

300 mL SW1

Chemical:	<i>2-propanol</i>	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:	<i>guanidine hydrochloride</i>	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/m ³ /4H		



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

50 mL SX

Chemical: *ethylendinitrilo tetraacetic acid (EDTA)* CAS No.: 60-00-4
 TSCA Inventory: listed
 LD50 orl rat : 2000-4500 mg/kg

150 mL SL2

Chemical: *sodium acetate* CAS No.: 127-09-3
 TSCA Inventory: listed
 LD50 orl rat : 3530 mg/kg

100 mL SW2

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

125 mL SE

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

150 mL SL1

Chemical: *chemicals/mixture until 2%* CAS No.: -
 TSCA Inventory: all listed, <2%

96 NucleoSpin® Bead Tubes (ceramic beads)

Chemical: *Ceramic particles* CAS No.: -
 TSCA Inventory: not applicable

50 mL SL3

Chemical: *acetate buffer solution* CAS No.: -
 TSCA Inventory: all listed

500 mL SB

Chemical: *guanidinium thiocyanate* CAS No.: 593-84-0
 TSCA Inventory: listed California Prop. 65 List: not listed
 Canada CEPA 1999: DSL yes
 LD50 orl rat : 593 mg/kg
 LC50 ihl rat : 5,319 mg/L/4H

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

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.

300 mL SW1

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 putida/16h : EC5: 1050 mg/L
 Partition Coefficient (o/w) : 0,05



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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

50 mL SX
 Chemical: *ethylendinitrilo tetraacetic acid (EDTA)* CAS No.: 60-00-4
 PNEC (fresh water) : 2.2 mg/L
 PNEC = Predicted No Effected Concentration
 LC50 daphnia magna/48h : [48h] 140 mg/L
 LC50 fish/96h : [4d] 41-1592 mg/L
 EC50 daphnia/48h : [24h] 480-790 mg/L
 EC10 pseudomonas putita/16h : [72h] 2.77-1000 mg/L
 Partition Coefficient (o/w) : -5,01-0,13

150 mL SL2
 Chemical: *sodium acetate* CAS No.: 127-09-3

100 mL SW2
 Chemical: *chemicals/mixture until 1%* CAS No.: -

125 mL SE
 Chemical: *chemicals/mixture until 1%* CAS No.: -

150 mL SL1
 Chemical: *chemicals/mixture until 2%* CAS No.: -

96 NucleoSpin® Bead Tubes (ceramic beads)
 Chemical: *Ceramic particles* CAS No.: -

50 mL SL3
 Chemical: *acetate buffer solution* CAS No.: -

500 mL SB
 Chemical: *guanidinium thiocyanate* CAS No.: 593-84-0
 Harmful to aquatic life with long lasting effects. Avoid contact of chemical/mixture to environment.
 Environmental hazards must not be labelled with P phrases until 125 mL (EU-CLP 1272/2008 Annex I - 1.5.2).
 PNEC (fresh water) : 42.4 µg/L
 PNEC = Predicted No Effected Concentration
 LC50 fish/96h : [4d] 89.1 mg/L
 EC50 daphnia/48h : 42.4 mg/L
 IC50 scenedesmus quadricauda/72h : 130 mg/L
 EC10 pseudomonas putita/16h : [10d] 200 mg/L
 Partition Coefficient (o/w) : -1,11 pH 5.1

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



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data not available

12.7 Other Adverse Effects

no additional data available

SECTION 13: Disposal Considerations

Do not collect in acidic waste. May form toxic gases.
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
<i>Transportation by Road</i>	
Classification code: F1	
Limited Quantity: 5 L	Tunnel restriction code: D/E
Excepted Quantity: E 1	Special instructions: 640E
<i>Air Transportation</i>	
Limited Quantity: LQ 7	
Excepted Quantity: E 1	
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, contains only small amounts of these 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



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SECTION 16: Other Information

16.1 Changes compared to the last version

Between versions 2.3.7.11 and 2.2.2.2 following changes were applied: - 1 product component data corrected - 5 composition data corrected - 9 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.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.

16.2.2 List of relevant P Phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P260D	Do not breathe vapors.
P264W	Wash with water thoroughly after handling.
P273	Avoid release to the environment.
P280sh	Wear protective gloves/eye protection.
P301+312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330	Rinse mouth.

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
 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 oxygen 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:	intraperitoneal
ISHL:	Industrial Safety and Health Law (Jp)
LC50:	lethal concentration 50%
LD50:	lethal dose 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:	fisch, 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:	fisch, fathead minnow
PNEC:	Predicted No Effect 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



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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.



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