Safety Data Sheet

according to Regulations REACh 1907/2006/EC

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

1.1 Product identifier

REF 740780.50
Product name NucleoSpin Soil (50)

REACH Registration number(s): see SECTION 3.1/3.2 or
A registration number for the substance(s) does not exist because the annual tonnage does not require registration or the substance or its use is excluded from registration.

50 x 1 NucleoSpin® Bead Tubes (ceramic beads)
1 x 60 mL SL1
1 x 60 mL SL2
1 x 10 mL SL3 UFI: 6EGV-53PC-X20V-FJKK
1 x 10 mL SX UFI: V8PV-K3MC-S20H-ES6Y
1 x 60 mL SB UFI: 1A6V-H3H9-G20E-ACTR
1 x 30 mL SW1 UFI: MMPT-631A-V206-GNTN
1 x 25 mL SW2
1 x 13 mL SE

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses
Product for analytical use.
Exposure Scenario Classification according REACh, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0
The exposure scenario is integrated into sections 1-16.
Uses advised against
not described

1.3 Details of the supplier of the safety data sheet

Manufactured by:
MACHEREY-NAGEL GmbH & Co. KG
Valencienner Str. 11, 52355 Düren, Germany
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.
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: **<https://www.mn-net.com/SDS>**

SECTION 2: Hazard identification

2.0 Classification of the complete product according to Regulation (EC) 1272/2008



GHS02 GHS05 GHS07

Signal word DANGER

Hazard identification	Hazard classes/categories
H226	Flam. Liq. 3
H302	Acute Tox. 4 oral
H314	Skin Corr. 1 B
H336	resp. irrit. STOT SE 3
H412	Aquatic Chronic 3

2.1 Classification of the substance or mixture according to Regulation (EC) 1272/2008

60 mL SL2

Do not need labelling as hazardous

Signal word -

No hazard class

30 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	resp. irrit. STOT SE 3

60 mL SB



GHS05 GHS07

Signal word DANGER

Hazard identification	Hazard classes/categories
H302	Acute Tox. 4 oral
H314	Skin Corr. 1 B
H412	Aquatic Chronic 3

10 mL SX



GHS07

Signal word WARNING

Hazard identification	Hazard classes/categories
H319	Eye Irrit. 2

10 mL SL3



GHS07

Signal word WARNING

Hazard identification	Hazard classes/categories
H315	Skin Irrit. 2
H319	Eye Irrit. 2

13 mL SE

Do not need labelling as hazardous

Signal word -

No hazard class

25 mL SW2

Do not need labelling as hazardous

Signal word -

No hazard class

60 mL SL1

Do not need labelling as hazardous

Signal word -

No hazard class

1 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 Label elements according regulation (EC) 1272/2008

According **CLP directive** inner packages must be only labelled with GHS symbol(s) and product identificator(s) (EU 1272/2008 Annex I - 1.5.1.2). Harmful chemicals/mixtures with signal word: **WARNING** and highly flammable chemicals/mixtures must not be labelled with H and P phrases **until 125 mL** (EU 1272/2008 Annex I - 1.5.2). The irritant hazard should be eliminated, because of buffer chemicals inside.

60 mL SL2

Do not need labelling as hazardous
Signal word: -

30 mL SW1



GHS02 GHS07

Signal word: WARNING

60 mL SB



GHS05 GHS07

Signal word: DANGER
H314
Causes severe skin burns and eye damage.
P260sh, P264, P280sh, P303+361+353, P305+351+338, P310, P405, P501
Do not breathe dust/vapours.Wash hands thoroughly after handling.Wear protective gloves/eye protection.IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.Immediately call a POISON CENTER/doctor.Store locked up.Dispose of contents/container to regulated waste treatment.

10 mL SX



GHS07

Signal word: WARNING

10 mL SL3



GHS07

Signal word: WARNING

13 mL SE
Do not need labelling as hazardous
Signal word: -

25 mL SW2
Do not need labelling as hazardous
Signal word: -

60 mL SL1
Do not need labelling as hazardous
Signal word: -

1 NucleoSpin® Bead Tubes (ceramic beads)
Do not need labelling as hazardous
Signal word: -

Label elements of the complete product



GHS02 GHS05

Signal word: DANGER
H314
Causes severe skin burns and eye damage.
P260sh, P264, P280sh, P303+361+353, P305+351+338, P310, P405, P501
Do not breathe dust/vapours.Wash hands thoroughly after handling.Wear protective gloves/eye protection.IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.Immediately call a POISON CENTER/doctor.Store locked up.Dispose of contents/container to regulated waste treatment.

2.3 Other hazards

Possible hazards from physicochemical properties
Generally in the case of pH values are less than 2 or higher than 11.5 then it is corrosive. Flammable properties. 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
Causes varying degrees of acid burns on the skin, to the eyes and to the mucous membranes and wounds which do not heal quickly depending on the concentration, temperature and the exposure time. Vapours especially which steam from hot liquids and mist can have a severe irritant effect upon the eyes and the respiratory organs.
Cause after oral intake, impairments of health when ingested in small quantities.

Information pertaining to particular risks to the environment
Should not be released into the environment.
PBT: not applicable
vPvB: not applicable

Possible endocrine disrupting effects
no data available

SECTION 3: Composition / information on ingredients

3.1 Substances or 3.2 Mixtures

60 mL SL2

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

Substance rating: No criteria for classification or naming of chemical not required.
Formula: $C_2H_3NaO_2$
Pseudonym (de): NaAc, E262a
REACH Reg. No.: 01-2119485123-42-0007
EC No.: 204-823-8
Concentration: 1 - <10 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

30 mL SW1

Substance name: *guanidine hydrochloride*
CAS No.: 50-01-1

Substance rating: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2
Formula: CH_6ClN_3
Pseudonym (de): Guanidiniumchlorid
REACH Reg. No.: 01-2119977063-35-0005
EC No.: 200-002-3 Indice No.: 607-148-00-0
Concentration: 36 - <50 %
acc. CLP (GHS): H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2

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

Substance rating: H225, Flam. Liq. 2, H319, Eye Irrit. 2, H336, resp. irrit. STOT SE 3
Formula: C_3H_8O
Pseudonym (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. CLP (GHS): H226, Flam. Liq. 3, H319, Eye Irrit. 2, H336, resp. irrit. STOT SE 3

60 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. 1 B, H332, Acute Tox. 4 inh., H412, Aquatic Chronic 3
Formula: $C_2H_6N_4S$
Pseudonym (de): Guanidiniumrhodanid
REACH Reg. No.: 01-2120735072-65-0001
EC No.: 209-812-1 Indice No.: 615-004-00-3
Concentration: 45 - <60 %
acc. CLP (GHS): H302, Acute Tox. 4 oral, H314, Skin Corr. 1 B, H412, Aquatic Chronic 3

10 mL SX

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

Substance rating: H319, Eye Irrit. 2
Formula: $C_{10}H_{16}N_2O_8$
Pseudonym (de): Ethylendiamintetraessigsäure, Titriplex® II
REACH Reg. No.: 01-2119486399-18-xxxx
Concentration: 10 - <25 %
acc. CLP (GHS): H319, Eye Irrit. 2

10 mL SL3

Substance name: *acetic acid*
CAS No.: 64-19-7

Substance rating: H226, Flam. Liq. 3, H314, Skin Corr. 1 A, H318, Eye Dam. 1
Formula: $C_2H_4O_2$; CH_3-COOH
REACH Reg. No.: 01-2119475328-30-xxxx
EC No.: 200-580-7 Indice No.: 607-002-00-6
Concentration: 10 - <25 %
acc. CLP (GHS): H315, Skin Irrit. 2, H319, Eye Irrit. 2

13 mL SE

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

Substance rating: No criteria for classification or naming of chemical not required.
Concentration: 0,1 - <1 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

25 mL SW2

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

Substance rating: No criteria for classification or naming of chemical not required.
Concentration: 0,1 - <1 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

60 mL SL1

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

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

1 NucleoSpin® Bead Tubes (ceramic beads)

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

Substance rating: No criteria for classification or naming of chemical not required.
Concentration: 95 - <100 %
acc. CLP (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 H and P 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. Remove contaminated clothing. Show product package, packing insert and this material safety data sheet to the doctor.

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 vapours

After inhalation of foam or vapour fresh air should be inhaled. Keep airways free. If vomiting and if insensible place patient in recovery position and 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 neutralise it. Contact medical advice for possible consequences.

4.2 Most important symptoms and effects, both acute and delayed

Rapid penetration and destruction of the skin. Especially in the heated form.
Causes severe skin burns and eye damage.

4.3 Indication of any immediate medical attention and special treatment needed

CORROSIVE DAMAGE: After SKIN CONTACT rinse with water for a long time. Efforts to neutralise the substance can frequently make matters worse. Apply glucocorticosteroides following inflammatory reactions. After EYE CONTACT rinse immediately with plenty of water for a long time. Eyelid convulsion measures. Name the corrosive chemical. Further treatment must to be carried out by an eye specialist. After INTAKE administer aluminium oxide drug suspensions. Administer a prophylaxis to counter pulmonary oedema following the INGESTION of corrosive aerosols. In the event of RESPIRATORY DISTREES ensure that the patient inhales oxygen. ---

SECTION 5: Firefighting measures

5.1 Extinguishing 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

no data available

5.2 Special hazards arising from the substance or mixture

WARNING: Flammable (GHS regulation). May form explosive vapour-air mixtures. Formation of hazardous and caustic vapour-air mixtures possible.

5.3 Advice for firefighters

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

Do not breathe vapours. Wear suitable protective gloves (see 8.2.2). Wear eye protection, respectively face protection. 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

Should not be released into the 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 hazardous chemicals.
Clean any contaminated equipment and floors with plenty of water.
Collect small amounts of leaked liquid and flush with water into drains.

6.4 Reference to other sections

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

Safe storage is guaranteed in the original packaging from MACHEREY-NAGEL. 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

Keep original product packages tightly closed during handling and storage. Use inbreakable container for transport of glass bottles.

7.3 Specific end use(s)

Product for analytical use.

SECTION 8: Exposure controls /personal protection

8.1 Control parameters

10 mL SL3

Chemical: *acetic acid* CAS No.: 64-19-7
DNEL: [loc, inh] 25 mg/m³
DNEL = Derived No-Effect Level (for workers)
PNEC (fresh water) : 3.058 mg/L
PNEC = Predicted No Effected Concentration
EU value: [TWA] 25 / [STEL] 50 mg/m³
TRGS 900 (DE): 10 mL/m³ / 25 mg/m³
E/e respirable
Short-term exposure factor: 2(I), Y
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded
SUVA(CH) MAK value: 10 ppm / 25 mg/m³
NIOSH: [TWA] 10 ppm / 25 mg/m 3 ; [STEL] 15 ppm / 37 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] 10 ppm / 25 mg/m³

30 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 Effected Concentration
TRGS 900 (DE): 200 ppm / 500 mg/m³
E/e respirable
Short-term exposure factor: 2 (II), Y
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded
SUVA(CH) MAK value: 200 ppm / 500 mg/m³
TRGS 903 (DE): [Aceton B/b, U/b] 25 mg/L
B blood, U urine, a no limitation, b end of exposition or shift
NIOSH: [TWA] 400 ppm / 980 mg/m³
NIOSH STEL: 500 ppm / 1225 mg/m³
[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period
OSHA: [TWA] 400 ppm / 980 mg/m³

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

10 mL SX
Chemical: *ethylendinitrilo 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 Effected Concentration

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

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

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

60 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 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

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

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

8.2 Exposure controls

Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities. The highest level of cleanliness must be maintained at the workplace.

8.2.1 Respiratory protection
No additional recommendations.

8.2.2 Skin protection / Hand protection
Yes, gloves according EN 374 (permeation time >30 min - level 2), consist of PVC, natural latex, Neopren, or Nitril (f.ex. from Ansell or KCL). Use for short times chemical resistant latex gloves with code EN 374-3 level 1.

8.2.3 Eye / Face Protection
Yes, safety glasses according EN 166 with integrated side shields or wrap-around protection or face protection.

8.2.4 Skin protection
Recommended to avoid clothing damage, and to avoid contamination with these hazards.

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

8.2.6 Thermal hazards
no data 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

10 mL SL3

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	acetic
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	>108.8 °C
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	5-6
l) Kinematic viscosity:	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient ($K_{o/w}$):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	1.19 g/cm³
q) Relative vapour density $_{(air=1)}$:	no data available
r) Particle size:	no data available

30 mL SW1

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	alcoholic
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	25 °C
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	7-8
l) Kinematic viscosity:	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient ($K_{o/w}$):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	1.06 g/cm³
q) Relative vapour density $_{(air=1)}$:	no data available
r) Particle size:	no data available

10 mL SX

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	odorless
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	7-8
l) Kinematic viscosity:	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient ($K_{o/w}$):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	no data available
q) Relative vapour density $_{(air=1)}$:	no data available
r) Particle size:	no data available

60 mL SL2

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	odorless
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	no data available
l) Kinematic viscosity:	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient ($K_{o/w}$):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	1.02 g/cm³
q) Relative vapour density $_{(air=1)}$:	no data available
r) Particle size:	no data available

25 mL SW2

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	odorless
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	7-8
l) Kinematic viscosity:	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient ($K_{o/w}$):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	1.00 g/cm³
q) Relative vapour density $_{(air=1)}$:	no data available
r) Particle size:	no data available

13 mL SE

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	odorless
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	8-9
l) Kinematic viscosity:	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient ($K_{o/w}$):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	1.0 g/cm³
q) Relative vapour density $_{(air=1)}$:	no data available
r) Particle size:	no data available

60 mL SB

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	odorless
d) Melting point:	no data available

e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	6.5-7.5
l) Kinematic viscosity:	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient ($K_{o/w}$):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	1.13 g/cm³
q) Relative vapour density $_{(air=1)}$:	no data available
r) Particle size:	no data available

60 mL SL1

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	odorless
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	no data available
l) Kinematic viscosity:	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient ($K_{o/w}$):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	1.02 g/cm³
q) Relative vapour density $_{(air=1)}$:	no data available
r) Particle size:	no data available

1 NucleoSpin® Bead Tubes (ceramic beads)

a) State of aggregation:	solid
b) Colour:	white
c) Odor:	odorless
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	no data available
l) Kinematic viscosity:	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient ($K_{o/w}$):	no data available
o) Vapour pressure (20°C):	no data available
p) Specific gravity:	no data available
q) Relative vapour density $_{(air=1)}$:	no data available
r) Particle size:	0.6-0.8 mm

9.2 Other information

9.2.1 Information on physical hazard classes

no data available

9.2.2 Other safety-related parameters

No data is available for the other parameters for the mixtures, since no registration and no chemical safety report is required.

Substances are highly corrosive.

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 react violently with organic material. Note: Can form very reactive substances with oxidizing agents. Possible: &H:EUH031& No further data available.

10.4 Conditions to avoid

No more required.

10.5 Incompatible materials

no additional data available

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 the hazard classes according regulation (EC) 1272/2008

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

10 mL SL3

Chemical:	*acetic acid*	CAS No.: 64-19-7
TSCA Inventory:	listed	California Proposition 65 List: not listed
Exposure Routes:	inhalation, skin and/or eye contact	
Target Organs:	Eyes, skin, respiratory system, teeth	
Symptoms:	irritation eyes, skin, nose, throat; eye, skin burns; skin sensitization; dental erosion; black skin, hyperkeratosis; conjunctivitis, lacrimation (di	
Australia NICNAS:	not listed	Canada CEPA 1999: DSL Yes
Japan CSCL/PRTR:	not listed, Japan PDSCL: not listed	
Japan ISHL:	listed ≥1,0%/≥1,0%, Article 57-2 (SDS required)	
South Korea TCCA:	not listed	
Korea Exist.Chem.Inventory:	KE-00013	
LD50 $_{orl\ rat}$:	3310 mg/kg	
LD50 $_{orl\ mus}$:	4960 mg/kg	

30 mL SW1

Chemical:	*2-propanol*	CAS No.: 67-63-0
TSCA Inventory:	listed	California Proposition 65 List: not listed
ACGIH:	1230 ppm	
Exposure Routes:	inhalation, ingestion, skin and/or eye contact	
Target Organs:	Eyes, skin, respiratory system	
Symptoms:	irritation eyes, nose, throat; drowsiness, dizziness, headache; dry cracking skin; in animals: narcosis	
Australia NICNAS:		Canada CEPA 1999: DSL yes
Japan CSCL/PRTR:	PAC yes, Japan PDSCL: -	
Japan ISHL:	listed ≥1,0%/≥0,1%, Article 57-2 (SDS required)	
South Korea TCCA:		
Korea Exist.Chem.Inventory:	KE-29363	
LD50 $_{orl\ rat}$:	5045 mg/kg	
LC_Low $_{orl\ hmn}$:	3570 mg/kg	
LC50 $_{ihl\ rat}$:	25 mg/L/4H	

TRGS 905 (DE): R $_{F}$ C

Chemical: *guanidine hydrochloride* CAS No.: 50-01-1
TSCA Inventory: listed California Proposition 65 List: not listed
Australia NICNAS: not listed Canada CEPA 1999: DSL yes
Japan CSCL/PRTR: not listed, Japan PDSCL: not listed
Japan ISHL: not listed
South Korea TCCA: not listed
Korea Exist.Chem.Inventory: KE-18111
LD50 orl rat : 475-907 mg/kg
LC50 ihl rat : 3181-7655 µg/m³/4H
Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

10 mL SX
Chemical: *ethylendinitrilo tetraacetic acid (EDTA)* CAS No.: 60-00-4
TSCA Inventory: listed
Japan CSCL/PRTR: PRTR: ≥1,0% class I
Korea Exist.Chem.Inventory: KE-13648
LD50 orl rat : 2000-4500 mg/kg

60 mL SL2
Chemical: *sodium acetate* CAS No.: 127-09-3
TSCA Inventory: listed
Korea Exist.Chem.Inventory: KE-00061
LD50 orl rat : 3530 mg/kg

25 mL SW2
Chemical: *chemicals/mixture until 1%* CAS No.: -
TSCA Inventory: all listed, <1%
Korea Exist.Chem.Inventory: listed

13 mL SE
Chemical: *chemicals/mixture until 1%* CAS No.: -
TSCA Inventory: all listed, <1%
Korea Exist.Chem.Inventory: listed

60 mL SB
Chemical: *guanidinium thiocyanate* CAS No.: 593-84-0
TSCA Inventory: listed California Proposition 65 List: not listed
Australia NICNAS: not listed Canada CEPA 1999: DSL yes
Japan CSCL/PRTR: not listed, Japan PDSCL: not listed
Japan ISHL: not listed
South Korea TCCA: not listed
Korea Exist.Chem.Inventory: not listed
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.

60 mL SL1
Chemical: *chemicals/mixture until 2%* CAS No.: -
TSCA Inventory: all listed, <2%
Korea Exist.Chem.Inventory: listed

1 NucleoSpin® Bead Tubes (ceramic beads)
Chemical: *Ceramic particles* CAS No.: -
TSCA Inventory: not applicable

11.2 Other hazards

Possible endocrine disrupting effects
no data available

Other information
no additional data available

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

10 mL SL3
Substance name: *acetic acid* CAS-Nr.: 64-19-7
PNEC (fresh water) : 3.058 mg/L
PNEC = Predicted No Effected Concentration = concentration at which no effect on the environment is expected
LC50 fish/96h : [4d] 301-1000 mg/L
EC50 daphnia/48h : 301-1000 mg/L
IC50 scenedesmus quadricauda/72h : 301-1000 mg/L
Water hazard class (DE): 1 WGK No.: 0093
Storage class (VCI): 8 B

30 mL SW1
Substance name: *2-propanol* CAS-Nr.: 67-63-0
PNEC (fresh water) : 140.9 mg/L
PNEC = Predicted No Effected Concentration = concentration at which no effect on the environment is expected
LC50 fish/96h : 1400 mg/L
EC50 daphnia/48h : 13.3 g/L
IC50 scenedesmus quadricauda/72h : >1000 mg/L
EC10 pseudomonas putita/16h : EC5: 1050 mg/L
Water hazard class (DE): 1 WGK No.: 0135
Storage class (VCI): 3

Substance name: *guanidine hydrochloride* CAS-Nr.: 50-01-1
PNEC (fresh water) : -
PNEC = Predicted No Effected Concentration = concentration at which no effect on the environment is expected
LC50 leuciscus idus/96h : 1759 mg/L
LC50 fish/96h : [4d] 690-1850; [48h] 1758-2420 mg/L
EC50 daphnia/48h : 70.2 mg/L
EC10 pseudomonas putita/16h : [72h] 11.8-33.5 mg/L
Water hazard class (DE): 1 WGK No.: 0788
Storage class (VCI): 12

10 mL SX
Substance name: *ethylendinitrilo tetraacetic acid (EDTA)* CAS-Nr.: 60-00-4
PNEC (fresh water) : 2.2 mg/L
PNEC = Predicted No Effected Concentration = concentration at which no effect on the environment is expected
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
Water hazard class (DE): 2
Storage class (VCI): 12-13

60 mL SL2
Substance name: *sodium acetate* CAS-Nr.: 127-09-3
Water hazard class (DE): 1
Storage class (VCI): 12-13

25 mL SW2
Substance name: *chemicals/mixture until 1%* CAS-Nr.: -
Water hazard class (DE): 1
Storage class (VCI): 12-13

13 mL SE

Substance name: *chemicals/mixture until 1%* CAS-Nr.: -
Water hazard class (DE): 1
Storage class (VCI): 12-13

60 mL SB
Substance name: *guanidinium thiocyanate* CAS-Nr.: 593-84-0
Harmful to aquatic life with long lasting effects. Do not release into the environment.
Environmentally hazardous substances/mixtures do not have to be labeled with P-phrases up to 125 mL (EU 1272/2008 Annex I Paragraph 1.5.2).
PNEC (fresh water) : 42.4 µg/L
PNEC = Predicted No Effected Concentration = concentration at which no effect on the environment is expected
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
Water hazard class (DE): 3
Storage class (VCI): 12

60 mL SL1
Substance name: *chemicals/mixture until 2%* CAS-Nr.: -
Water hazard class (DE): 1
Storage class (VCI): 12-13

1 NucleoSpin® Bead Tubes (ceramic beads)
Substance name: *Ceramic particles* CAS-Nr.: -
Storage class (VCI): 12-13

12.2 Persistence and degradability

12.3 Bioaccumulative potential

10 mL SL3
Substance name: *acetic acid* CAS-Nr.: 64-19-7
Dispersion coefficient ($K_{o/w}$): -0,17

30 mL SW1
Substance name: *2-propanol* CAS-Nr.: 67-63-0
Dispersion coefficient ($K_{o/w}$): 0,05

10 mL SX
Substance name: *ethylendinitrilo tetraacetic acid (EDTA)* CAS-Nr.: 60-00-4
Dispersion coefficient ($K_{o/w}$): -5,01-0,13

60 mL SB
Substance name: *guanidinium thiocyanate* CAS-Nr.: 593-84-0
Dispersion coefficient ($K_{o/w}$): -1,11 pH 5.1

12.4 Mobility in soil

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

no data 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 (waste code number 16 05 06).

13.1 Waste treatment methods

Normally it is possible to empty small amounts (diluted!) into drains. Empty containers of corrosive reagents prior to disposal, rinse with water.

SECTION 14: Transport information

UN 1993 class 3 III, **Excepted Quantities** (≤30 mL/∑≤1 L) = ADR/ IATA E1
or

14.1 UN number: 1993
14.2 UN proper shipping name: Flammable liquid, n.o.s. (2-propanol mixture)
14.3 Class: 3
14.4 Packing group: III

Road transport ADR

Classification code:	F1		
Limited Quantity:	5 L	Tunnel restriction code:	D/E
Excepted Quantity:	E 1		
Special instructions:	274, 601		

Air transport IATA DGR

Limited Quantity:	PAX: 355	max. quantity PAX:	60 L
	CAO: 366	max. quantity CAO:	220 L
Excepted Quantity:	E 1		

Maritime transport IMDG

EmS:	F-E, S-E	Staukategorie:	A
Special instructions:	223, 274, 955		

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 in bulk 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

Dangerous Substances Protection Act (DE: Chemikaliengesetz - ChemG), Aug 2013, Stand: Okt 2020
Ordinance on protection against dangerous substances (E: Gefahrstoffverordnung - GefStoffV), Nov 2010, Stand: Mrz 2017
TRGS 201, Classification and labeling of activities involving hazardous substances, Feb 2017
TRGS 220, National aspects when preparing safety data sheets, Jan 2017
TRGS 400, Risk assessment for activities involving hazardous substances, Jul 2017
TRGS 401, Skin contact hazard - identification, assessment, action, Jun 2008, status: Feb 2011
BekGS 408, Application of the GefStoffV and the TRGS with the entry into force of the CLP regulation, December 2009, status: Jan 2012
TRGS 500, Protective measures, Mai 2008
TRGS 510, Storage of hazardous substances in portable containers from March 2013, status: Oct 2015
Wasserhaushaltsgesetz - WHG, Section 3 Handling substances hazardous to water, Jul 2009, status: Aug 2016
MN leaflet/instructions for use, also at www.mn-net.com
If necessary, observe other country-specific regulations.

15.2 Chemical safety assessment

no data available

SECTION 16: Other information

16.1 Changes compared to the last version

Between versions 2.24.12.24 and 2.2.2.2 following changes were applied: - 22 product component data corrected - 10 composition data corrected - 22 substance data corrected

16.2 List of H and P phrases

16.2.1 List of relevant H phrases

H	Between versions 2.24.12.24 and 2.2.2.2 following changes were applied: - 22 product component data corrected - 10 composition data corrected - 22 substance data corrected
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
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

P260sh	Do not breathe dust/vapours.
P264	Wash hands thoroughly after handling.
P280sh	Wear protective gloves/eye protection.
P303+361+353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P405	Store locked up.
P501	Dispose of contents/container to regulated waste treatment.

16.3 Recommended restriction on use

Only for professional user.
Look about employee restrictions for young people (f. ex. 94/33/EC or DE § 22 JArbSchG)!
Look about employee restrictions for pregnant women and nursing women (f.ex. 92/85/EEC or for DE §§ 11-13 MuSchG 2017)!
An individual package of this product or test kit has a moderate hazardous potential.

16.4 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)
Regulation 692/2022/EU, adaptation of Annex VI, Part 1, of Regulation 1272/2008/EC to technical and scientific progress (18th 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 spezified)
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
RIP:	REACH Implementations Projects
scu:	sub cutan
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.