

Safety Data Sheet

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

REF: 740643.5

NucleoSpin 8 Virus (60x8)

Page: 1/15

Printing date: 15.11.2021

Date of issue: 08.11.2021

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

1.1 Product identifier

REF 740643.5
Product name NucleoSpin 8 Virus (60x8)

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.

8 x 0.09-1.0 mg Carrier RNA
1 x 15 mL PB
3 x 75 mg Proteinase K (lyo)
8 x 40 mL RAV1
2 x 100 mL RAV3
1 x 300 mL RAW
1 x 125 mL RE
1 x 125 mL RNase-free H₂O

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
Valenciennener Str. 11, 52355 Düren, GERMANY
Tel.: +49 2421 969 0

E-mail: sds@mn-net.com (msds@mn-net.com)

1.4 Emergency telephone number

Outside Germany (DE): Call your regional Poisons Information Service or call local Life Saving Service.

DE: Gemeinsames Giftinformationszentrum (GGIZ) 99089 Erfurt tel. +49 361 730 730

You find our current versions of SDS (22 languages) in Internet:

<http://www.mn-net.com/SDS>

SECTION 2: Hazard identification

2.0 Classification of the complete product



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
H412 Aquatic Chronic 3

2.1 Classification of the substance or mixture

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0.09-1.0 mg Carrier RNA

Signal word

Do not need labelling as hazardous

No hazard class

15 mL PB

Signal word

Do not need labelling as hazardous

No hazard class

75 mg Proteinase K (Iyo)



GHS07

GHS08

Signal word

DANGER

Hazard identification

Hazard classes/categories

H315

Skin Irrit. 2

H319

Eye Irrit. 2

H334

Resp. Sens. 1

40 mL RAV1



GHS07

Signal word

WARNING

Hazard identification

Hazard classes/categories

H302

Acute Tox. 4 oral

H412

Aquatic Chronic 3

100 mL RAV3

Signal word

Do not need labelling as hazardous

No hazard class

300 mL RAW



GHS02

GHS07

Signal word

WARNING

Hazard identification

Hazard classes/categories

H226

Flam. Liq. 3

H302

Acute Tox. 4 oral

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125 mL RE

Signal word Do not need labelling as hazardous
-

No hazard class

125 mL RNase-free H₂O

Signal word Do not need labelling as hazardous
-

No hazard class

2.2 Label elements

According **CLP directive** inner packages must be only labelled with GHS symbol(s) and product identifier(s) (EU 1272/2008 Annex I - 1.5.1.2).

Harmful chemicals/mixtures with signal word: **WARNING** and highly flammable chemicals/mixtures must not be labelled with H and P phrases **until 125 mL** (EU 1272/2008 Annex I - 1.5.2). This labelling exemption is NOT valid for sensibilizing substances.

0.09-1.0 mg Carrier RNA

Do not need labelling as hazardous
Signal word: -

15 mL PB

Do not need labelling as hazardous
Signal word: -

75 mg Proteinase K (lyo)



GHS07 GHS08

Signal word: DANGER

H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

P261sh, P342+311

Avoid breathing dust/vapours. If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

40 mL RAV1



GHS07

Signal word: WARNING

H412

Harmful to aquatic life with long lasting effects.

100 mL RAV3

Do not need labelling as hazardous
Signal word: -

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300 mL RAW



GHS02 GHS07

Signal word: WARNING

H226, H302

Flammable liquid and vapour. Harmful if swallowed.

P210, P264W, P301+312, P330

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Wash with water thoroughly after handling. IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

125 mL RE

Do not need labelling as hazardous

Signal word: -

125 mL RNase-free H₂O

Do not need labelling as hazardous

Signal word: -

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.

Kit contains small amounts of enzymes: May cause allergy or asthma symptoms or breathing difficulties if inhaled. -

Information pertaining to particular risks to the environment

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

PBT: not applicable

vPvB: not applicable

Other hazards

SECTION 3: Composition/information on ingredients

3.1

Substances or 3.2 Mixtures

0.09-1.0 mg Carrier RNA

Chemical: *carrier RNA*

CAS No.: 26763-19-6

Classification:

No criteria for classification or naming of chemical not required.

RTECS:

-

MFCD:

00131937

KE No.:

KE-30341

Concentration:

90 - <100 %

acc. CLP (GHS):

The criteria for classification are not fulfilled.

15 mL PB

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Chemical:	glycerole	CAS No.:	56-81-5
Classification:	No criteria for classification or naming of chemical not required.		
Formula:	C ₃ H ₈ O ₃		
Pseudonym:	glycerin, 1,2,3-propanetriol		
TSCA Inventory:	listed (1,2,3-Propanetriol)		
REACH Reg. No.:	01-2119471987-18-xxxx		
EC No.:	200-289-5	Indice No.:	n/a
RTECS:	MA8050000	MFCD:	00004722
KE No.:	KE-29297		
Concentration:	10 - <50 %		
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

75 mg Proteinase K (Iyo)

Chemical:	proteinase K (origin: tritirachium album)	CAS No.:	39450-01-6
Classification:	H315, Skin Irrit. 2, H319, Eye Irrit. 2, H334, Resp. Sens. 1		
Formula:	Enzyme Comm. No. 3.4.21.64, origin: tritirachium album		
TSCA Inventory:	listed (CAS 102925-54-2)		
EC No.:	254-457-8	Indice No.:	647-014-00-9
RTECS:	-	MFCD:	00132129
KE No.:	not listed		
Concentration:	90 - <100 %		
acc. CLP (GHS):	H315, Skin Irrit. 2, H319, Eye Irrit. 2, H334, Resp. Sens. 1		

40 mL RAV1

Chemical:	guanidinium thiocyanate	CAS No.:	593-84-0
Classification:	H302, Acute Tox. 4 oral, H312, Acute Tox. 4 derm., H314, Skin Corr. 1B, H332, Acute Tox. 4 inh., H412, Aquatic Chronic 3		
Formula:	C ₂ H ₆ N ₄ S		
Pseudonym:	guanidine rhodanide		
TSCA Inventory:	listed		
REACH Reg. No.:	01-2120735072-65-0001		
EC No.:	209-812-1	Indice No.:	615-004-00-3
RTECS:	XL1225000	MFCD:	00013027
KE No.:	not listed		
Concentration:	45 - <60 %		
acc. CLP (GHS):	H302, Acute Tox. 4 oral, H412, Aquatic Chronic 3		

Chemical:	Triton® X-100	CAS No.:	9002-93-1
Classification:	H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H318, Eye Dam. 1, H410, Aquatic Chronic 1		
Formula:	C ₃₃ H ₆₀ O _{10,5}		
Pseudonym:	octoxynol-9		
TSCA Inventory:	listed		
SVHC listed:	listed		
RTECS:	MD0907700	MFCD:	00132505
KE No.:	KE-33568		
Concentration:	0.25 - <2.5 %		
acc. CLP (GHS):	H412, Aquatic Chronic 3		

100 mL RAV3

Chemical:	chemicals/mixture < 1%	CAS No.:	-
Classification:	No criteria for classification or naming of chemical not required.		
TSCA Inventory:	all listed, <1%		
KE No.:	listed		
Concentration:	0.1 - <1 %		
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

300 mL RAW

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Chemical: *guanidine hydrochloride* CAS No.: 50-01-1
Classification: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2
Formula: CH_6ClN_3
Pseudonym: guanidinium chloride
TSCA Inventory: listed
REACH Reg. No.: 01-2119977063-35-0005
EC No.: 200-002-3
RTECS: MF4300000 Indice No.: 607-148-00-0
KE No.: KE-18111 MFCD: 00013026
Concentration: 24 - <36 %
acc. CLP (GHS): H302, Acute Tox. 4 oral

Chemical: *ethanol* CAS No.: 64-17-5
(denatured with 1%IPA/1%MEK, acc.2016/1867/EU)
Classification: H225, Flam. Liq. 2
Formula: $\text{C}_2\text{H}_6\text{O}$; $\text{C}_2\text{H}_5\text{OH}$
Pseudonym: ethyl alcohol, methylated spirit
TSCA Inventory: listed
REACH Reg. No.: 01-2119457610-43-xxxx
EC No.: 200-578-6 Indice No.: 603-002-00-5
RTECS: KQ6300000 MFCD: 00003568
KE No.: KE-13217
Concentration: 35 - <55 %
acc. CLP (GHS): H226, Flam. Liq. 3

125 mL RE

Chemical: *chemicals/mixture < 1%* CAS No.: -
Classification: No criteria for classification or naming of chemical not required.
TSCA Inventory: all listed, <1%
KE No.: listed
Concentration: 0.1 - <1 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

125 mL RNase-free H₂O

Chemical: *water* CAS No.: 7732-18-5
Classification: No criteria for classification or naming of chemical not required.
Formula: H_2O
TSCA Inventory: listed
REACH Reg. No.: exempt, Annex IV
EC No.: 231-791-2
RTECS: ZC0110000
KE No.: KE-35400
Concentration: 90 - <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 16.1

SECTION 4: First aid measures

4.1 Description of first aid measures

Place insured person out of danger zone to fresh air immediately. Ensure quiet, warmth, and provide resuscitation if necessary. If necessary contact medical advice. Take to a doctor, in a raised position if there are breathing difficulties.

- 4.1.1 After SKIN Contact**
Remove contaminated clothing. Rinse the affected skin or mucous membrane thoroughly under running water. (If possible) use soap.
- 4.1.2 After EYE Contact**
After contact with the eyes rinse thoroughly under running water with the eyelid wide open with eye washing bottle, eye douche or running water (protect intact eye).
- 4.1.3 After INHALATION of vapours**

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After inhalation of foam or vapour fresh air should be inhaled. Keep airways free. Administer a Dexamethasone spray as soon as possible. Ensure quiet, warmth, and provide resuscitation if necessary. In the event of respiratory distress ensure that the patient inhales oxygen. Secure the breathing, heart and circulatory function. ---

4.1.4

After ORAL Intake

After oral intake lots of water with activated charcoal supplement should be drunk after it has been ingested. ---

4.2

Most important symptoms and effects, both acute and delayed

Chronic Effects: May cause sensitization by skin contact, also in repeated contact of small amounts. May cause allergy or asthma symptoms or breathing difficulties if inhaled. ---

4.3

Indication of any immediate medical attention and special treatment needed

Inform patient respectively further measures and the possibility of long-term damages. ---

SECTION 5: Firefighting measures

5.1

Extinguishing media

Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.

5.2

Special hazards arising from the substance or mixture

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

5.3

Advice for firefighters

No, for listed product. 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 procedures

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

6.2

Environmental precautions

not necessary, contains only small amounts of these substances

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 ---

SECTION 7: Handling and storage

7.1

Precautions for safe handling

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

7.2

Conditions for safe storage, including any incompatibilities

The original product package of MACHEREY-NAGEL allows a safe storage.

Storage class (VCI): 3

Water hazard class (DE): 3

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)

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Product for analytical use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

0.09-1.0 mg Carrier RNA

Chemical: *carrier RNA*

CAS No.: 26763-19-6

15 mL PB

Chemical: *glycerole*

CAS No.: 56-81-5

DNEL: [inh] 56 mg/m³
DNEL = Derived No-Effect Level (for workers)

PNEC(fresh water): 0.885 mg/L
PNEC = Predicted No Effect Concentration

TRGS 900 (DE): 200 E 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: 50 e* mg/m³

75 mg Proteinase K (Iyo)

Chemical: *proteinase K (origin: tritirachium album)*

CAS No.: 39450-01-6

SUVA(CH) MAK value: 0,00006_{15min} mg/m³

40 mL RAV1

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

Chemical: *Triton® X-100*

CAS No.: 9002-93-1

100 mL RAV3

Chemical: *chemicals/mixture < 1%*

CAS No.: -

300 mL RAW

Chemical: *guanidine hydrochloride*

CAS No.: 50-01-1

DNEL: [inh] 3.5 mg/m³
DNEL = Derived No-Effect Level (for workers)

PNEC(fresh water): -
PNEC = Predicted No Effect Concentration

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

OSHA: not listed

Chemical: *ethanol*

CAS No.: 64-17-5

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

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

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

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

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

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

OSHA: [TWA] 1000 ppm / 1900 mg/m³

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125 mL RE

Chemical: chemicals/mixture < 1%

CAS No.: -

125 mL RNase-free H₂O

Chemical: water

CAS No.: 7732-18-5

8.2 Exposure controls

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

8.2.1 Respiratory protection

Use for open access of these substances for example a protection filter, class A/AX. No additional recommendations.

8.2.2 Hand protection

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

8.2.3 Eye protection

Yes, safety glasses according EN 166 with integrated side shields or wrap-around protection.

8.2.4 Skin protection

Recommended to avoid contamination with these hazards.

8.2.5 Personal hygiene

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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

0.09-1.0 mg Carrier RNA

Appearance: solid (lyoph.)

Colour: colourless

Odor: odorless

15 mL PB

Appearance: liquid

Colour: colourless

Odor: alcoholic

Specific gravity:

1.11 g/cm³

75 mg Proteinase K (Iyo)

Appearance: solid (lyoph.)

Colour: slightly grey

Odor: odorless

40 mL RAV1

Appearance: liquid

Colour: colourless

Odor: odorless

pH:

7.0-7.5

Specific gravity:

1.12 g/cm³

100 mL RAV3

Appearance: liquid

Colour: colourless

Odor: odorless

pH:

7-8

Specific gravity:

1.00 g/cm³

300 mL RAW

Appearance: liquid

Colour: colourless

Odor: alcoholic

pH:

5-5.5

Flash point:

23 °C

Specific gravity:

0.98 g/cm³

125 mL RE

Appearance: liquid

Colour: colourless

Odor: odorless

pH:

8-9

Specific gravity:

1.0 g/cm³

125 mL RNase-free H₂O

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Appearance: liquid
pH:
Specific gravity:

Colour: colourless
6-8
1.0 g/cm³

Odor: odorless

9.2 Other information

Data for the other parameters of the mixtures are not available, because no registration and no chemical safety report is required.

Relevant Properties of Substance Group

SECTION 10: Stability and reactivity

10.1 Reactivity

no further data available.

10.2 Chemical stability

No known instability.

10.3 Possibility of hazardous reactions

But avoid reactions with oxidizing agents. Note: Can form very reactive substances with oxidizing agents. Possible: Contact with acids liberates toxic gas. No further data available.

10.4 Conditions to avoid

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

10.5 Incompatible materials

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

0.09-1.0 mg Carrier RNA

Chemical: *carrier RNA*
Japan CSCL/PRTR: not listed, Japan PDSC: not listed
Japan ISHL: not listed
Korea Exist.Chem.Inventory: KE-30341

CAS No.: 26763-19-6

15 mL PB

Chemical: *glycerole*
TSCA Inventory: listed (1,2,3-Propanetriol)
Exposure Routes: inhalation, skin and/or eye contact
Target Organs: Eyes, skin, respiratory system, kidneys
Symptoms: irritation eyes, skin, respiratory system; headache, nausea, vomiting; kidney injury
Japan CSCL/PRTR: not listed, Japan PDSC: not listed
Japan ISHL: not listed
Korea Exist.Chem.Inventory: KE-29297
LD50_{orl rat}: 12.6 g/kg
LD50_{drm rbt}: >18.7 g/kg

CAS No.: 56-81-5

TRGS 905 (DE): R_F C

75 mg Proteinase K (Iyo)

Chemical: *proteinase K (origin: tritirachium album)*
TSCA Inventory: listed (CAS 102925-54-2)
Japan CSCL/PRTR: not listed
Japan ISHL: not listed
Korea Exist.Chem.Inventory: not listed

CAS No.: 39450-01-6

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.

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40 mL RAV1

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_{drn rbt}: >2000 mg/m³
LC50_{ihl rat}: [4h] 5.319 mg/L
LD50_{ipr mus}: 300 mg/kg
Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

Chemical: *Triton® X-100* CAS No.: 9002-93-1
TSCA Inventory: listed
Korea Exist.Chem.Inventory: KE-33568
LD50_{orl rat}: 707-1800 mg/kg
LD50_{drn rbt}: 3000-12300 mg/kg

100 mL RAV3

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

300 mL RAW

Chemical: *guanidine hydrochloride* CAS No.: 50-01-1
TSCA Inventory: listed California Proposition 65 List: not listed
Australia NICNAS: not listed Canada CEPA 1999: DSL yes
Japan CSCL/PRTR: not listed, Japan PDSCL: not listed
Japan ISHL: not listed
South Korea TCCA: not listed
Korea Exist.Chem.Inventory: KE-18111
LD50_{orl rat}: 475-907 mg/kg
LC50_{ihl rat}: [4h] 3181-7655 µg/m³
LD50_{drn rbt}: 2000 mg/kg
Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

Chemical: *ethanol* CAS No.: 64-17-5
TSCA Inventory: listed California Proposition 65 List: not listed
ACGIH: 1000 ppm
Exposure Routes: inhalation, ingestion, skin and/or eye contact
Target Organs: Eyes, skin, respiratory system, central nervous system, liver, blood, reproductive system
Symptoms: irritation eyes, skin, nose; headache, drowsiness, lassitude (weakness, exhaustion), narcosis; cough;
liver damage; anemia; reproductive, teratogenic
Australia NICNAS: not listed Canada CEPA 1999: DSL yes
Japan CSCL/PRTR: not listed, Japan PDSCL: not listed
Japan ISHL: listed ≥0,1%/≥0,1%, Article 57-2 (SDS required)
South Korea TCCA: not listed
Korea Exist.Chem.Inventory: KE-13217
LD50_{orl rat}: 6200 mg/kg
LC_{Lowihl gpg}: 21.9 g/m³
LC_{Loworl hmn}: 1400 mg/kg
LC50_{ihl mouse}: [4h] 39 g/m³
LC50_{ihl rat}: [10h] 20 g/m³
LD50_{drn rbt}: 20 000 mg/kg
LD50_{oral mouse}: 3450 mg/kg
TRGS 905 (DE): K5, M5, R_F C

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125 mL RE

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

CAS No.: -

125 mL RNase-free H₂O

Chemical: water
TSCA Inventory: listed
Korea Exist.Chem.Inventory: KE-35400

CAS No.: 7732-18-5

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

0.09-1.0 mg Carrier RNA

Chemical: carrier RNA

CAS No.: 26763-19-6

15 mL PB

Chemical: glycerole
PNEC(fresh water): 0.885 mg/L
PNEC = Predicted No Effected Concentration
LC50_{fish/96h}: >5000_{24h} mg/L
EC50_{daphnia/48h}: >10_{24h} g/L
IC50_{scenedesmus quadricauda/72h}: IC50_{7d} >10 g/L
EC10_{pseudomonas putida/16h}: EC5: >10 g/L
Water hazard class (DE): 0
Dispersion coefficient_(octanol-water): -1.76
Storage class (VCI): 10

CAS No.: 56-81-5

75 mg Proteinase K (Iyo)

Chemical: proteinase K (origin: tritirachium album)
Water hazard class (DE): 1
Storage class (VCI): 13

CAS No.: 39450-01-6

40 mL RAV1

Chemical: guanidinium thiocyanate
Harmful to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment.
Environmental hazards must not be labelled with P phrases until 125 mL (EU 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 putida/16h}: [10d] 200 mg/L
Water hazard class (DE): 3
Dispersion coefficient_(octanol-water): [pH 5.1] -1.11
Storage class (VCI): 12

CAS No.: 593-84-0

Chemical: Triton® X-100

CAS No.: 9002-93-1

Harmful to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment.
Environmental hazards must not be labelled with P phrases until 125 mL (EU 1272/2008 Annex I - 1.5.2).
Water hazard class (DE): 1 WGK No.: n.n.
Storage class (VCI): 12-13

100 mL RAV3

Chemical: chemicals/mixture < 1%
Water hazard class (DE): 1
Storage class (VCI): 12-13

CAS No.: -

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300 mL RAW

Chemical: *guanidine hydrochloride*

CAS No.: 50-01-1

PNEC_(fresh water) :

PNEC = Predicted No Effect Concentration

LC50_{leuciscus idus/96h} : 1759 mg/L

LC50_{fish/96h} : [4d] 690-1850; [48h] 1758-2420 mg/L

EC50_{daphnia/48h} : 70.2 mg/L

EC10_{pseudomonas putita/16h} : [72h] 11.8-33.5 mg/L

Water hazard class (DE): 1 WGK No.: 0788

Storage class (VCI): 12

Chemical: *ethanol*

CAS No.: 64-17-5

PNEC_(fresh water) : 0.96 mg/L

PNEC = Predicted No Effect Concentration

LC50_{daphnia magna/48h} : >100 mg/L

LC50_{pimephales promelas/96h} : 13400 - 15100 mg/L

LC50_{leuciscus idus/96h} : [48h] 8140 mg/L

LC50_{fish/96h} : 13 g/L

EC50_{daphnia/48h} : 9.3-14.2 g/L

IC50_{scenedesmus quadricauda/72h} : [7d] 5000 mg/L

EC10_{pseudomonas putita/16h} : [EC5] 6500 mg/L

Water hazard class (DE): 1 WGK No.: 0096

Dispersion coefficient_(octanol-water) : -0.31

Storage class (VCI): 3

125 mL RE

Chemical: *chemicals/mixture < 1%*

CAS No.: -

Water hazard class (DE): 1

Storage class (VCI): 12-13

125 mL RNase-free H₂O

Chemical: *water*

CAS No.: 7732-18-5

12.2 Persistence and degradability

not necessary

12.3 Bioaccumulative potential

not necessary

12.4 Mobility in soil

not necessary

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

no additional data available

SECTION 13: Disposal considerations

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.

SECTION 14: Transport information

14.1 UN number: 1993 14.2 UN proper shipping name: Flammable liquid, n.o.s. (ethanol mixture)

14.3 Class: 3 14.4 Packing group: III

Road transport

Classification code: F1

Limited Quantity: 5 L

Excepted Quantity: E 1

Air transport

PAX: 355

Tunnel restriction code: E

Special instructions: 640E

max. weight PAX: 60 L

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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, contains only small amounts of these substances

14.6 Special precautions for user

not necessary

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

not applicable

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

German act governing protection from hazardous substances (Chemicals Act / Chemikaliengesetz- ChemG), revised on August 2013
German order governing protection from hazardous substances (Ordinance on Hazardous Substances / Gefahrstoffverordnung - GefStoffV), revised on November 2010, according to Directive 98/24/EC
TRGS 200, German engineering rules governing the classification and labelling of hazardous substances, preparations and products, updated October 2011
MN Leaflet/User manual, also see www.mn-net.com
Look for your country-specific regulations.

15.2 Chemical safety assessment

not necessary for these small amounts ---

SECTION 16: Other information

16.1 List of H and P phrases

16.1.1 List of relevant H phrases

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H412 Harmful to aquatic life with long lasting effects.

16.1.2 List of relevant P phrases

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P261sh Avoid breathing dust/vapours.
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.
P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P330 Rinse mouth.
P342+311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

16.2 Training advice

Multiple safety training of staffs about danger and protection by using hazards in working area. Additionally training and introduction of staffs for using these products.

16.3 Recommended restriction on use

Only for professional user.

Look about employee restrictions for young people (f. ex. 94/33/EC or DE § 22 JArbSchG)!

Look about employee restrictions for pregnant women and nursing women (f.ex. 92/85/EEC or for DE §§ 11-13 MuSchG 2017)!

An individual package of this product or test kit has a moderate hazardous potential.

16.4 Further information

MACHEREY-NAGEL GmbH & Co. KG provides the information contained herein in good faith being up-to-date of own realizations at revision time. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose.

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from use of or reliance upon this information. See terms and conditions at the end of our price lists for additional information.

16.5 Sources of key data

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

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

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

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

Regulation 849/2021/EU, 4th adaptation of CLP regulation to technical and scientific progress

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

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

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

Directive 1999/92/EC Minimum requirements for improving the safety and health protection of workers at risk from potentially explosive atmospheres

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

Revisions/Updates

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

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

2017-11 Adaption of ECHA Registration dossier