

Safety Data Sheet

according to Regulations REACH 1907/2006/EC

REF: 744750.4

NucleoMag Plasmid (4x96)

Page: 1/22

Printing date: 15.05.2024

Date of issue: 07.05.2024

Version: 5.15.2.1

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

1.1 Product identifier

REF 744750.4
Product name NucleoMag Plasmid (4x96)

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.

1 x 75 mL A1
1 x 60 mL AE
1 x 100 mL S3
2 x 100 mL AQ
2 x 400 mL ERB
1 x 100 mL A2 (with LyseControl)
1 x 60 mg RNase A
1 x 300 mL PAB
8 x 1 mL M-Beads

UFI: E4FW-93GQ-X203-AP6W
UFI: W24W-23R9-3206-XR1C
UFI: WWJV-U3PV-U207-MFGF
UFI: YPKW-432S-520A-DS3A

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
Valenciener 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 Gif tinformat ionszentrum (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 identification

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



GHS02 GHS05 GHS07 GHS08

Signal word DANGER

| Hazard identification | Hazard classes/categories |
|-----------------------|---------------------------|
| H225 | Flam. Liq. 2 |
| H314 | Skin Corr. 1 B |
| H334 | Resp. Sens. 1 |
| H336 | resp. irrit. STOT SE 3 |

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

400 mL ERB



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GHS02

GHS07

Signal word

WARNING

Hazard identification

Hazard classes/categories

H226
H319
H336

Flam. Liq. 3
Eye Irrit. 2
resp. irrit. STOT SE 3

100 mL A2 (with LyseControl)



GHS07

Signal word

WARNING

Hazard identification

Hazard classes/categories

H315
H319

Skin Irrit. 2
Eye Irrit. 2

300 mL PAB



GHS02

GHS05

GHS07

Signal word

DANGER

Hazard identification

Hazard classes/categories

H225
H314
H319
H336

Flam. Liq. 2
Skin Corr. 1 B
Eye Irrit. 2
resp. irrit. STOT SE 3

60 mg RNase A



GHS08

Signal word

DANGER

Hazard identification

Hazard classes/categories

H334

Resp. Sens. 1

100 mL AQ

Signal word

Do not need labelling as hazardous
-

No hazard class



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60 mL AE

Signal word Do not need labelling as hazardous
-
No hazard class

75 mL A1

Signal word Do not need labelling as hazardous
-
No hazard class

100 mL S3

Signal word Do not need labelling as hazardous
-
No hazard class

1 mL M-Beads

Signal word Do not need labelling as hazardous
-
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 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.

400 mL ERB



Signal word: **WARNING**
H226, H319, H336
Flammable liquid and vapour. Causes serious eye irritation. May cause drowsiness or dizziness.
P210, P241, P242, P243, P261, P264, P271, P280sh, P303+361+353, P305+351+338, P312, P337+313, P403+235, P405, P501
Keep away from heat/sparks/open flames/hot surfaces. No smoking. Use explosion-proof [electrical/ventilating/lighting] equipment. Use non-sparking tools. Take precautionary measures against static discharge. Avoid breathing dust/fume/gas/mist/vapours/spray. Wash hands thoroughly after handling. Use only outdoors or in a well-ventilated area. 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. Call a POISON CENTER/doctor if you feel unwell. If eye irritation persists: Get medical advice/attention. Store in a well-ventilated place. Keep cool. Store locked up. Dispose of contents/container to regulated waste treatment.

100 mL A2 (with LyseControl)



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Signal word: WARNING

300 mL PAB



GHS02



GHS05

Signal word: DANGER

H225, H314, H336

Highly flammable liquid and vapour. Causes severe skin burns and eye damage. May cause drowsiness or dizziness. P210, P241, P242, P243, P260sh, P264, P271, P280sh, P301+330+331, P303+361+353, P305+351+338, P310, P403+235, P405, P501

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Use explosion-proof [electrical/ventilating/lighting] equipment. Use non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/vapours. Wash hands thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/eye protection. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. 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 in a well-ventilated place. Keep cool. Store locked up. Dispose of contents/container to regulated waste treatment.

60 mg RNase A



GHS08

Signal word: DANGER

H334

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

P261sh, P284, P342+311, P501

Avoid breathing dust/vapours. [In case of inadequate ventilation] wear respiratory protection. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. Dispose of contents/container to regulated waste treatment.

100 mL AQ

Do not need labelling as hazardous

Signal word: -

60 mL AE

Do not need labelling as hazardous

Signal word: -

75 mL A1

Do not need labelling as hazardous

Signal word: -

100 mL S3

Do not need labelling as hazardous

Signal word: -

1 mL M-Beads

Do not need labelling as hazardous

Signal word: -

Label elements of the complete product



GHS02



GHS05



GHS08

Signal word: DANGER

H225, H314, H334, H336

Highly flammable liquid and vapour. Causes severe skin burns and eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause drowsiness or dizziness.

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P210, P241, P242, P243, P260sh, P264, P271, P280sh, P284, P301+330+331, P303+361+353, P305+351+338, P310, P403+235, P405, P501

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Use explosion-proof [electrical/ventilating/lighting] equipment. Use non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/vapours. Wash hands thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/eye protection. [In case of inadequate ventilation] wear respiratory protection. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. 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 in a well-ventilated place. Keep cool. 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. 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

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 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

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

400 mL ERB

Substance name: *triethanolamine*
CAS No.: 102-71-6

Substance rating: H315, Skin Irrit. 2, H319, Eye Irrit. 2
Formula: $C_6H_{15}NO_3$
Pseudonym (de): 2,2',2''-Nitrilotriethanol, TEA, Tris(2-hydroxyethyl)amin
REACH Reg. No.: 01-2119486482-31-xxxx

Dual-use: The application of this chemical is exempt from the regulation 2017/2268/EU (see IC350 remark 4).

EC No.: 203-049-8
Concentration: 1 - <10 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

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
Concentration: 35 - <50 %
acc. CLP (GHS): H226, Flam. Liq. 3, H319, Eye Irrit. 2, H336, resp. irrit. STOT SE 3

Indice No.: 603-117-00-0

100 mL A2 (with LyseControl)



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

Substance rating: H314, Skin Corr. 1 A
 Formula: NaOH·H₂O
 Pseudonym (de): verdünnte Natronlauge
 REACH Reg. No.: 01-2119457892-27-xxxx
 EC No.: 215-185-5

Specific concentration limit: Eye Irrit. 2; H319: 0,5 % ≤ C < 2 % - Skin Corr. 1A; H314: C ≥ 5 % - Skin Corr. 1B;
 H314: 2 % ≤ C < 5 % - Skin Irrit. 2; H315: 0,5 % ≤ C < 2 %
 Concentration: 0,5 - <1 %
 acc. CLP (GHS): H315, Skin Irrit. 2, H319, Eye Irrit. 2

Indice No.: 011-002-00-6

Substance name: *dodecyl sulfate, sodium salt*
 CAS No.: 151-21-3

Substance rating: H228, Flam. Sol. 1, H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H318, Eye Dam. 1, H332, Acute Tox. 4 inh., H335, resp. irrit. STOT SE 3, H412, Aquatic Chronic 3
 Formula: C₁₂H₂₅NaO₄S
 Pseudonym (de): Natriumlaurylsulfat
 REACH Reg. No.: 01-2119489461-32-xxxx
 EC No.: 205-788-1
 Concentration: 0,1 - <1 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

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

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

300 mL PAB

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: C₂H₆N₄S
 Pseudonym (de): Guanidiniumrhodanid
 REACH Reg. No.: 01-2120735072-65-0001
 EC No.: 209-812-1

Concentration: 10 - <15 %
 acc. CLP (GHS): H314, Skin Corr. 1 B

Indice No.: 615-004-00-3

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: C₃H₈O
 Pseudonym (de): Isopropanol, IPA, Propan-2-ol
 REACH Reg. No.: 01-2119457558-25-XXXX
 EC No.: 200-661-7

Concentration: 50 - <65 %
 acc. CLP (GHS): H225, Flam. Liq. 2, H319, Eye Irrit. 2, H336, resp. irrit. STOT SE 3

Indice No.: 603-117-00-0



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Substance name: *Tergitol 15-S-7*
 CAS No.: 84133-50-6

Substance rating: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H318, Eye Dam. 1, H332, Acute Tox. 4 inh.
 Formula: C12-14H25-29O[CH2CH2O]xH
 EC No.: 617-534-0
 Concentration: 0,1 - <1 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

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 mg RNase A

Substance name: *RNase*
 CAS No.: 9001-99-4

Substance rating: H334, Resp. Sens. 1
 Formula: Enzyme C. No. 3.1.27.5, origin: bovine pancreas (controlled population)
 Pseudonym (de): RNase A
 EC No.: 232-646-6
 Concentration: 90 - <100 %
 acc. CLP (GHS): H334, Resp. Sens. 1

100 mL AQ

Substance name: *inorganic salts, declaration not necessary*
 CAS No.: -

Substance rating: No criteria for classification or naming of chemical not required.
 Pseudonym (de): kein Gefahrstoff
 Concentration: 1 - <3 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

60 mL AE

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.

75 mL A1

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.

100 mL S3



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

Substance rating: No criteria for classification or naming of chemical not required.
Formula: $\text{CH}_3\text{COOH}/\text{K}/\text{Na}\cdot\text{H}_2\text{O}$
Concentration: 25 - <45 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

1 mL M-Beads

Substance name: *magnetic particles, suspended in water*
CAS No.: -

Substance rating: No criteria for classification or naming of chemical not required.
Pseudonym (de): magnetic beads
Concentration: 1 - <15 %
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. Take to a doctor, in a raised position if there are breathing difficulties.

4.1.1 After SKIN Contact

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

4.1.2 After EYE Contact

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

4.1.3 After INHALATION of 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. Administer a Dexamethasone spray as soon as possible. Ensure quiet, warmth, and provide resuscitation if necessary. In the event of respiratory distress ensure that the patient inhales oxygen. Secure the breathing, heart and circulatory function. ---

4.1.4 After ORAL Intake

After oral intake lots of water with activated charcoal supplement should be drunk after it has been ingested. Do not induce vomiting under any circumstances. Do not make any efforts to neutralise it. Contact medical advice for possible consequences.

4.2 Most important symptoms and effects, both acute and delayed

May cause allergy or asthma symptoms or breathing difficulties if inhaled. Chronic effects: Repeated contact, even in small amounts, can lead to sensitization. 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 DISTRESSES ensure that the patient inhales oxygen. Inform patient respectively further measures and the possibility of long-term damages. ---

SECTION 5: Firefighting measures

5.1 Extinguishing media

5.1.1 Suitable extinguishing media



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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
DANGER: Highly flammable (GHS regulation). Forms 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 highly 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). Wear eye protection, respectively face 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
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. Use only in well-ventilated working areas.

7.2 Conditions for safe storage, including any incompatibilities
Safe storage is guaranteed in the original packaging from MACHEREY-NAGEL. Store in a well-ventilated place, away from - or better: separated from - substances with which dangerous reactions can occur. Classification always storage class A. 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, and store in a well-ventilated place at max. 25 °C, away or preferably separate from substances with which a hazardous reaction could take place. 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
60 mg RNase A



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Chemical: *RNase* CAS No.: 9001-99-4

100 mL A2 (with LyseControl)

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

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

Chemical: *dodecyl sulfate, sodium salt* CAS No.: 151-21-3

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

OSHA: not listed

75 mL A1

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

60 mL AE

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

300 mL PAB

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

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

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: *Tergitol 15-S-7* CAS No.: 84133-50-6

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

100 mL S3

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

1 mL M-Beads

Chemical: *magnetic particles, suspended in water* CAS No.: -

400 mL ERB

Chemical: *triethanolamine* CAS No.: 102-71-6

DNEL: [derm] 6.3; [inh] 5 mg/m³
 DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 0.32 mg/L
 PNEC = Predicted No Effect Concentration

TRGS 900 (DE): - DFG: 5 E mg/m³
 E/e respirable

Short-term exposure factor: I, (2)
 skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: [MAK] 5 e/[STEL] 10 e mg/m³



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

Chemical: *2-propanol* CAS No.: 67-63-0

DNEL: [inh] 500 mg/m³
 DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 140.9 mg/L
 PNEC = Predicted No Effect 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

100 mL AQ

Chemical: *inorganic salts, declaration not necessary* 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

Use for open access of these substances for example a protection filter, class A/AX. 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

60 mg RNase A

| | |
|--------------------------------------|---------------------|
| a) State of aggregation: | solid (lyophilized) |
| 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: | 0-100 % |



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| | |
|--|-------------------|
| 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 |

100 mL A2 (with LyseControl)

| | |
|--|-------------------------|
| a) State of aggregation: | liquid |
| b) Colour: | blue |
| 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: | 13 |
| 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: | 1.008 g/cm ³ |
| q) Relative vapour density ($air=1$): | no data available |
| r) Particle size: | no data available |

75 mL A1

| | |
|--|------------------------|
| 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: | 7.5-8.5 |
| 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: | 1.00 g/cm ³ |
| q) Relative vapour density ($air=1$): | no data available |
| r) Particle size: | no data available |

60 mL AE

| | |
|--|-----------------------|
| 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/cm ³ |
| q) Relative vapour density ($air=1$): | no data available |



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r) Particle size: no data available

300 mL PAB

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: 21 °C
 i) Flashing temperature: no data available
 j) Decomposition temperature: no data available
 k) pH value: 6.2-7.8
 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: 0.89 g/cm³
 q) Relative vapour density (air=1): no data available
 r) Particle size: no data available

100 mL S3

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: no data available
 i) Flashing temperature: no data available
 j) Decomposition temperature: no data available
 k) pH value: 5- 5.5
 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: 1.14 g/mL
 q) Relative vapour density (air=1): no data available
 r) Particle size: no data available

1 mL M-Beads

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: no data available
 q) Relative vapour density (air=1): no data available
 r) Particle size: no data available



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400 mL ERB

| | |
|--|------------------------|
| 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: | 24 °C |
| i) Flashing temperature: | no data available |
| j) Decomposition temperature: | no data available |
| k) pH value: | 5.5-6.5 |
| l) Kinematic viscosity: | no data available |
| m) Solubility in water: | 0-100 % |
| n) Dispersion coefficient (K _{o/w}): | no data available |
| o) Vapour pressure (20°C): | no data available |
| p) Specific gravity: | 0.94 g/cm ³ |
| q) Relative vapour density (air=1): | no data available |
| r) Particle size: | no data available |

100 mL AQ

| | |
|--|------------------------|
| 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: | 7.5-8 |
| 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: | 1.01 g/cm ³ |
| q) Relative vapour density (air=1): | no data available |
| r) Particle size: | no data available |

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 volatile and form flammable gas-air mixtures. 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

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



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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 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 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.

60 mg RNase A

Chemical: *RNase* CAS No.: 9001-99-4

TSCA Inventory: listed

Japan CSCL/PRTR: not listed

Japan ISHL: not listed

Korea Exist.Chem.Inventory: KE-30341

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

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

100 mL A2 (with LyseControl)

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

TSCA Inventory: all listed, <1%

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

TSCA Inventory: listed California Proposition 65 List: not listed

Exposure Routes: inhalation, ingestion, skin and/or eye contact

Target Organs: Eyes, skin, respiratory system

Symptoms: -

Japan CSCL/PRTR: not listed, Japan PDSCL: not listed

Japan ISHL: listed ≥1,0%/≥1,0% SDS required

Korea Exist.Chem.Inventory: KE-31487

LD50 orl rat : [$< 1\%$] > 50000 mg/kg

LD50 orl mus : [$< 1\%$] > 4000 mg/kg

Chemical: *dodecyl sulfate, sodium salt* CAS No.: 151-21-3

TSCA Inventory: listed California Proposition 65 List: not listed

Australia NICNAS: not listed Canada CEPA 1999: DSL yes

Japan CSCL/PRTR: PRTR - Class I Designated Chemical Substance, Japan PDSCL: not listed

Japan ISHL: not listed

South Korea TCCA: not listed

Korea Exist.Chem.Inventory: KE-21884

LD50 orl rat : 1288 mg/kg

LC50 ihl rat : 3,900 mg/L/1H

75 mL A1

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

TSCA Inventory: all listed, <1%

Korea Exist.Chem.Inventory: listed

60 mL AE

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

TSCA Inventory: all listed, <1%

Korea Exist.Chem.Inventory: listed



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300 mL PAB

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

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
 LC₅₀ Low orl hmn : 3570 mg/kg
 LC50 ihl rat : 25 mg/L/4H
 TRGS 905 (DE): R F C

Chemical: *Tergitol 15-S-7* CAS No.: 84133-50-6
 Korea Exist.Chem.Inventory: KE-00456

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

100 mL S3

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

1 mL M-Beads

Chemical: *magnetic particles, suspended in water* CAS No.: -
 TSCA Inventory: listed (CAS 1309-38-2)

400 mL ERB

Chemical: *triethanolamine* CAS No.: 102-71-6
 TSCA Inventory: listed California Proposition 65 List: not listed
 Australia NICNAS: not listed Canada CEPA 1999: DSL Yes
 Japan CSCL/PRTR: PAC Yes, 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-25940
 LD50 orl rat : > 5000 mg/kg

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: -



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Japan ISHL: listed $\geq 1,0\%$ / $\geq 0,1\%$, 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

100 mL AQ

Chemical: *inorganic salts, declaration not necessary*
 TSCA Inventory: all listed
 Korea Exist.Chem.Inventory: listed

CAS No.: -

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.

60 mg RNase A

Substance name: *RNase*
 Water hazard class (DE): 1
 Storage class (VCI): 13

CAS-Nr.: 9001-99-4

100 mL A2 (with LyseControl)

Substance name: *indicator dye(s)*
 Storage class (VCI): 12-13

CAS-Nr.: -

Substance name: *sodium hydroxide solution*
 LC50 leuciscus idus/96h : 35-189 mg/L
 LC50 fish/96h : 45.4 mg/L
 EC50 daphnia/48h : >100 mg/L
 Water hazard class (DE): nwg WGK No.: 0142
 Storage class (VCI): 12-13

CAS-Nr.: 1310-73-2

Substance name: *dodecyl sulfate, sodium salt*
 LC50 daphnia magna/48h : 6.3 mg/L
 LC50 fish/96h : 1.31-22.5 mg/L
 Water hazard class (DE): 2
 Storage class (VCI): 12-13

CAS-Nr.: 151-21-3

75 mL A1

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

CAS-Nr.: -

60 mL AE

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

CAS-Nr.: -

300 mL PAB

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

CAS-Nr.: -



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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: *Tergitol 15-S-7* CAS-Nr.: 84133-50-6
 LC50 fish/96h: 3,2-3,6 mg/L
 EC50 daphnia/48h: 7,3 mg/L
 EC10 pseudomonas putita/16h: EC50: >1000 mg/L

Substance name: *guanidinium thiocyanate* CAS-Nr.: 593-84-0
 Do not release into the environment.
 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

100 mL S3
 Substance name: *acetate buffer solution* CAS-Nr.: -
 Storage class (VCI): 12

1 mL M-Beads
 Substance name: *magnetic particles, suspended in water* CAS-Nr.: -
 Storage class (VCI): 12

400 mL ERB
 Substance name: *triethanolamine* CAS-Nr.: 102-71-6
 PNEC (fresh water): 0.32 mg/L
 PNEC = Predicted No Effected Concentration = concentration at which no effect on the environment is expected
 LC50 fish/96h: >1000 mg/L
 EC50 daphnia/48h: >1000 24h mg/L
 Water hazard class (DE): 1 WGK No.: 0201
 Storage class (VCI): 12

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

100 mL AQ
 Substance name: *inorganic salts, declaration not necessary* CAS-Nr.: -
 Water hazard class (DE): 1
 Storage class (VCI): 12-13

12.2 Persistence and degradability

12.3 Bioaccumulative potential

Substance name: *dodecyl sulfate, sodium salt* CAS-Nr.: 151-21-3
 Dispersion coefficient (K_{ow}): 1,6
 Substance name: *2-propanol* CAS-Nr.: 67-63-0
 Dispersion coefficient (K_{ow}): 0,05



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| | | |
|---|--------------------------------|---------------------|
| Substance name: | <i>Tergitol 15-S-7</i> | CAS-Nr.: 84133-50-6 |
| Dispersion coefficient (K _{o/w}): | 2,72 | |
| Substance name: | <i>guanidinium thiocyanate</i> | CAS-Nr.: 593-84-0 |
| Dispersion coefficient (K _{o/w}): | -1,11 pH 5.1 | |
| 400 mL ERB | | |
| Substance name: | <i>triethanolamine</i> | CAS-Nr.: 102-71-6 |
| Dispersion coefficient (K _{o/w}): | -2,3 | |
| Substance name: | <i>2-propanol</i> | CAS-Nr.: 67-63-0 |
| Dispersion coefficient (K _{o/w}): | 0,05 | |

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

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: II

Road transport ADR

| | | | |
|-----------------------|------|--------------------------|---|
| Classification code: | F1 | Tunnel restriction code: | E |
| Limited Quantity: | 1 L | | |
| Excepted Quantity: | E 2 | | |
| Special instructions: | 640C | | |

Air transport IATA DGR

| | | | |
|--------------------|----------|--------------------|------|
| Limited Quantity: | PAX: 353 | max. quantity PAX: | 5 L |
| | CAO: 364 | max. quantity CAO: | 60 L |
| Excepted Quantity: | E 2 | | |

Maritime transport IMDG

| | | | |
|-----------------------|----------|----------------|---|
| EmS: | F-E, S-E | Staukategorie: | B |
| Special instructions: | 274 | | |

14.5 Environmental hazards

none, contains only small quantities of hazardous substances

14.6 Special precautions for user

not necessary

14.7 Carriage in bulk by sea in accordance with IMO instruments



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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
 Betriebsicherheitsverordnung (BetrSichV), Sept 2002
 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**
 not necessary for these small amounts

SECTION 16: Other information

- 16.1 Changes compared to the last version**
 Between versions 5.15.2.1 and 2.2.2.2 following changes were applied: -0 product data corrected - 13 product component data corrected
- 16.2 List of H and P phrases**
- 16.2.1 List of relevant H phrases**
- | | |
|------|---|
| H | Between versions 5.15.2.1 and 2.2.2.2 following changes were applied: -0 product data corrected - 13 product component data corrected |
| H225 | Highly flammable liquid and vapour. |
| H226 | Flammable liquid and vapour. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H336 | May cause drowsiness or dizziness. |
- 16.2.2 List of relevant P phrases**
- | | |
|--------------|--|
| P210 | Keep away from heat/sparks/open flames/hot surfaces. No smoking. |
| P241 | Use explosion-proof [electrical/ventilating/lighting] equipment. |
| P242 | Use non-sparking tools. |
| P243 | Take precautionary measures against static discharge. |
| P260sh | Do not breathe dust/vapours. |
| P264 | Wash hands thoroughly after handling. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P280sh | Wear protective gloves/eye protection. |
| P284 | [In case of inadequate ventilation] wear respiratory protection. |
| P301+330+331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. |
| 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. |
| P403+235 | Store in a well-ventilated place. Keep cool. |
| 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.



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16.4 Sources of key data

KÜHN, BIRETT, Leaflets on hazardous materials, 2021
 Directive 1999/92/EG Minimum requirements to improve the safety and health protection of workers at risk from potentially explosive atmospheres
 SUVA .CH, limit values in the air at work 2009, revised on 01/2009
 Regulation 790/2009/EU, adaptation of Regulation 1272/2008/EU to technical and scientific progress (1st ATP)
 Regulation 453/2010/EU, adaptation of the REACH regulation 1907/2006/EG
 TRGS 907, German technical rules for listing substances and causes of sensitization, updated November 2011
 Regulation 487/2013/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (4th ATP)
 Regulation 1221/2015/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (7th ATP)
 Regulation 776/2017/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (10th ATP)

Regulation 669/2018/EU, adaptation of Regulation 1272/2008/EC to technical and scientific progress (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 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 |



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- intrav: intravenous
- ipt: intraperitoneal
- 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: 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
- 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.

