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

1.1 Product identifier

REF 740410.100
Product name NucleoBond Xtra Midi (100)

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 600 mL ELU
2 x 1000 mL EQU
1 x 1000 mL LYS
1 x 1000 mL NEU
1 x 1000 mL RES
1 x 0.6-100 mg RNase A (lyo)
1 x 1000 mL WASH

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
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
H315	Skin Irrit. 2
H319	Eye Irrit. 2
H334	Resp. Sens. 1

2.1 Classification of the substance or mixture

600 mL ELU

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MACHEREY-NAGEL ISO 9001 CERTIFIED
Version: M V 4.12.0

GHS02 GHS07

Signal word WARNING

Hazard identification	Hazard classes/categories
H226	Flam. Liq. 3
H319	Eye Irrit. 2

1000 mL EQU

Do not need labelling as hazardous

Signal word -

No hazard class

1000 mL LYS

GHS07

Signal word WARNING

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

1000 mL NEU

Do not need labelling as hazardous

Signal word -

No hazard class

1000 mL RES

Do not need labelling as hazardous

Signal word -

No hazard class

0.6-100 mg RNase A (lyo)

GHS08

Signal word DANGER

Hazard identification	Hazard classes/categories
H334	Resp. Sens. 1

1000 mL WASH

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GHS02

Signal word	WARNING

Hazard identification	Hazard classes/categories
H226	Flam. Liq. 3

2.2 Label elements

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). This labelling exemption is NOT valid for sensibilizing substances.

600 mL ELU

GHS02 GHS07

Signal word: WARNING

H226, H319
Flammable liquid and vapour. Causes serious eye irritation.

P210, P280sh
Keep away from heat/sparks/open flames/hot surfaces. No smoking. Wear protective gloves/eye protection.

1000 mL EQU

Do not need labelling as hazardous
Signal word: -

1000 mL LYS

GHS07

Signal word: WARNING

H315, H319
Causes skin irritation. Causes serious eye irritation.

P280sh
Wear protective gloves/eye protection.

1000 mL NEU

Do not need labelling as hazardous
Signal word: -

1000 mL RES

Do not need labelling as hazardous
Signal word: -

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0.6-100 mg RNase A (lyo)

GHS08

Signal word: DANGER

H334
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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

1000 mL WASH

GHS02

Signal word: WARNING

H226
Flammable liquid and vapour.

P210
Keep away from heat/sparks/open flames/hot surfaces. No smoking.

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. ---

Information pertaining to particular risks to human and possible symptoms
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
PBT: not applicable
vPvB: not applicable

Other hazards

SECTION 3: Composition/information on ingredients

3.1 Substances or 3.2 Mixtures

600 mL ELU

Chemical:	*2-propanol*		CAS No.: 67-63-0
Classification:	H225, Flam. Liq. 2, H319, Eye Irrit. 2, H336, STOT SE 3		
Formula:	$C_3 H_8 O$		
Pseudonym:	isopropanol, IPA, propan-2-ol		
TSCA Inventory:	listed		
REACH Reg. No.:	01-2119457558-25-XXXX		
EC No.:	200-661-7	Indice No.:	603-117-00-0
RTECS:	NT8050000	MFCD:	00011674
KE No.:	KE-29363		
Concentration:	10 - <15 %		
acc. CLP (GHS):	H226, Flam. Liq. 3, H319, Eye Irrit. 2		

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Chemical: *potassium chloride* CAS No.: 7447-40-7
Classification: No criteria for classification or naming of chemical not required.
Formula: KCl
TSCA Inventory: listed
REACH Reg. No.: 01-2119539416-36-xxxx
EC No.: 231-211-8
RTECS: TS8050000 MFCD: 00011360
KE No.: KE-29086
Concentration: 1 - <10 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

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.

1000 mL EQU

Chemical: *potassium chloride* CAS No.: 7447-40-7
Classification: No criteria for classification or naming of chemical not required.
Formula: KCl
TSCA Inventory: listed
REACH Reg. No.: 01-2119539416-36-xxxx
EC No.: 231-211-8
RTECS: TS8050000 MFCD: 00011360
KE No.: KE-29086
Concentration: 1 - <10 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

1000 mL LYS

Chemical: *sodium hydroxide solution* (diluted < 2 %) CAS No.: 1310-73-2d
Classification: H314, Skin Corr. 1B
Formula: $NaOH \cdot H_2O$
Pseudonym: diluted soda lye
TSCA Inventory: listed
REACH Reg. No.: 01-2119457892-27-xxxx
EC No.: 215-185-5 Indice No.: 011-002-00-6
RTECS: WB4900000
KE No.: KE-31487
Concentration: 0.5 - <1 %
acc. CLP (GHS): H315, Skin Irrit. 2, H319, Eye Irrit. 2

Chemical: *dodecyl sulfate, sodium salt* CAS No.: 151-21-3
Classification: H228, Flam. Sol. 1, H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H318, Eye Dam. 1, H332, Acute Tox. 4 inh., H335, STOT SE 3, H412, Aquatic Chronic 3
Formula: $C_{12}H_{25}NaO_4S$
Pseudonym: sodium lauryl sulfate, sulfuric acid monododecyl ester sodium salt
TSCA Inventory: listed
REACH Reg. No.: 01-2119489461-32-xxxx
EC No.: 205-788-1
RTECS: WT1050000 MFCD: 00036175
KE No.: KE-21884
Concentration: 0.1 - <1 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

Chemical: *indicator dye(s)* CAS No.: -
Classification: No criteria for classification or naming of chemical not required.
TSCA Inventory: all listed, <1%
Concentration: < 0.10 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

1000 mL NEU

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Chemical: *acetate buffer solution* CAS No.: -
Classification: No criteria for classification or naming of chemical not required.
Formula: $CH_3COOH/K/Na•H_2O$
TSCA Inventory: all listed
KE No.: listed
Concentration: 25 - <45 %
acc. CLP (GHS): The criteria for classification are not fulfilled.

1000 mL RES

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.

0.6-100 mg RNase A (lyo)

Chemical: *RNase* CAS No.: 9001-99-4
Classification: H334, Resp. Sens. 1
Formula: Enzyme Comm. No. 3.1.27.5,origin: bovine pancreas (controlled population)
Pseudonym: Nuclease, ribo-
TSCA Inventory: listed
EC No.: 232-646-6
RTECS: RF0760000
KE No.: KE-30341
Concentration: 90 - <100 %
acc. CLP (GHS): H334, Resp. Sens. 1

1000 mL WASH

Chemical: *ethanol* (diluted < 20 %) CAS No.: 64-17-5d
(denatured with 1%IPA/1%MEK, acc.2016/1867/EU)
Classification: H225, Flam. Liq. 2
Formula: C_2H_6O; C_2H_5OH
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: 5 - <20 %
acc. CLP (GHS): H226, Flam. Liq. 3

Chemical: *potassium chloride* CAS No.: 7447-40-7
Classification: No criteria for classification or naming of chemical not required.
Formula: KCl
TSCA Inventory: listed
REACH Reg. No.: 01-2119539416-36-xxxx
EC No.: 231-211-8
RTECS: TS8050000 MFCD: 00011360
KE No.: KE-29086
Concentration: 1 - <10 %
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.

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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. 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

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

After SKIN CONTACT rinse with water for a long time. Apply glucocorticosteroides following inflammatory reactions. After EYE CONTACT rinse immediately with plenty of water for a long time. Eyelid convulsion measures. Name the corrosive chemical. Further treatment must to be carried out by an eye specialist. 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). Wear eye protection. Keep product away from sources of ignition - No smoking. Regular staff training is necessary, indicating hazards and precautions on the basis of operating instructions. Restrictions on activity must be observed.

6.2 Environmental precautions

not necessary

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 ---

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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): 2

7.2.1 Requirements for stock rooms and containers

Keep original product packages tightly closed during handling and storage.

7.3 Specific end use(s)

Product for analytical use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

600 mL ELU
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: *potassium chloride* CAS No.: 7447-40-7

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

1000 mL EQU
Chemical: *potassium chloride* CAS No.: 7447-40-7

1000 mL LYS
Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2d

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

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

1000 mL NEU
Chemical: *acetate buffer solution* CAS No.: -

1000 mL RES
Chemical: *chemicals/mixture < 1%* CAS No.: -

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

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1000 mL WASH

Chemical: *ethanol* CAS No.: 64-17-5d

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 Effected Concentration

TRGS 900 (DE): 200 ppm / 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: 1000 ppm / 1900 mg/m³

Chemical: *potassium chloride* CAS No.: 7447-40-7

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

600 mL ELU

Appearance: liquid	Colour: colourless	Odor: alcoholic
pH:	8.5-9.5	
Flash point:	30 °C	
Specific gravity:	1.04 g/cm³	

1000 mL EQU

Appearance: liquid	Colour: colourless	Odor: odorless
pH:	6-7	
Specific gravity:	1.05 g/cm³	

1000 mL LYS

Appearance: liquid	Colour: blue	Odor: odorless
pH:	13	
Specific gravity:	1.008 g/cm³	

1000 mL NEU

Appearance: liquid	Colour: colourless	Odor: acetic
pH:	4-5	
Flash point:	63 °C	
Specific gravity:	1.19 g/cm³	

1000 mL RES

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Appearance: liquid	Colour: colourless	Odor: odorless
pH:	7.5 - 8.5	
Specific gravity:	1.01 g/cm³	

0.6-100 mg RNase A (lyo)

Appearance: solid (lyoph.)	Colour: colourless	Odor: odorless
Solubility in water:	0-100 %	

1000 mL WASH

Appearance: liquid	Colour: colourless	Odor: alcoholic
pH:	6.5 - 7.5	
Flash point:	31 °C	
Specific gravity:	1.04 g/cm³	

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. 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.

600 mL ELU

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	
$LC50_{ihl\ rat}$:	16_{4h} g/m³	
$LD50_{drm\ rbt}$:	12.8 g/kg	

TRGS 905 (DE): R_F C

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Chemical: *potassium chloride* CAS No.: 7447-40-7
TSCA Inventory: listed
Korea Exist.Chem.Inventory: KE-29086
$LD50_{orl\ rat}$: 2600 mg/kg

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

1000 mL EQU

Chemical: *potassium chloride* CAS No.: 7447-40-7
TSCA Inventory: listed
Korea Exist.Chem.Inventory: KE-29086
$LD50_{orl\ rat}$: 2600 mg/kg

1000 mL LYS

Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2d
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%] > 50 g/kg
$LD50_{drm\ rbt}$: not applicable
$LD50_{orl\ mus}$: [< 1%] > 4 g/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
$LC50_{inh\ rat}$: 3900_{1h} mg/m³
$LD50_{drm\ rbt}$: 10 g/kg

Chemical: *indicator dye(s)* CAS No.: -
TSCA Inventory: all listed, <1%

1000 mL NEU

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

1000 mL RES

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

0.6-100 mg RNase A (lyo)

Chemical: *RNase* CAS No.: 9001-99-4
TSCA Inventory: listed
Japan CSCL/PRTR: not listed
Japan ISHL: not listed

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Korea Exist.Chem.Inventory: KE-30341
$LD50_{intraperitonaeal\ rat}$: 392 mg/kg
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.

1000 mL WASH

Chemical: *ethanol* CAS No.: 64-17-5d
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
$LC_Low_{ihl\ gpg}$: 21.9 g/m³
$LC_Low_{orl\ hmn}$: 1400 mg/kg
$LC50_{ihl\ mouse}$: [4h] 39 g/m³
$LC50_{ihl\ rat}$: [10h] 20 g/m³
$LD50_{drm\ rbt}$: 20 000 mg/kg
$LD50_{oral\ mouse}$: 3450 mg/kg

TRGS 905 (DE): K5, M5, R_F C

Chemical: *potassium chloride* CAS No.: 7447-40-7
TSCA Inventory: listed
Korea Exist.Chem.Inventory: KE-29086
$LD50_{orl\ rat}$: 2600 mg/kg

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

600 mL ELU

Chemical: *2-propanol* CAS No.: 67-63-0
$PNEC_{(fresh\ water)}$: 140.9 mg/L
PNEC = Predicted No Effected Concentration
$LC50_{fish/96h}$: 1400 mg/L
$EC50_{daphnia/48h}$: 13.3 g/L
$IC50_{scenedesmus\ quadricauda/72h}$: >1000 mg/L
$EC10_{pseudomonas\ putita/16h}$: EC5: 1050 mg/L
Water hazard class (DE): 1 WGK No.: 0135
$Dispersion\ coefficient_{(octanol\text{-}water)}$: 0.05
Storage class (VCI): 3

Chemical: *potassium chloride* CAS No.: 7447-40-7
Water hazard class (DE): 1
Storage class (VCI): 12-13

Chemical: *chemicals/mixture < 1%* CAS No.: -
Water hazard class (DE): 1
Storage class (VCI): 12-13

1000 mL EQU

Chemical: *potassium chloride* CAS No.: 7447-40-7
Water hazard class (DE): 1
Storage class (VCI): 12-13

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1000 mL LYS

Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2d
$LC50_{leuciscus\ idus/96h}$: 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

Chemical: *dodecyl sulfate, sodium salt* CAS No.: 151-21-3
$LC50_{daphnia\ magna/48h}$: 6.3 mg/L
$LC50_{fish/96h}$: 1.31-22.5 mg/L
Water hazard class (DE): 2
Dispersion $coefficient_{(octanol-water)}$: 1.6
Storage class (VCI): 12-13

Chemical: *indicator dye(s)* CAS No.: -
Storage class (VCI): 12-13

1000 mL NEU

Chemical: *acetate buffer solution* CAS No.: -
Storage class (VCI): 12

1000 mL RES

Chemical: *chemicals/mixture < 1%* CAS No.: -
Water hazard class (DE): 1
Storage class (VCI): 12-13

0.6-100 mg RNase A (lyo)

Chemical: *RNase* CAS No.: 9001-99-4
Water hazard class (DE): 1
Storage class (VCI): 13

1000 mL WASH

Chemical: *ethanol* CAS No.: 64-17-5d
$PNEC_{(fresh\ water)}$: 0.96 mg/L
PNEC = Predicted No Effected Concentration
$LC50_{daphnia\ magna/48h}$: >100 g/L
$LC50_{pimephales\ promelas/96h}$: 13.4-15.1 g/L
$LC50_{leuciscus\ idus/96h}$: [48h] 8.14 g/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

Chemical: *potassium chloride* CAS No.: 7447-40-7
Water hazard class (DE): 1
Storage class (VCI): 12-13

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

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no additional data available

SECTION 13: Disposal considerations

Please observe local regulations for collection and disposal of hazardous waste and contact waste disposal company, where you will obtain information on laboratory waste disposal (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. (2-propanol mixture)**
14.3 Class: 3 **14.4 Packing group: III**

Road transport

Classification code:	F1		
Limited Quantity:	5 L	Tunnel restriction code:	E
Excepted Quantity:	E 1	Special instructions:	640E

Air transport

PAX:	355	max. weight PAX:	60 L
CAO:	366	max. weight CAO:	220 L

Maritime transport

EmS:	F-E, S-E	Storage category:	A

14.5 Environmental hazards

none, contains only small quantities of hazardous substances

14.6 Special precautions for user

not necessary

14.7 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.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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.
P280sh	Wear protective gloves/eye protection.
P304+340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

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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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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

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