

Safety Data Sheet

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

REF: 740427	NucleoBond Xtra EF Buffer Set I	Page: 1/10
Printing date: 12.05.2021	Date of issue: 11.12.2020	

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

1.1 Product identifier

REF: 740427
 Product name: NucleoBond Xtra EF Buffer Set I

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 150 mL LYS-EF
- 1 x 150 mL NEU-EF
- 1 x 150 mL RES-EF
- 1 x 0.6-100 mg RNase A (lyo)

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



GHS07 GHS08

Signal word: DANGER

Hazard identification	Hazard classes/categories
H315	Skin Irrit. 2
H319	Eye Irrit. 2
H334	Resp. Sens. 1

2.1 Classification of the substance or mixture

150 mL LYS-EF



GHS07

Safety Data Sheet

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

REF: 740427	NucleoBond Xtra EF Buffer Set I	Page: 2/10
Printing date: 12.05.2021	Date of issue: 11.12.2020	

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

150 mL NEU-EF

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

150 mL RES-EF

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

0.6-100 mg RNase A (lyo)



	GHS08
Signal word	DANGER
Hazard identification	Hazard classes/categories
H334	Resp. Sens. 1

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** 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.

150 mL LYS-EF



GHS07
 Signal word: WARNING
 H315, H319
 Causes skin irritation. Causes serious eye irritation.
 P280sh
 Wear protective gloves/eye protection.

150 mL NEU-EF

Do not need labelling as hazardous
 Signal word: -

150 mL RES-EF

Do not need labelling as hazardous

Safety Data Sheet

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

REF: 740427	NucleoBond Xtra EF Buffer Set I	Page: 3/10
Printing date: 12.05.2021	Date of issue: 11.12.2020	

Signal word: -

0.6-100 mg RNase A (Iyo)



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.

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. ---

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

150 mL LYS-EF

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

Chemical:	<i>dodecyl sulfate, sodium salt</i>	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 ₄ S		
Pseudonym:	sodium lauryl sulfate, sulfuric acid monododecyl ester sodium salt		
TSCA Inventory:	listed		
REACH Reg. No.:	01-2119489461-32-xxxx	MFCD:	00036175
EC No.:	205-788-1		
RTECS:	WT1050000		
KE No.:	KE-21884		
Concentration:	0.1 - <1 %		
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

Safety Data Sheet

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

REF: 740427

NucleoBond Xtra EF Buffer Set I

Page: 4/10

Printing date: 12.05.2021

Date of issue: 11.12.2020

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.

150 mL NEU-EF

Chemical: *acetate buffer solution* CAS No.: -
 Classification: No criteria for classification or naming of chemical not required.
 Formula: CH₃COOH/K/Na•H₂O
 TSCA Inventory: all listed
 KE No.: listed
 Concentration: 25 - <45 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

150 mL RES-EF

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 (Iyo)

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

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 immediately. Rinse the affected skin or mucous membrane thoroughly for min. 15 minutes under running water. 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

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. ---

Safety Data Sheet

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

REF: 740427

NucleoBond Xtra EF Buffer Set I

Page: 5/10

Printing date: 12.05.2021

Date of issue: 11.12.2020

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

5.3 Advice for firefighters

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

Wear suitable protective gloves (see 8.2.2). Wear eye protection. Regular staff training is necessary, indicating hazards and precautions on the basis of operating instructions. Restrictions on activity must be observed.

6.2 Environmental precautions

not necessary

6.3 Methods and material for containment and cleaning up

And dispose in accordance to local regulations for the disposal of hazardous chemicals. Clean any contaminated equipment and floors with plenty of water.

6.4 Reference to other sections

see information in section 5.4 ---

SECTION 7: Handling and storage

7.1 Precautions for safe handling

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): 12

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

150 mL LYS-EF

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

Safety Data Sheet

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

REF: 740427	NucleoBond Xtra EF Buffer Set I	Page: 6/10
Printing date: 12.05.2021	Date of issue: 11.12.2020	

Chemical: <i>indicator dye(s)</i>	CAS No.: -
150 mL NEU-EF Chemical: <i>acetate buffer solution</i>	CAS No.: -
150 mL RES-EF Chemical: <i>chemicals/mixture < 1%</i>	CAS No.: -
0.6-100 mg RNase A (lyo) Chemical: <i>RNase</i>	CAS No.: 9001-99-4

8.2 Exposure controls

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 (f.ex. from Ansell or KCL).

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

150 mL LYS-EF Appearance: liquid pH: Specific gravity:	Colour: blue 13 1.008 g/cm ³	Odor: odorless
150 mL NEU-EF Appearance: liquid pH: Flash point: Specific gravity:	Colour: colourless 4-5 63 °C 1.19 g/cm ³	Odor: acetic
150 mL RES-EF Appearance: liquid pH: Specific gravity:	Colour: colourless 7.5 - 8.5 1.01 g/cm ³	Odor: odorless
0.6-100 mg RNase A (lyo) Appearance: solid (lyoph.) Solubility in water:	Colour: colourless 0-100 %	Odor: odorless

9.2 Other information

Relevant Properties of Substance Group

Safety Data Sheet

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

REF: 740427

NucleoBond Xtra EF Buffer Set I

Page: 7/10

Printing date: 12.05.2021

Date of issue: 11.12.2020

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

No further data available.

10.4 Conditions to avoid

Not necessary. ---

10.5 Incompatible materials

Avoid contact with strong acids or alkalines.

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.

150 mL LYS-EF

Chemical:	<i>sodium hydroxide solution</i>	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 PDSCCL: not listed	
Japan ISHL:	listed $\geq 1,0\%$ / $\geq 1,0\%$	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:	<i>dodecyl sulfate, sodium salt</i>	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 PDSCCL: 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/m ³	
LD50 _{drm rbt} :	10 g/kg	

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

150 mL NEU-EF

Chemical:	<i>acetate buffer solution</i>	CAS No.: -
TSCA Inventory:	all listed	
Korea Exist.Chem.Inventory:	listed	

150 mL RES-EF

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

Safety Data Sheet

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

REF: 740427

NucleoBond Xtra EF Buffer Set I

Page: 8/10

Printing date: 12.05.2021

Date of issue: 11.12.2020

0.6-100 mg RNase A (Iyo)

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

LD50_{intrapitoneal 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.

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

150 mL LYS-EF

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

150 mL NEU-EF

Chemical: *acetate buffer solution*

CAS No.: -

Storage class (VCI): 12

150 mL RES-EF

Chemical: *chemicals/mixture < 1%*

CAS No.: -

Water hazard class (DE): 1

Storage class (VCI): 12-13

0.6-100 mg RNase A (Iyo)

Chemical: *RNase*

CAS No.: 9001-99-4

Water hazard class (DE): 1

Storage class (VCI): 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

Safety Data Sheet

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

REF: 740427

NucleoBond Xtra EF Buffer Set I

Page: 9/10

Printing date: 12.05.2021

Date of issue: 11.12.2020

12.6 Other adverse effects

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

SECTION 14: Transport information

14.1 - 14.4: No dangerous goods according to the transport regulations

14.5 Environmental hazards

none

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
 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

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

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.

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.

MACHEREY-NAGEL GmbH & Co. KG makes NO REPRESENTATIONS or WARRANTIES, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly MACHEREY-NAGEL GmbH & Co. KG will not be responsible for damages resulting

www.mn-net.com

Safety Data Sheet

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

REF: 740427

NucleoBond Xtra EF Buffer Set I

Page: 10/10

Printing date: 12.05.2021

Date of issue: 11.12.2020

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

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

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

Revisions/Updates

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