

Safety Data Sheet

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

REF: 970001

Bio Fix nitrification inhib. test A-Tox

Page: 1/9

Printing date: 22.11.2022

Date of issue: 02.08.2022

Version: 2.2.2.2

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

1.1 Product identifier

REF 970001
 no data available Bio Fix nitrification inhib. test A-Tox
 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 100 mL A-Tox (R1)
 1 x 5 mL A-Tox (R3)
 1 x 100 mL A-Tox (R4)
 1 x 2 mL A-Tox (R2) (1.5...5x10¹⁰ cfu/mL)

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

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

1.3 Details of the supplier of the safety data sheet

Manufactured by:
 MACHEREY-NAGEL GmbH & Co. KG
 Valencienner Str. 11, 52355 Düren, Germany
 Phone: +49 2421 969 0 E-mail: sds@mn-net.com (msds@mn-net.com)

1.4 Emergency telephone number

Information not necessary.
 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

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

5 mL A-Tox (R3)
 Do not need labelling as hazardous
 Signal word -
 No hazard class

2 mL A-Tox (R2) (1.5...5x10¹⁰ cfu/mL)
 Do not need labelling as hazardous
 Signal word -
 No hazard class

List of H phrases: see section 16.2

2.2 Label elements according regulation (EC) 1272/2008



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5 mL A-Tox (R3)

Do not need labelling as hazardous
Signal word: -

2 mL A-Tox (R2) (1.5...5x10¹⁰ cfu/mL)

Do not need labelling as hazardous
Signal word: -

Label elements of the complete product

Signal word: -

2.3 Other hazards

Possible hazards from physicochemical properties

According to our current status of knowledge and experience we state, that this product does not contain any substances, which - in accordance with EC regulations 1272/2008/EC, 1907/2006/EC and German Regulations for Hazardous goods - have to be declared as dangerous goods, either because of their applied concentration or because of their total amount in anyone kit. An individual package has considerably less hazardous potential.

Information pertaining to particular risks to human and possible symptoms

Information pertaining to particular risks to the environment

Possible endocrine disrupting effects

no data available

SECTION 3: Composition / information on ingredients

3.1 Substances or 3.2 Mixtures

5 mL A-Tox (R3)

Substance name: *ammonium chloride*
CAS No.: 12125-02-9

Substance rating: H302, Acute Tox. 4 oral, H319, Eye Irrit. 2

Formula: NH₄ Cl

Pseudonym (de): Salmiak

REACH Reg. No.: 01-2119487950-27-xxxx

EC No.: 231-211-8

Indice No.: 017-014-00-8

Concentration: 1 - <4 %

acc. CLP (GHS): The criteria for classification are not fulfilled.

2 mL A-Tox (R2) (1.5...5x10¹⁰ cfu/mL)

Substance name: *bacterial strain A-Tox, risk group 1*

CAS No.: -

Substance rating: No criteria for classification or naming of chemical not required.

Formula: *nitrosomona eutropha*

Concentration: 10 - <100 %

acc. CLP (GHS): The criteria for classification are not fulfilled.

3.3 Remarks

When not listed, mixtures are added with water [CAS No. 7732-18-5] to 100%. List of H and P phrases: see section 16.2.

SECTION 4: First aid measures

4.1 Description of first aid measures

Place insured person out of danger zone to fresh air immediately.

4.1.1 After SKIN Contact

4.1.2 After EYE Contact

4.1.3 After INHALATION of vapours



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4.1.4 After ORAL Intake

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment needed

No additionally recommendations. ---

SECTION 5: Firefighting measures

5.1 Extinguishing media

5.1.1 Suitable extinguishing media

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

None.

5.3 Advice for firefighters

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

5.4 Additional information

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.2 Environmental precautions

not necessary

6.3 Methods and material for containment and cleaning up

Clean working area with water. Flush used water into drains.

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handling in accordance with the test instruction, that comes with the product.

7.2 Conditions for safe storage, including any incompatibilities

Safe storage is guaranteed in the original packaging . Storage class (German chemical industry): see chapter 12.1

Storage class (VCI): 10

Water hazard class (DE): 1

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.



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SECTION 8: Exposure controls /personal protection

8.1 Control parameters

5 mL A-Tox (R3)

Chemical: *ammonium chloride*
 DNEL: 128.9 derm mg/kg
DNEL = Derived No-Effect Level (for workers)
 PNEC (fresh water): 0.25 mg/L
PNEC = Predicted No Effect Concentration
 SUVA(CH) MAK value: 3 a mg/m³
 NIOSH STEL: 20 mg/m³

CAS No.: 12125-02-9

2 mL A-Tox (R2) (1.5...5x10¹⁰ cfu/mL)

Chemical: *bacterial strain A-Tox, risk group 1*

CAS No.: -

8.2 Exposure controls

Not necessary.

8.2.1 Respiratory protection

Not necessary.

8.2.2 Skin protection / Hand protection

Not necessary.

8.2.3 Eye / Face Protection

Not necessary.

8.2.4 Skin protection

Not necessary.

8.2.5 Personal hygiene

Information not necessary.

8.2.6 Thermal hazards

no data available

8.3 Limitation and monitoring of environmental exposure

Information not necessary.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

5 mL A-Tox (R3)

a) State of aggregation:	
b) Colour:	colourless
c) Odor:	red
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 (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

2 mL A-Tox (R2) (1.5...5x10¹⁰ cfu/mL)

a) State of aggregation:	
b) Colour:	colourless
c) Odor:	red
d) Melting point:	no data available
e) Boiling point:	no data available



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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 (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
r) Particle size:	no data available

9.2 Other information

Properties relevant to substance groups

SECTION 10: Stability and reactivity

10.1 Reactivity

None

10.2 Chemical stability

no known instability.

10.3 Possibility of hazardous reactions

None.

10.4 Conditions to avoid

Not known.

10.5 Incompatible materials

Not known.

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.

5 mL A-Tox (R3)

Chemical:	<i>ammonium chloride</i>	CAS No.: 12125-02-9
TSCA Inventory:	listed	
Japan CSCL/PRTR:	not listed, Japan PDSCL: not listed	
Japan ISHL:	listed $\geq 1,0\%$ / $\geq 1,0\%$,	
Korea Exist.Chem.Inventory:	KE-01645	
LD50 orl rat :	1440 mg/kg	
LC _{Low} orl rbt :	1000 mg/kg	
LC50 ihl rat :	1000 ppm/4h	
LD50 orl mus :	1300 mg/kg	

2 mL A-Tox (R2) (1.5...5x10¹⁰ cfu/mL)

Chemical:	<i>bacterial strain A-Tox, risk group 1</i>	CAS No.: -
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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.

5 mL A-Tox (R3)

Chemical: *ammonium chloride*
 PNEC (fresh water): 0.25 mg/L
 PNEC = Predicted No Effect Concentration
 LC50 fish/96h: 42.9 mg/L
 EC50 daphnia/48h: 136.6 mg/L
 EC50 chlorella vulgaris/5d: EC50/5d: 1300 mg/L
 Water hazard class (DE): 1 WGK No.: 0213
 Dispersion coefficient (o/w): -4,37
 Storage class (VCI): 12-13

CAS No.: 12125-02-9

2 mL A-Tox (R2) (1.5...5x10¹⁰ cfu/mL)

Chemical: *bacterial strain A-Tox, risk group 1*

CAS No.: -

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

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

Not necessary.

13.1 Waste treatment methods

GENERAL: Empty solids into municipal waste, empty liquids diluted into drains.

SECTION 14: Transport information

14.1 - 14.4 Not necessary

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.



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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
MN leaflet/instructions for use, also at www.mn-net.com
If necessary, observe other country-specific regulations.

15.2 Chemical safety assessment

SECTION 16: Other information

16.1 Changes compared to the last version

in preparation

16.2 List of H and P phrases

16.2.1 List of relevant H phrases

16.2.2 List of relevant P phrases

16.3 Recommended restriction on use

None

16.4 Sources of key data

KÜHN, BIRETT leaflets on dangerous working materials
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 the CLP Regulation 1272/2008/EU to technical and scientific progress
Regulation 453/2010/EU REACH – REQUIREMENTS FOR THE PREPARATION OF SAFETY DATA SHEET
Regulation 487/2013/EU, 4. Adaptation of the CLP regulation to technical and scientific progress
Regulation 669/2018/EU, 4. Adaptation of the CLP regulation to technical and scientific progress
Regulation 1480/2018/EU, 4. Adaptation of the CLP regulation to technical and scientific progress
TRGS 900, German engineering rules on limit values in the air at work, as of 03/2019
Regulation 878/2020/EU
Regulation 849/2021/EU, 4. Adaptation of the CLP regulation to technical and scientific progress

Revisions/Updates

Reason for revision: 2014-02 Corrected structure of the sections according to Regulation 453/2010/EU, if necessary
2014-04 Adjustment of Regulation 487/2013/EU
2016-03 Adjustment of Regulation 1221/2015/EU

2017-11 adaptation of the ECHA registration dossier
2022-11 Adjustment of 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



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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 spezified)
 GHS: Global Harmonized System of Classification and Labeling of Chemicals
 gpg: guinea pig
 ICAO: International Civil Aviation Organization
 ihl: inhaled
 IMDG: International Maritime Dangerous Goods Code
 intrav: intravenous
 ipt: 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



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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.



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