


abia Treponema Ab

DK.009.01.3

DK.009.05.3

Revision 01, 2025-12-19

Component & Article number	Pictograms & Signal Word	Hazard Statement & Special Labelling	SDS Rev. & Date
T. pallidum Ag coated plate MP.009			n/a
Conjugate (concentrated 11-fold) CJ.009		EUH210 EUH208	1.0 17.07.2025
Conjugate diluent CD.009			n/a
Sample diluent SD.009			n/a
Positive control (inactivated) PC.009			n/a
Negative control (inactivated) NC.009		H317 H412 P302+P352 P333+P313 P362+364 P501	1.0 17.07.2025
Washing solution (concentrated 25-fold) WS.001			n/a
TMB (concentrated 11-fold) TB.003		EUH210 EUH208	1.0 03.06.2025
Substrate buffer SB.001		EUH210 EUH208	1.0 21.01.2025
Stopping reagent 0.2M SR.020		EUH210	1.0 21.01.2025

n/a: not applicable.

The mixture of these components is classified as non-hazardous and is not subject to labelling requirements within the meaning of Regulation (EC) No. 1272/2008 (CLP).



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

1.1 Product identifier

abia Treponema Ab Conjugate (concentrated 11-fold)
Article number: CJ.009

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

1.2.1 Relevant uses

Laboratory reagents

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company AB Diagnostic Systems GmbH
Sportfliegerstraße 4
12487 Berlin / GERMANY
Phone +49 30 208 9871-0
Fax +49 30 208 987 1-99
Homepage www.ab-ds.de
E-mail info@ab-ds.de

Address enquiries to

Technical information

info@ab-ds.de

Safety Data Sheet

sdb@chemiebuero.de (No dispatch of safety data sheets)

Safety data sheets are available from the supplier.

1.4 Emergency telephone number

Company +49 30 208 9871-14

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]

No classification.

2.2 Label elements

The product is required to be labelled in accordance with regulation CLP.

Hazard pictograms

none

Signal word

none

Hazard statements

none

Precautionary statements

none

Special labelling

EUH210 Safety data sheet available on request.

Contains: Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), 2-Methyl-2H-isothiazolin-3-one. EUH208 May produce an allergic reaction.

2.3 Other hazards

Environmental hazards

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.

Other hazards

Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable



3.2 Mixtures

The product is a mixture.

Range [%]	Substance
0,00015 - < 0,0015	Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1)
	CAS: 55965-84-9, EINECS/ELINCS: 611-341-5, EU-INDEX: 613-167-00-5
	GHS/CLP: Acute Tox. 3: H301 - Acute Tox. 2: H310 H330 - Skin Corr. 1C: H314 - Eye Dam. 1: H318 - Skin Sens. 1A: H317 - Aquatic Acute 1: H400 - Aquatic Chronic 1: H410 - EUH071, M-Factor (acute): 100, M-Factor (chronic): 100
	SCL [%]: 0,06 - <0,6: Skin Irrit. 2: H315, 0,06 - <0,6: Eye Irrit. 2: H319, >=0,6: Skin Corr. 1A: H314, >=0,6: Eye Dam. 1: H318, >=0,0015: Skin Sens. 1: H317
0,00015 - < 0,0015	2-Methyl-2H-isothiazolin-3-one
	CAS: 2682-20-4, EINECS/ELINCS: 220-239-6, EU-INDEX: 613-326-00-9
	GHS/CLP: Acute Tox. 3: H301 H311 - Acute Tox. 2: H330 - Skin Corr. 1B: H314 - Eye Dam. 1: H318 - Skin Sens. 1A: H317 - Aquatic Acute 1: H400 - Aquatic Chronic 1: H410 - EUH071, M-Factor (acute): 10, M-Factor (chronic): 1
	SCL [%]: >= 0,0015: Skin Sens. 1A: H317

Comment on component parts

For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Take off contaminated clothing and wash before reuse.

Inhalation

Ensure supply of fresh air.
In the event of symptoms seek medical treatment.

Skin contact

When in contact with the skin, clean with soap and water.
If skin irritation or rash occurs: Get medical advice/attention.

Eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion

Rinse out mouth and give plenty of water to drink.
Do not induce vomiting.
Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Forward this sheet to your doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Foam, dry powder, water spray jet, carbon dioxide
Fire extinguishing method of surrounding areas must be considered.

Extinguishing media that must not be used

Full water jet

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.

5.3 Advice for firefighters

Use self-contained breathing apparatus.
Fire residues must be disposed of in accordance within the local regulations.



SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

High risk of slipping due to leakage/spillage of product.
Ensure adequate ventilation.
Wear suitable protective equipment. For personal protection see SECTION 8.

6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up with absorbent material (e.g. sand, sawdust).
Dispose of absorbed material in accordance with the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
Avoid contact with eyes and skin. Use personal protective equipment.
Observe the general safety regulations when handling chemicals.

Do not eat, drink or smoke when using this product.
Wash hands before breaks and after work.
Take off contaminated clothing and wash before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Prevent penetration into the ground.
Do not store together with food and animal food/diet.
Keep container tightly closed.
Protect from heat/overheating.

Storage class (TRGS 510)

Storage class 10 - 13 (VCI)

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored DE (TRGS 900)

Substance
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1)
CAS: 55965-84-9, EINECS/ELINCS: 611-341-5, EU-INDEX: 613-167-00-5
Exposure limit: 0,2 mg/m ³ , einatembare Fraktion (DFG)
Factor: 0,4 mg/m ³

Ingredients with occupational exposure limits to be monitored EU (2004/37/EG)

not relevant



8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation.
Eye protection	safety glasses
Hand protection	> 0,1 mm; Nitrile rubber, >60 min (EN 374-1/-2/-3). The details concerned are recommendations. Please contact the glove supplier for further information.
Skin protection	Protective clothing (EN 340)
Other	Avoid contact with eyes and skin. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
Respiratory protection	Not required under normal conditions. If workplace limit values are exceeded or if there is insufficient ventilation: Short term: filter apparatus, filter A. (DIN EN 14387)
Thermal hazards	none
Delimitation and monitoring of the environmental exposition	Comply with applicable environmental regulations limiting discharge to air, water and soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Form	liquid
Color	transparent slightly opalescence
Odor	characteristic
Odour threshold	No information available.
pH-value	No information available.
pH-value [1%]	No information available.
Boiling point or initial boiling point and boiling range [°C]	No information available.
Flash point [°C]	not applicable
Flammability	The product is not combustible.
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	none
Vapour pressure/gas pressure [kPa]	No information available.
Density [g/cm³]	No information available.
Relative density	No information available.
Bulk density [kg/m³]	not applicable
Solubility in water [g/L]	miscible
Solubility other solvents	No information available.
Partition coefficient n-octanol/water (log value)	not applicable
Kinematic viscosity	not relevant
Relative vapour density	No information available.
Melting point [°C]	No information available.
Auto-ignition temperature [°C]	not applicable
Decomposition temperature [°C]	No information available.
Particle characteristics	not applicable

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

When handled and stored properly, no hazardous reactions are anticipated.



10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

No hazardous reactions known.

10.4 Conditions to avoid

No information available.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

No decomposition if used and stored according to specifications.



SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity Based on the available information, the classification criteria are not fulfilled.

Substance
2-Methyl-2H-isothiazolin-3-one, CAS: 2682-20-4
LD50, oral, Rat, 120 mg/kg
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
LD50, oral, Rat, 53 mg/kg
LD50, oral, 64 mg/kg (ECHA, CLH Report)

Acute dermal toxicity Based on the available information, the classification criteria are not fulfilled.

Substance
2-Methyl-2H-isothiazolin-3-one, CAS: 2682-20-4
LC50, dermal, Rabbit, 242 mg/kg
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
LD50, dermal, Rabbit, 87,12 mg/kg (ECHA, CLH Report)

Acute inhalational toxicity Based on the available information, the classification criteria are not fulfilled.

Substance
2-Methyl-2H-isothiazolin-3-one, CAS: 2682-20-4
LC50, inhalative, Rat, 340 µg/m³ (4h)
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
LC50, inhalative, Rat, 0,171 mg/l/4h (ECHA, CLH Report)

Serious eye damage/irritation Based on the available information, the classification criteria are not fulfilled.

Substance
2-Methyl-2H-isothiazolin-3-one, CAS: 2682-20-4
Eye, corrosive
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
Causes serious eye damage.

Skin corrosion/irritation Based on the available information, the classification criteria are not fulfilled.

Substance
2-Methyl-2H-isothiazolin-3-one, CAS: 2682-20-4
dermal, corrosive
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
corrosive

Respiratory or skin sensitisation EUH208: May produce an allergic reaction.
The labelling was carried out based on substance-specific concentration limits.

Substance
2-Methyl-2H-isothiazolin-3-one, CAS: 2682-20-4
dermal, sensitising
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
dermal, sensitising

Specific target organ toxicity — single exposure Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — repeated exposure Based on the available information, the classification criteria are not fulfilled.

Mutagenicity Based on the available information, the classification criteria are not fulfilled.

Substance
2-Methyl-2H-isothiazolin-3-one, CAS: 2682-20-4
no adverse effect observed



Date printed 17.07.2025, Revision 17.07.2025 Version 1.0 Page 7 / 11

Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
in vitro, negativ
in vivo, negativ

Reproduction toxicity Based on the available information, the classification criteria are not fulfilled.

- Fertility

Substance
2-Methyl-2H-isothiazolin-3-one, CAS: 2682-20-4
NOAEL, oral, Rat, 69 mg/kg bw/d, no adverse effect observed

- Development

Substance
2-Methyl-2H-isothiazolin-3-one, CAS: 2682-20-4
NOAEL, oral, Rabbit, 30 mg/kg bw/d, no adverse effect observed

Carcinogenicity Based on the available information, the classification criteria are not fulfilled.

Substance
2-Methyl-2H-isothiazolin-3-one, CAS: 2682-20-4
NOAEL, oral, Rat, 3,1 mg/kg bw/day, no adverse effect observed
NOAEL, dermal, mouse, 400 mg/kg bw/day, no adverse effect observed

Aspiration hazard Based on the available information, the classification criteria are not fulfilled.

General remarks

Toxicological data of complete product are not available.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties No information available.

11.2.2 Other information none

SECTION 12: Ecological information

12.1 Toxicity

Based on the available information, the classification criteria are not fulfilled.

Substance
2-Methyl-2H-isothiazolin-3-one, CAS: 2682-20-4
LC50, (96h), Oncorhynchus mykiss, 4,77 mg/l
LC50, (48h), Invertebrates, 0,93 - 2,98 mg/L
EC50, (96h), Algae, 72,5 - 103 µg/L
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
LC50, (96h), Oncorhynchus mykiss, 0,19 mg/l
EC50, (48h), Daphnia magna, 0,18 mg/l
ErC50, Skeletonema costatum, 0,003 mg/l



12.2 Persistence and degradability

Behaviour in environment compartments No information available.

Behaviour in sewage plant No information available.

Biological degradability

Substance
2-Methyl-2H-isothiazolin-3-one, CAS: 2682-20-4
OECD 301 A, The product is not readily biodegradable.
OECD 301 B, The product is not readily biodegradable.
OECD 301 D, The product is not readily biodegradable.
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9 (28d), > 70, OECD 301 D

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

Spillages may penetrate the soil causing ground water contamination.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

Do not discharge product unmonitored into the environment or into the drainage.
Ecological data of complete product are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Coordinate disposal with the authorities if necessary.

Waste no. (recommended) 070799

Contaminated packaging

Untaminated packaging may be taken for recycling.

Waste no. (recommended) 150102
150107



SECTION 14: Transport information

14.1 UN number or ID number

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.2 UN proper shipping name

Transport by land according to ADR/RID NO DANGEROUS GOODS

Inland navigation (ADN) NO DANGEROUS GOODS

Marine transport in accordance with IMDG NOT CLASSIFIED AS "DANGEROUS GOODS"

Air transport in accordance with IATA NOT CLASSIFIED AS "DANGEROUS GOODS"

14.3 Transport hazard class(es)

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.4 Packing group

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.5 Environmental hazards

Transport by land according to ADR/RID no

Inland navigation (ADN) no

Marine transport in accordance with IMDG no

Air transport in accordance with IATA no



14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EEC-REGULATIONS	2008/98/EG (2000/532/EC); 2010/75/EU; 2004/42/EG; (EG) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EWG ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 2024/573; (EU) 2019/1148; (EU) 2019/1021, (EU) 2023/707
- Comment on component parts	Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
- Annex XIV (REACH)	According to Annex XIV of Regulation (EC) 1907/2006 (REACH) the product does not contain any substances \geq 0.1% that are subject to authorisation.
- Annex XVII (REACH)	According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product does not contain any substances \geq 0.1% that are restricted. According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product is not subject to any restrictions.
TRANSPORT-REGULATIONS	ADR (2025); IMDG-Code (2025, 42. Amdt.); IATA-DGR (2025)
NATIONAL REGULATIONS (DE):	Hazardous Substances Ordinance - GefStoffV 21.07.2021; Detergent and Cleaning Agents Act - WRMG; Federal Water Act - WHG; Technical Rule for Hazardous Substances - TRGS: 200, 220, 615, 900, 905.
- Water hazard class	1, conf. AwSV, 18.04.2017
- Decree for case of interference, observe limits	not applicable
- Class. according to TA-Luft	not applicable
- Storage class (TRGS 510)	Storage class 10 - 13 (VCI)
- Observe employment restrictions for people	Observe employment restrictions for young people.
- VOC (2010/75/CE)	0 %
- Other regulations	TRGS 510: Storage of hazardous substances in non-stationary containers

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H330 Fatal if inhaled.
H301+H311 Toxic if swallowed or in contact with skin.
EUH071 Corrosive to the respiratory tract.
H410 Very toxic to aquatic life with long lasting effects.
H400 Very toxic to aquatic life.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H314 Causes severe skin burns and eye damage.
H310+H330 Fatal in contact with skin or if inhaled.
H301 Toxic if swallowed.



16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform Chemical Information Database
IVIS = In vitro irritation score
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV@/TWA = Threshold limit value – time-weighted average
TLV@STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure

Modified position

none

Copyright: Chemiebüro®



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

1.1 Product identifier

Abia Treponema Ab Negative control (inactivated)
Article number: NC.009

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

1.2.1 Relevant uses

Laboratory reagents

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company AB Diagnostic Systems GmbH
Sportfliegerstraße 4
12487 Berlin / GERMANY
Phone +49 30 208 9871-0
Fax +49 30 208 987 1-99
Homepage www.ab-ds.de
E-mail info@ab-ds.de

Address enquiries to

Technical information

info@ab-ds.de

Safety Data Sheet

sdb@chemiebuero.de (No dispatch of safety data sheets)

Safety data sheets are available from the supplier.

1.4 Emergency telephone number

Company +49 30 208 9871-14

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]

Skin Sens. 1: H317 May cause an allergic skin reaction.
Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

Hazard pictograms



The product is required to be labelled in accordance with regulation CLP.

Signal word

WARNING

Contains:

Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1)

Hazard statements

H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P302+P352 IF ON SKIN: Wash with plenty of water / soap.
P333+P313 If skin irritation or rash occurs: Get medical advice / attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P501 Dispose of contents/container in accordance with local/national regulation.

2.3 Other hazards

Human health dangers

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Environmental hazards

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.

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other hazards

Further hazards were not determined with the current level of knowledge.



SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

The product is a mixture.

Range [%]	Substance
0,01 - < 0,1	Thiomersal CAS: 54-64-8, EINECS/ELINCS: 200-210-4, EU-INDEX: 080-004-00-7 GHS/CLP: Acute Tox. 2: H300 H330 - Acute Tox. 1: H310 - STOT RE 2: H373 - Aquatic Acute 1: H400 - Aquatic Chronic 1: H410, M-Factor (acute): 10 SCL [%]: >= 0,1: STOT RE 2: H373
0,0025 - < 0,025	Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1) CAS: 55965-84-9, EINECS/ELINCS: 611-341-5, EU-INDEX: 613-167-00-5 GHS/CLP: Acute Tox. 3: H301 - Acute Tox. 2: H310 H330 - Skin Corr. 1C: H314 - Eye Dam. 1: H318 - Skin Sens. 1A: H317 - Aquatic Acute 1: H400 - Aquatic Chronic 1: H410 - EUH071, M-Factor (acute): 100, M-Factor (chronic): 100 SCL [%]: 0,06 - <0,6: Skin Irrit. 2: H315, 0,06 - <0,6: Eye Irrit. 2: H319, >=0,6: Skin Corr. 1A: H314, >=0,6: Eye Dam. 1: H318, >=0,0015: Skin Sens. 1: H317

Comment on component parts

For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Take off contaminated clothing and wash before reuse.

Inhalation

Ensure supply of fresh air.
In the event of symptoms seek medical treatment.

Skin contact

When in contact with the skin, clean with soap and water.
If skin irritation or rash occurs: Get medical advice/attention.

Eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion

Rinse out mouth and give plenty of water to drink.
Do not induce vomiting.
Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Forward this sheet to your doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Product itself is non-combustible. Fire extinguishing method of surrounding areas must be considered.

Extinguishing media that must not be used

Full water jet

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.

5.3 Advice for firefighters

Use self-contained breathing apparatus.
Fire residues must be disposed of in accordance within the local regulations.



SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

High risk of slipping due to leakage/spillage of product.
Ensure adequate ventilation.
Wear suitable protective equipment. For personal protection see SECTION 8.

6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up with absorbent material (e.g. sand, sawdust).
Dispose of absorbed material in accordance with the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
Avoid contact with eyes and skin. Use personal protective equipment.
Observe the general safety regulations when handling chemicals.

Do not eat, drink or smoke when using this product.
Wash hands before breaks and after work.
Take off contaminated clothing and wash before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Prevent penetration into the ground.
Do not store together with food and animal food/diet.
Keep container tightly closed.
Protect from heat/overheating.

Storage class (TRGS 510)

Storage class 12 (VCI)

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored DE (TRGS 900)

Substance
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1)
CAS: 55965-84-9, EINECS/ELINCS: 611-341-5, EU-INDEX: 613-167-00-5
Exposure limit: 0,2 mg/m ³ , einatembare Fraktion (DFG)
Factor: 0,4 mg/m ³

Ingredients with occupational exposure limits to be monitored EU (2004/37/EG)

not relevant



8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation.
Eye protection	If there is a risk of splashing: safety glasses (EN 166:2001)
Hand protection	> 0,1 mm; Nitrile rubber, >60 min (EN 374-1/-2/-3). The details concerned are recommendations. Please contact the glove supplier for further information.
Skin protection	Protective clothing (EN 340)
Other	Avoid contact with eyes and skin. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
Respiratory protection	If workplace limit values are exceeded or if there is insufficient ventilation: Short term: filter apparatus, filter A. (DIN EN 14387)
Thermal hazards	none
Delimitation and monitoring of the environmental exposition	Comply with applicable environmental regulations limiting discharge to air, water and soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Form	liquid
Color	green
Odor	characteristic
Odour threshold	No information available.
pH-value	No information available.
pH-value [1%]	No information available.
Boiling point or initial boiling point and boiling range [°C]	No information available.
Flash point [°C]	not applicable
Flammability	The product is not combustible.
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	none
Vapour pressure/gas pressure [kPa]	No information available.
Density [g/cm³]	No information available.
Relative density	No information available.
Bulk density [kg/m³]	not applicable
Solubility in water [g/L]	miscible
Solubility other solvents	No information available.
Partition coefficient n-octanol/water (log value)	not applicable
Kinematic viscosity	not relevant
Relative vapour density	No information available.
Melting point [°C]	No information available.
Auto-ignition temperature [°C]	not applicable
Decomposition temperature [°C]	No information available.
Particle characteristics	not applicable

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

When handled and stored properly, no hazardous reactions are anticipated.



10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

No hazardous reactions known.

10.4 Conditions to avoid

No information available.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

No decomposition if used and stored according to specifications.



SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity Based on the available information, the classification criteria are not fulfilled.

Substance
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
LD50, oral, Rat, 53 mg/kg
LD50, oral, 64 mg/kg (ECHA, CLH Report)
Thiomersal, CAS: 54-64-8
ATE, oral, 5,1 mg/kg

Acute dermal toxicity Based on the available information, the classification criteria are not fulfilled.

Substance
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
LD50, dermal, Rabbit, 87,12 mg/kg (ECHA, CLH Report)
Thiomersal, CAS: 54-64-8
ATE, dermal, 5,1 mg/kg

Acute inhalational toxicity Based on the available information, the classification criteria are not fulfilled.

Substance
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
LC50, inhalative, Rat, 0,171 mg/l/4h (ECHA, CLH Report)
Thiomersal, CAS: 54-64-8
ATE, inhalativ (dust/mist), 0,051 mg/l, 4h

Serious eye damage/irritation Based on the available information, the classification criteria are not fulfilled.

Substance
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
Causes serious eye damage.

Skin corrosion/irritation Based on the available information, the classification criteria are not fulfilled.

Substance
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
corrosive

Respiratory or skin sensitisation May cause an allergic skin reaction.
Classification was carried out based on substance-specific concentration limits.

Substance
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
dermal, sensitising

Specific target organ toxicity — single exposure Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — repeated exposure Based on the available information, the classification criteria are not fulfilled.

Substance
Thiomersal, CAS: 54-64-8
May cause damage to organs (Kidney, CNS) through prolonged or repeated exposure.

Mutagenicity Based on the available information, the classification criteria are not fulfilled.

Substance
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
in vitro, negativ
in vivo, negativ
Thiomersal, CAS: 54-64-8



AMES Test, negativ

Reproduction toxicity Based on the available information, the classification criteria are not fulfilled.
Carcinogenicity Based on the available information, the classification criteria are not fulfilled.
Aspiration hazard Based on the available information, the classification criteria are not fulfilled.
General remarks

Toxicological data of complete product are not available.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

11.2.2 Other information none

SECTION 12: Ecological information

12.1 Toxicity

Based on the available information, the classification criteria are fulfilled.

Substance
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
LC50, (96h), Oncorhynchus mykiss, 0,19 mg/l
EC50, (48h), Daphnia magna, 0,18 mg/l
ErC50, Skeletonema costatum, 0,003 mg/l
Thiomersal, CAS: 54-64-8
LC50, (24h), Fish, 7,5 mg/l

12.2 Persistence and degradability

Behaviour in environment compartments No information available.

Behaviour in sewage plant No information available.

Biological degradability

Substance
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
(28d), > 70, OECD 301 D

12.3 Bioaccumulative potential

Substance
Thiomersal, CAS: 54-64-8
log Pow, -1,88

12.4 Mobility in soil

Spillages may penetrate the soil causing ground water contamination.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.



12.7 Other adverse effects

Do not discharge product unmonitored into the environment or into the drainage.
Ecological data of complete product are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Coordinate disposal with the authorities if necessary.

Waste no. (recommended) 070799

Contaminated packaging

Uncontaminated packaging may be taken for recycling.

Waste no. (recommended) 150102
150107

SECTION 14: Transport information

14.1 UN number or ID number

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.2 UN proper shipping name

Transport by land according to ADR/RID NO DANGEROUS GOODS

Inland navigation (ADN) NO DANGEROUS GOODS

Marine transport in accordance with IMDG NOT CLASSIFIED AS "DANGEROUS GOODS"

Air transport in accordance with IATA NOT CLASSIFIED AS "DANGEROUS GOODS"

14.3 Transport hazard class(es)

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable



14.4 Packing group

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.5 Environmental hazards

Transport by land according to ADR/RID no

Inland navigation (ADN) no

Marine transport in accordance with IMDG no

Air transport in accordance with IATA no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EEC-REGULATIONS	2008/98/EG (2000/532/EC); 2010/75/EU; 2004/42/EG; (EG) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EWG ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 2024/573; (EU) 2019/1148; (EU) 2019/1021, (EU) 2023/707
- Comment on component parts	Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
- Annex XIV (REACH)	According to Annex XIV of Regulation (EC) 1907/2006 (REACH) the product does not contain any substances \geq 0.1% that are subject to authorisation.
- Annex XVII (REACH)	According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product does not contain any substances \geq 0.1% that are restricted. According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product is subject to the following restrictions. 3
TRANSPORT-REGULATIONS	ADR (2025); IMDG-Code (2025, 42. Amdt.); IATA-DGR (2025)
NATIONAL REGULATIONS (DE):	Hazardous Substances Ordinance - GefStoffV 21.07.2021; Detergent and Cleaning Agents Act - WRMG; Federal Water Act - WHG; Technical Rule for Hazardous Substances - TRGS: 200, 220, 615, 900, 905.
- Water hazard class	2, conf. AwSV, 18.04.2017
- Decree for case of interference, observe limits	not applicable
- Class. according to TA-Luft	not applicable
- Storage class (TRGS 510)	Storage class 12 (VCI)
- Observe employment restrictions for people	not applicable
- VOC (2010/75/CE)	0 %
- Other regulations	TRGS 510: Storage of hazardous substances in non-stationary containers

15.2 Chemical safety assessment

not applicable



SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H314 Causes severe skin burns and eye damage.
H310+H330 Fatal in contact with skin or if inhaled.
H301 Toxic if swallowed.

H410 Very toxic to aquatic life with long lasting effects.
H400 Very toxic to aquatic life.
H373 May cause damage to organs through prolonged or repeated exposure.
H310 Fatal in contact with skin.
H300+H330 Fatal if swallowed or if inhaled.

16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform Chemical Information Database
IVIS = In vitro irritation score
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV@/TWA = Threshold limit value – time-weighted average
TLV@STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure

Skin Sens. 1: H317 May cause an allergic skin reaction. (Calculation method)
Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects. (Calculation method)

Modified position

none

Safety Data Sheet according to REACH-Regulation (EC) 1907/2006 amended by regulation (EC) 2020/878 (DE)

abia Treponema Ab Negative control (inactivated)

Article number NC.009

AB Diagnostic Systems GmbH

12487 Berlin



AB Diagnostic Systems

Date printed 17.07.2025, Revision 17.07.2025

Version 1.0

Page 11 / 11

Copyright: Chemiebüro®



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

1.1 Product identifier

abia TMB (concentrated 11-fold)
Article number: TB.003

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

1.2.1 Relevant uses

Laboratory reagents

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company AB Diagnostic Systems GmbH
Sportfliegerstraße 4
12487 Berlin / GERMANY
Phone +49 30 208 9871-0
Fax +49 30 208 987 1-99
Homepage www.ab-ds.de
E-mail info@ab-ds.de

Address enquiries to

Technical information

info@ab-ds.de

Safety Data Sheet

sdb@chemiebuero.de (No dispatch of safety data sheets)

Safety data sheets are available from the supplier.

1.4 Emergency telephone number

Company +49 30 208 9871-14

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]

No classification.

2.2 Label elements

The product is required to be labelled in accordance with regulation CLP.

Hazard pictograms

none

Signal word

none

Hazard statements

none

Precautionary statements

none

Special labelling

EUH210 Safety data sheet available on request.

Contains: 2-Chloracetamid. EUH208 May produce an allergic reaction.

2.3 Other hazards

Human health dangers

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Environmental hazards

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.

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other hazards

Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable



3.2 Mixtures

The product is a mixture.

Range [%]	Substance
80 - < 90	Dimethyl sulfoxide CAS: 67-68-5, EINECS/ELINCS: 200-664-3
0,01 - < 0,1	2-Chloracetamid CAS: 79-07-2, EINECS/ELINCS: 201-174-2, EU-INDEX: 616-036-00-0 GHS/CLP: Repr. 2: H361f - Skin Sens. 1: H317 - Acute Tox. 3: H301 SCL [%]: ≥ 0,1: Skin Sens. 1: H317

Comment on component parts

For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Take off contaminated clothing and wash before reuse.

Inhalation

Ensure supply of fresh air.
In the event of symptoms seek medical treatment.

Skin contact

When in contact with the skin, clean with soap and water.
If skin irritation or rash occurs: Get medical advice/attention.

Eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion

Rinse out mouth and give plenty of water to drink.
Do not induce vomiting.
Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Forward this sheet to your doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Foam, dry powder, water spray jet, carbon dioxide
Fire extinguishing method of surrounding areas must be considered.

Extinguishing media that must not be used

Full water jet

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.
Sulphur oxides (SO_x).

5.3 Advice for firefighters

Use self-contained breathing apparatus.
Cool containers at risk with water spray jet.
Fire residues must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

High risk of slipping due to leakage/spillage of product.
Ensure adequate ventilation.
Wear suitable protective equipment. For personal protection see SECTION 8.
Keep away from all sources of ignition.

6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the drains/surface waters/groundwater.



6.3 Methods and material for containment and cleaning up

Take up with absorbent material (e.g. sand, sawdust).
Dispose of absorbed material in accordance with the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
Avoid contact with eyes and skin. Use personal protective equipment.
Observe the general safety regulations when handling chemicals.
Keep away from open flames, hot surfaces and sources of ignition.
Do not eat, drink or smoke when using this product.
Wash hands before breaks and after work.
Take off contaminated clothing and wash before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Prevent penetration into the ground.
Do not store together with food and animal food/diet.
Keep container tightly closed.
Protect from heat/overheating and from sun.

Storage class (TRGS 510)

Storage class 10 - 13 (VCI)

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored DE (TRGS 900)

Substance
Dimethyl sulfoxide
CAS: 67-68-5, EINECS/ELINCS: 200-664-3
Exposure limit: 50 ppm, 160 mg/m ³ , DFG, Z, H
Factor: 2(I)

Ingredients with occupational exposure limits to be monitored EU (2004/37/EG)

not relevant



8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation.
Eye protection	If there is a risk of splashing: safety glasses (EN 166:2001)
Hand protection	> 0,1 mm; Nitrile rubber, >60 min (EN 374-1/-2/-3). The details concerned are recommendations. Please contact the glove supplier for further information.
Skin protection	Protective clothing (EN 340)
Other	Avoid contact with eyes and skin. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
Respiratory protection	Not required under normal conditions. If workplace limit values are exceeded or if there is insufficient ventilation: Short term: filter apparatus, filter A. (DIN EN 14387)
Thermal hazards	none
Delimitation and monitoring of the environmental exposition	Comply with applicable environmental regulations limiting discharge to air, water and soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Form	liquid
Color	colourless yellowish
Odor	characteristic
Odour threshold	No information available.
pH-value	No information available.
pH-value [1%]	No information available.
Boiling point or initial boiling point and boiling range [°C]	No information available.
Flash point [°C]	not applicable
Flammability	No information available.
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	none
Vapour pressure/gas pressure [kPa]	No information available.
Density [g/cm³]	1,090 - 1,110
Relative density	No information available.
Bulk density [kg/m³]	not applicable
Solubility in water	miscible
Solubility other solvents	No information available.
Partition coefficient n-octanol/water (log value)	not applicable
Kinematic viscosity	not relevant
Relative vapour density	No information available.
Melting point [°C]	No information available.
Auto-ignition temperature [°C]	not applicable
Decomposition temperature [°C]	No information available.
Particle characteristics	not applicable

9.2 Other information

none



SECTION 10: Stability and reactivity

10.1 Reactivity

When handled and stored properly, no hazardous reactions are anticipated.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

No hazardous reactions known.

10.4 Conditions to avoid

Reactions with strong oxidizing agents.
Reactions with strong acids and alkalies.
Reactions with halogenated compounds.

10.5 Incompatible materials

Various plastics
Various metals.

10.6 Hazardous decomposition products

No decomposition if used and stored according to specifications.
In the event of fire: See SECTION 5.



SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity Based on the available information, the classification criteria are not fulfilled.

Substance
2-Chloracetamid, CAS: 79-07-2
LD50, oral, Rat, 138 mg/kg, OECD 401
Dimethyl sulfoxide, CAS: 67-68-5
LD50, oral, Rat, 14500 mg/kg (RTECS)

Acute dermal toxicity Based on the available information, the classification criteria are not fulfilled.

Substance
Dimethyl sulfoxide, CAS: 67-68-5
LD50, dermal, Rat, 40000 mg/kg (RTECS)

Acute inhalational toxicity Based on the available information, the classification criteria are not fulfilled.

Serious eye damage/irritation Based on the available information, the classification criteria are not fulfilled.

Substance
Dimethyl sulfoxide, CAS: 67-68-5
Rabbit, OECD 405, Slight irritant effect - does not require labelling.

Skin corrosion/irritation Based on the available information, the classification criteria are not fulfilled.

Substance
Dimethyl sulfoxide, CAS: 67-68-5
Rabbit, OECD 404, non-irritating

Respiratory or skin sensitisation EUH208: May produce an allergic reaction.
The labelling was carried out based on substance-specific concentration limits.

Substance
2-Chloracetamid, CAS: 79-07-2
dermal, Guinea pig, OECD 406, sensitising
Dimethyl sulfoxide, CAS: 67-68-5
Guinea pig, OECD 406, negativ
mouse, OECD 429, negativ

Specific target organ toxicity — single exposure Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — repeated exposure Based on the available information, the classification criteria are not fulfilled.

Mutagenicity Based on the available information, the classification criteria are not fulfilled.

Substance
2-Chloracetamid, CAS: 79-07-2
OECD 476, negativ
Dimethyl sulfoxide, CAS: 67-68-5
Salmonella typhimurium, OECD 471, negativ
OECD 479, negativ
OECD 473, negativ
OECD 474, negativ

Reproduction toxicity Based on the available information, the classification criteria are not fulfilled.

Carcinogenicity Based on the available information, the classification criteria are not fulfilled.

Aspiration hazard Based on the available information, the classification criteria are not fulfilled.

General remarks

Toxicological data of complete product are not available.



11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

11.2.2 Other information

none

SECTION 12: Ecological information

12.1 Toxicity

Based on the available information, the classification criteria are not fulfilled.

Substance
2-Chloracetamid, CAS: 79-07-2
LC50, (96h), Carassius auratus, 19,8 mg/l
EC50, (48h), Daphnia magna, 14 mg/l
Dimethyl sulfoxide, CAS: 67-68-5
LC50, (96h), Danio rerio, > 25 000 mg/l, OECD 203
EC50, (48h), Daphnia magna, 24 600 mg/l, OECD 202
Erl50, (72h), Pseudokirchneriella subcapitata, 17 000 mg/l, OECD 201

12.2 Persistence and degradability

Behaviour in environment compartments

No information available.

Behaviour in sewage plant

No information available.

Biological degradability

Substance
2-Chloracetamid, CAS: 79-07-2
(28d), 94 %, OECD 301 B, The product is readily biodegradable.
Dimethyl sulfoxide, CAS: 67-68-5
(28d), 31 %, OECD 301 D, The product is not readily biodegradable.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

Spillages may penetrate the soil causing ground water contamination.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Do not discharge product unmonitored into the environment or into the drainage.
Ecological data of complete product are not available.



SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Coordinate disposal with the authorities if necessary.

Waste no. (recommended)

070799

Contaminated packaging

Uncontaminated packaging may be taken for recycling.

Waste no. (recommended)

150102
150107

SECTION 14: Transport information

14.1 UN number or ID number

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.2 UN proper shipping name

Transport by land according to ADR/RID NO DANGEROUS GOODS

Inland navigation (ADN) NO DANGEROUS GOODS

Marine transport in accordance with IMDG NOT CLASSIFIED AS "DANGEROUS GOODS"

Air transport in accordance with IATA NOT CLASSIFIED AS "DANGEROUS GOODS"

14.3 Transport hazard class(es)

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable



14.4 Packing group

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.5 Environmental hazards

Transport by land according to ADR/RID no

Inland navigation (ADN) no

Marine transport in accordance with IMDG no

Air transport in accordance with IATA no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EEC-REGULATIONS 2008/98/EG (2000/532/EC); 2010/75/EU; 2004/42/EG; (EG) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEG ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 2024/573; (EU) 2019/1148; (EU) 2019/1021, (EU) 2023/707

- **Comment on component parts** Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.

- **Annex XIV (REACH)** According to Annex XIV of Regulation (EC) 1907/2006 (REACH) the product does not contain any substances $\geq 0.1\%$ that are subject to authorisation.

- **Annex XVII (REACH)** According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product contains $\geq 0.1\%$ of substances with the following restrictions. 75

According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product is not subject to any restrictions.

TRANSPORT-REGULATIONS ADR (2025); IMDG-Code (2025, 42. Amdt.); IATA-DGR (2025)

NATIONAL REGULATIONS (DE): Hazardous Substances Ordinance - GefStoffV 21.07.2021; Detergent and Cleaning Agents Act - WRMG; Federal Water Act - WHG; Technical Rule for Hazardous Substances - TRGS: 200, 220, 615, 900, 905.

- **Water hazard class** 1, conf. AwSV, 18.04.2017

- **Decree for case of interference, observe limits** not applicable

- **Class. according to TA-Luft** not applicable

- **Storage class (TRGS 510)** Storage class 10 - 13 (VCI)

- **Observe employment restrictions for people** not applicable

- **VOC (2010/75/CE)** 0 %

- **Other regulations** TRGS 510: Storage of hazardous substances in non-stationary containers

15.2 Chemical safety assessment

not applicable



SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H301 Toxic if swallowed.
H317 May cause an allergic skin reaction.
H361f Suspected of damaging fertility.

16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform Chemical Information Database
IVIS = In vitro irritation score
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV@/TWA = Threshold limit value – time-weighted average
TLV@STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure

Modified position none

Copyright: Chemiebüro®



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

1.1 Product identifier

abia Substrate buffer
Article number: SB.001

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

1.2.1 Relevant uses

Laboratory reagents

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company AB Diagnostic Systems GmbH
Sportfliegerstraße 4
12487 Berlin / GERMANY
Phone +49 30 208 9871-0
Fax +49 30 208 987 1-99
Homepage www.ab-ds.de
E-mail info@ab-ds.de

Address enquiries to

Technical information

info@ab-ds.de

Safety Data Sheet

sdb@chemiebuero.de (No dispatch of safety data sheets)

Safety data sheets are available from the supplier.

1.4 Emergency telephone number

Company +49 30 208 9871-14

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]

No classification.

2.2 Label elements

The product is required to be labelled in accordance with regulation CLP.

Hazard pictograms

none

Signal word

none

Hazard statements

none

Precautionary statements

none

Special labelling

EUH210 Safety data sheet available on request.

Contains: Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1).
EUH208 May produce an allergic reaction.

2.3 Other hazards

Human health dangers

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Environmental hazards

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.

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other hazards

Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable



3.2 Mixtures

The product is a mixture.

Range [%]	Substance
0,00015 - < 0,0015	Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1)
	CAS: 55965-84-9, EINECS/ELINCS: 611-341-5, EU-INDEX: 613-167-00-5
	GHS/CLP: Acute Tox. 3: H301 - Acute Tox. 2: H310 H330 - Skin Corr. 1C: H314 - Eye Dam. 1: H318 - Skin Sens. 1A: H317 - Aquatic Acute 1: H400 - Aquatic Chronic 1: H410 - EUH071, M-Factor (acute): 100, M-Factor (chronic): 100
	SCL [%]: 0,06 - <0,6: Skin Irrit. 2: H315, 0,06 - <0,6: Eye Irrit. 2: H319, >=0,6: Skin Corr. 1A: H314, >=0,6: Eye Dam. 1: H318, >=0,0015: Skin Sens. 1: H317

Comment on component parts

For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Take off contaminated clothing and wash before reuse.

Inhalation

Ensure supply of fresh air.
In the event of symptoms seek medical treatment.

Skin contact

When in contact with the skin, clean with soap and water.
If skin irritation or rash occurs: Get medical advice/attention.

Eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion

Rinse out mouth and give plenty of water to drink.
Do not induce vomiting.
Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Forward this sheet to your doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Product itself is non-combustible. Fire extinguishing method of surrounding areas must be considered.

Extinguishing media that must not be used

Full water jet

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.

5.3 Advice for firefighters

Use self-contained breathing apparatus.
Fire residues must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

High risk of slipping due to leakage/spillage of product.
Ensure adequate ventilation.
Wear suitable protective equipment. For personal protection see SECTION 8.

6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the drains/surface waters/groundwater.



6.3 Methods and material for containment and cleaning up

Take up with absorbent material (e.g. sand, sawdust).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
Avoid contact with eyes and skin. Use personal protective equipment.
Observe the general safety regulations when handling chemicals.

Do not eat, drink or smoke when using this product.
Wash hands before breaks and after work.
Take off contaminated clothing and wash before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Prevent penetration into the ground.
Do not store together with food and animal food/diet.
Keep container tightly closed.
Protect from heat/overheating.

Storage class (TRGS 510)

Storage class 12 (VCI)

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored DE (TRGS 900)

Substance
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1)
CAS: 55965-84-9, EINECS/ELINCS: 611-341-5, EU-INDEX: 613-167-00-5
Exposure limit: 0,2 mg/m ³ , einatembare Fraktion (DFG)
Factor: 0,4 mg/m ³

Ingredients with occupational exposure limits to be monitored EU (2004/37/EG)

not relevant

8.2 Exposure controls

Additional advice on system design Ensure adequate ventilation on workstation.

Eye protection If there is a risk of splashing:
safety glasses (EN 166:2001)

Hand protection > 0,1 mm; Nitrile rubber, >60 min (EN 374-1/-2/-3).
The details concerned are recommendations. Please contact the glove supplier for further information.

Skin protection Protective clothing (EN 340)

Other Avoid contact with eyes and skin.
Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.

Respiratory protection If workplace limit values are exceeded or if there is insufficient ventilation:
Short term: filter apparatus, filter A. (DIN EN 14387)

Thermal hazards none

Delimitation and monitoring of the environmental exposition Comply with applicable environmental regulations limiting discharge to air, water and soil.



SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Form	liquid
Color	colourless transparent
Odor	characteristic
Odour threshold	No information available.
pH-value	4,1 - 4,3
pH-value [1%]	No information available.
Boiling point or initial boiling point and boiling range [°C]	No information available.
Flash point [°C]	not applicable
Flammability	The product is not combustible.
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	none
Vapour pressure/gas pressure [kPa]	No information available.
Density [g/cm ³]	0,99 - 1,01
Relative density	No information available.
Bulk density [kg/m ³]	not applicable
Solubility in water	miscible
Solubility other solvents	No information available.
Partition coefficient n-octanol/water (log value)	not applicable
Kinematic viscosity	not relevant
Relative vapour density	No information available.
Melting point [°C]	No information available.
Auto-ignition temperature [°C]	not applicable
Decomposition temperature [°C]	No information available.
Particle characteristics	not applicable

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

No hazardous reactions known.

10.4 Conditions to avoid

No information available.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

No decomposition if used and stored according to specifications.



SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity Based on the available information, the classification criteria are not fulfilled.

Substance
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
LD50, oral, Rat, 53 mg/kg
LD50, oral, 64 mg/kg (ECHA, CLH Report)

Acute dermal toxicity Based on the available information, the classification criteria are not fulfilled.

Substance
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
LD50, dermal, Rabbit, 87,12 mg/kg (ECHA, CLH Report)

Acute inhalational toxicity Based on the available information, the classification criteria are not fulfilled.

Substance
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
LC50, inhalative, Rat, 0,171 mg/l/4h (ECHA, CLH Report)

Serious eye damage/irritation Based on the available information, the classification criteria are not fulfilled.

Substance
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
Causes serious eye damage.

Skin corrosion/irritation Based on the available information, the classification criteria are not fulfilled.

Substance
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
corrosive

Respiratory or skin sensitisation Based on the available information, the classification criteria are not fulfilled.
The labelling was carried out based on substance-specific concentration limits.

Substance
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
dermal, sensitising

Specific target organ toxicity — single exposure Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — repeated exposure Based on the available information, the classification criteria are not fulfilled.

Mutagenicity Based on the available information, the classification criteria are not fulfilled.

Substance
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
in vitro, negativ
in vivo, negativ

Reproduction toxicity Based on the available information, the classification criteria are not fulfilled.

Carcinogenicity Based on the available information, the classification criteria are not fulfilled.

Aspiration hazard Based on the available information, the classification criteria are not fulfilled.

General remarks

Toxicological data of complete product are not available.



11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

11.2.2 Other information

none

SECTION 12: Ecological information

12.1 Toxicity

Substance
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
LC50, (96h), Oncorhynchus mykiss, 0,19 mg/l
EC50, (48h), Daphnia magna, 0,18 mg/l
ErC50, Skeletonema costatum, 0,003 mg/l

12.2 Persistence and degradability

Behaviour in environment compartments

No information available.

Behaviour in sewage plant

No information available.

Biological degradability

Substance
Mixture: 5-chloro-2-methyl-2H- isothiazol-3-one/2-methyl-2H-isothiazol-3-one (3:1), CAS: 55965-84-9
(28d), > 70, OECD 301 D

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

Spillages may penetrate the soil causing ground water contamination.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Do not discharge product unmonitored into the environment or into the drainage.
Ecological data of complete product are not available.



SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Coordinate disposal with the authorities if necessary.

Waste no. (recommended)

070701*
160506*

Contaminated packaging

Uncontaminated packaging may be taken for recycling.

Waste no. (recommended)

150102

SECTION 14: Transport information

14.1 UN number or ID number

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.2 UN proper shipping name

Transport by land according to ADR/RID NO DANGEROUS GOODS

Inland navigation (ADN) NO DANGEROUS GOODS

Marine transport in accordance with IMDG NOT CLASSIFIED AS "DANGEROUS GOODS"

Air transport in accordance with IATA NOT CLASSIFIED AS "DANGEROUS GOODS"

14.3 Transport hazard class(es)

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable



14.4 Packing group

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.5 Environmental hazards

Transport by land according to ADR/RID no

Inland navigation (ADN) no

Marine transport in accordance with IMDG no

Air transport in accordance with IATA no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EEC-REGULATIONS 2008/98/EG (2000/532/EC); 2010/75/EU; 2004/42/EG; (EG) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EWG ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014; (EU) 2019/1148; (EU) 2019/1021, (EU) 2023/707

- **Comment on component parts** Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.

- **Annex XIV (REACH)** According to Annex XIV of Regulation (EC) 1907/2006 (REACH) the product does not contain any substances \geq 0.1% that are subject to authorisation.

- **Annex XVII (REACH)** According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product contains \geq 0.1% of substances with the following restrictions. 75

According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product is not subject to any restrictions.

TRANSPORT-REGULATIONS ADR (2025); IMDG-Code (2025, 42. Amdt.); IATA-DGR (2025)

NATIONAL REGULATIONS (DE): Hazardous Substances Ordinance - GefStoffV 21.07.2021; Detergent and Cleaning Agents Act - WRMG; Federal Water Act - WHG; Technical Rule for Hazardous Substances - TRGS: 200, 220, 615, 900, 905.

- **Water hazard class** not hazardous for water, acc. AwSV of 18.04.2017

- **Decree for case of interference, observe limits** not applicable

- **Class. according to TA-Luft** not applicable

- **Storage class (TRGS 510)** Storage class 12 (VCI)

- **Observe employment restrictions for people** Observe employment restrictions for young people.

- **VOC (2010/75/CE)** 0 %

- **Other regulations** TRGS 510: Storage of hazardous substances in non-stationary containers

15.2 Chemical safety assessment

not applicable



SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H410 Very toxic to aquatic life with long lasting effects.
H400 Very toxic to aquatic life.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H314 Causes severe skin burns and eye damage.
H310+H330 Fatal in contact with skin or if inhaled.
H301 Toxic if swallowed.

16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform Chemical Information Database
IVIS = In vitro irritation score
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV@/TWA = Threshold limit value – time-weighted average
TLV@STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure

Modified position

none

Copyright: Chemiebüro®



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

1.1 Product identifier

abia Stopping reagent
Article number: SR.020

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

1.2.1 Relevant uses

Laboratory reagents

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company AB Diagnostic Systems GmbH
Sportfliegerstraße 4
12487 Berlin / GERMANY
Phone +49 30 208 9871-0
Fax +49 30 208 987 1-99
Homepage www.ab-ds.de
E-mail info@ab-ds.de

Address enquiries to

Technical information

info@ab-ds.de

Safety Data Sheet

sdb@chemiebuero.de (No dispatch of safety data sheets)

Safety data sheets are available from the supplier.

1.4 Emergency telephone number

Company +49 30 208 9871-14

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]

No classification.

2.2 Label elements

The product is required to be labelled in accordance with regulation CLP.

Hazard pictograms

none

Signal word

none

Hazard statements

none

Precautionary statements

none

Special labelling

EUH210 Safety data sheet available on request.

2.3 Other hazards

Human health dangers

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Environmental hazards

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.

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other hazards

Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable



3.2 Mixtures

The product is a mixture.

Range [%]	Substance
1 - < 3	Sulphuric acid
	CAS: 7664-93-9, EINECS/ELINCS: 231-639-5, EU-INDEX: 016-020-00-8
	GHS/CLP: Skin Corr. 1A: H314 - Eye Dam. 1: H318 - Met. Corr. 1: H290
	SCL [%]: 5 - <15: Skin Irrit. 2: H315, 5 - <15: Eye Irrit. 2: H319, >= 15: Skin Corr. 1A: H314

Comment on component parts

For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Take off contaminated clothing and wash before reuse.

Inhalation

Ensure supply of fresh air.
In the event of symptoms seek medical treatment.

Skin contact

When in contact with the skin, clean with soap and water.
Consult a doctor if skin irritation persists.

Eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion

Rinse out mouth and give plenty of water to drink.
Do not induce vomiting.
Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Forward this sheet to your doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Product itself is non-combustible. Fire extinguishing method of surrounding areas must be considered.

Extinguishing media that must not be used

Full water jet

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.
Sulphur oxides (SO_x).

5.3 Advice for firefighters

Use self-contained breathing apparatus.
Fire residues must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

High risk of slipping due to leakage/spillage of product.
Ensure adequate ventilation.
Wear suitable protective equipment. For personal protection see SECTION 8.

6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up with absorbent material (e.g. acid binder).
Dispose of absorbed material in accordance within the regulations.



6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
Avoid contact with eyes and skin. Use personal protective equipment.
Observe the general safety regulations when handling chemicals.

Do not eat, drink or smoke when using this product.
Wash hands before breaks and after work.
Take off contaminated clothing and wash before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Prevent penetration into the ground.
Do not store together with food and animal food/diet.
Keep container tightly closed.
Protect from heat/overheating.

Storage class (TRGS 510)

Storage class 12 (VCI)

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored DE (TRGS 900)

Substance
Sulphuric acid
CAS: 7664-93-9, EINECS/ELINCS: 231-639-5, EU-INDEX: 016-020-00-8
Exposure limit: 0,1 mg/m ³ , E, DFG, EU, Y
Factor: 1(l)

Ingredients with occupational exposure limits to be monitored EU (2004/37/EG)

Substance / EC LIMIT VALUES
Sulphuric acid
CAS: 7664-93-9, EINECS/ELINCS: 231-639-5, EU-INDEX: 016-020-00-8
Eight hours: 0,05 mg/m ³ , thoracic fraction

8.2 Exposure controls

Additional advice on system design Ensure adequate ventilation on workstation.

Eye protection If there is a risk of splashing:
safety glasses (EN 166:2001)

Hand protection > 0,1 mm; Viton, >60 min (EN 374-1/-2/-3).
The details concerned are recommendations. Please contact the glove supplier for further information.

Skin protection Protective clothing (EN 340)

Other Avoid contact with eyes and skin.
Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.

Respiratory protection If workplace limit values are exceeded or if there is insufficient ventilation:
Short term: filter apparatus, filter B. (DIN EN 14387)

Thermal hazards none

Delimitation and monitoring of the environmental exposition Comply with applicable environmental regulations limiting discharge to air, water and soil.



SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Form	liquid
Color	colourless transparent
Odor	characteristic
Odour threshold	No information available.
pH-value	0,6 - 0,7
pH-value [1%]	No information available.
Boiling point or initial boiling point and boiling range [°C]	No information available.
Flash point [°C]	not applicable
Flammability	The product is not combustible.
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	none
Vapour pressure/gas pressure [kPa]	No information available.
Density [g/cm ³]	1,009 - 1,015
Relative density	No information available.
Bulk density [kg/m ³]	not applicable
Solubility in water	miscible
Solubility other solvents	No information available.
Partition coefficient n-octanol/water (log value)	not applicable
Kinematic viscosity	not relevant
Relative vapour density	No information available.
Melting point [°C]	No information available.
Auto-ignition temperature [°C]	not applicable
Decomposition temperature [°C]	No information available.
Particle characteristics	not applicable

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

See SECTION 10.3.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Reactions with strong oxidizing agents.
Reactions with alkalis (lyes).
Reactions with alkali metals.

10.4 Conditions to avoid

No information available.

10.5 Incompatible materials

See SECTION 10.3.



10.6 Hazardous decomposition products

No decomposition if used and stored according to specifications.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity Based on the available information, the classification criteria are not fulfilled.

Substance
Sulphuric acid, CAS: 7664-93-9
LD50, oral, Rat, 2140 mg/kg

Acute dermal toxicity Based on the available information, the classification criteria are not fulfilled.

Acute inhalational toxicity Based on the available information, the classification criteria are not fulfilled.

Substance
Sulphuric acid, CAS: 7664-93-9
LC50, inhalative, Rat, 0,375 mg/l (OECD TG 403 aerosols)

Serious eye damage/irritation Based on the available information, the classification criteria are not fulfilled.
No classification due to substance-specific concentration limits.

Substance
Sulphuric acid, CAS: 7664-93-9
corrosive

Skin corrosion/irritation Based on the available information, the classification criteria are not fulfilled.
No classification due to substance-specific concentration limits.

Substance
Sulphuric acid, CAS: 7664-93-9
corrosive

Respiratory or skin sensitisation Based on the available information, the classification criteria are not fulfilled.

Substance
Sulphuric acid, CAS: 7664-93-9
no adverse effect observed

Specific target organ toxicity — single exposure Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — repeated exposure Based on the available information, the classification criteria are not fulfilled.

Mutagenicity Based on the available information, the classification criteria are not fulfilled.

Substance
Sulphuric acid, CAS: 7664-93-9
Salmonella typhimurium, Ames test, negativ

Reproduction toxicity Based on the available information, the classification criteria are not fulfilled.

Carcinogenicity Based on the available information, the classification criteria are not fulfilled.

Aspiration hazard Based on the available information, the classification criteria are not fulfilled.

General remarks

Toxicological data of complete product are not available.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

11.2.2 Other information none



SECTION 12: Ecological information

12.1 Toxicity

Substance
Sulphuric acid, CAS: 7664-93-9
EC50, (48h), Daphnia magna, > 100 mg/l, OECD 202
ErC50, (72h), Desmodemus subspicatus, > 100 mg/l, OECD 201

12.2 Persistence and degradability

Behaviour in environment compartments No information available.

Behaviour in sewage plant No information available.

Biological degradability

Substance
Sulphuric acid, CAS: 7664-93-9
The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

Spillages may penetrate the soil causing ground water contamination.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Do not discharge product unmonitored into the environment or into the drainage.

Ecological data of complete product are not available.

Harmful effect due to pH shift.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Coordinate disposal with the authorities if necessary.

Waste no. (recommended) 060101*
160506*

Contaminated packaging

Uncontaminated packaging may be taken for recycling.

Waste no. (recommended) 150102



SECTION 14: Transport information

14.1 UN number or ID number

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.2 UN proper shipping name

Transport by land according to ADR/RID NO DANGEROUS GOODS

Inland navigation (ADN) NO DANGEROUS GOODS

Marine transport in accordance with IMDG NOT CLASSIFIED AS "DANGEROUS GOODS"

Air transport in accordance with IATA NOT CLASSIFIED AS "DANGEROUS GOODS"

14.3 Transport hazard class(es)

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.4 Packing group

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.5 Environmental hazards

Transport by land according to ADR/RID no

Inland navigation (ADN) no

Marine transport in accordance with IMDG no

Air transport in accordance with IATA no



14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EEC-REGULATIONS	2008/98/EG (2000/532/EC); 2010/75/EU; 2004/42/EG; (EG) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EWG ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014; (EU) 2019/1148; (EU) 2019/1021, (EU) 2023/707
- Comment on component parts	Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
- Annex XIV (REACH)	According to Annex XIV of Regulation (EC) 1907/2006 (REACH) the product does not contain any substances \geq 0.1% that are subject to authorisation.
- Annex XVII (REACH)	According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product contains \geq 0.1% of substances with the following restrictions. 75 According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product is not subject to any restrictions.
TRANSPORT-REGULATIONS	ADR (2025); IMDG-Code (2025, 42. Amdt.); IATA-DGR (2025)
NATIONAL REGULATIONS (DE):	Hazardous Substances Ordinance - GefStoffV 21.07.2021; Detergent and Cleaning Agents Act - WRMG; Federal Water Act - WHG; Technical Rule for Hazardous Substances - TRGS: 200, 220, 615, 900, 905.
- Water hazard class	not hazardous for water, acc. AwSV of 18.04.2017
- Decree for case of interference, observe limits	not applicable
- Class. according to TA-Luft	not applicable
- Storage class (TRGS 510)	Storage class 12 (VCI)
- Observe employment restrictions for people	Observe employment restrictions for young people.
- VOC (2010/75/CE)	0 %
- Other regulations	TRGS 510: Storage of hazardous substances in non-stationary containers

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H290 May be corrosive to metals.
H318 Causes serious eye damage.
H314 Causes severe skin burns and eye damage.



16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform Chemical Information Database
IVIS = In vitro irritation score
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV@/TWA = Threshold limit value – time-weighted average
TLV@STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure

Modified position

none

Copyright: Chemiebüro®