

Seramun® Wash buffer A

Revision date: 18.07.2024

Print date: 18.07.2024

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product name: Seramun® Wash buffer A
Article number: LSG-0-000-2101
LSG-0-000-2101N

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Component for in vitro tests.
Component for in vitro tests for scientific research and development or quality control analysis.
Restricted to professional users.

1.3. Details of the supplier of the safety data sheet

Company name: Seramun Diagnostica GmbH
Street: Spreehagener Str. 1
Place: 15754 Heidesee
Germany
Telephone: +49 33767 791-10
E-mail: regulatory@seramun.com
Internet: www.seramun.com

1.4. Emergency telephone number:

+49 33767 791-10
from 9:00 am to 3:00 pm CET, excluding weekends and public holidays in
Germany

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

This mixture is not classified as hazardous in accordance with Regulation (EC) No 1272/2008.

2.2. Label elements**Regulation (EC) No 1272/2008****Special labelling of certain mixtures**

EUH208 Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.
EUH210 Safety data sheet available on request.

Labelling of packages where the contents do not exceed 125 ml

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2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients**3.2. Mixtures**

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Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)			< 0.0015 %
	611-341-5	613-167-00-5	01-2120764691-48	
	Acute Tox. 2, Acute Tox. 2, Acute Tox. 3, Skin Corr. 1C, Eye Dam. 1, Skin Sens. 1A, Aquatic Acute 1, Aquatic Chronic 1; H330 H310 H301 H314 H318 H317 H400 H410 EUH071			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
55965-84-9	611-341-5	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	< 0.0015 %
	inhalation: ATE = 0,5 mg/l (vapours); inhalation: LC50 = 0.171 mg/l (dusts or mists); dermal: LD50 = 87.12 mg/kg; oral: LD50 = 64 mg/kg Skin Corr. 1C; H314: >= 0,6 - 100 Skin Irrit. 2; H315: >= 0,06 - < 0,6 Eye Dam. 1; H318: >= 0,6 - 100 Eye Irrit. 2; H319: >= 0,06 - < 0,6 Skin Sens. 1A; H317: >= 0,0015 - 100 Aquatic Acute 1; H400: M=100 Aquatic Chronic 1; H410: M=100		

SECTION 4: First aid measures
4.1. Description of first aid measures
General information

When in doubt or if symptoms are observed, get medical advice.

After inhalation

Provide fresh air.

After contact with skin

Wash with plenty of water.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.

Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth thoroughly with water.

4.2. Most important symptoms and effects, both acute and delayed

Allergic reactions.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures
5.1. Extinguishing media
Suitable extinguishing media

 Foam
 Dry extinguishing powder
 Carbon dioxide (CO₂)

Unsuitable extinguishing media

Full water jet

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5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated:

Carbon dioxide (CO₂)

Carbon monoxide

Nitrogen oxides (NO_x)**5.3. Advice for firefighters**

Co-ordinate fire-fighting measures to the fire surroundings.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Use personal protection equipment.

For non-emergency personnel

Wear personal protection equipment (refer to section 8).

For emergency responders

Use personal protective equipment as required.

6.2. Environmental precautions

No special environmental measures are necessary.

6.3. Methods and material for containment and cleaning up**For containment**

Take up mechanically.

For cleaning up

Wipe up with absorbent material (eg. cloth, fleece).

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Observe instructions for use.

Advice on protection against fire and explosion

No special measures are necessary.

Advice on general occupational hygiene

When using do not eat, drink, smoke, sniff.

Wash hands before breaks and after work.

Take off contaminated clothing.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed.

Keep cool.

Keep/Store only in original container.

Never return spills in original containers for re-use.

Hints on joint storage

Keep away from: Food and feedingstuffs

Further information on storage conditions

storage temperature of 2 °C - 8 °C.

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7.3. Specific end use(s)

Component for in vitro tests.
 Component for in vitro tests for scientific research and development or quality control analysis.
 Restricted to professional users.

SECTION 8: Exposure controls/personal protection
8.1. Control parameters
DNEL/DMEL values

CAS No	Name of agent		
DNEL type	Exposure route	Effect	Value
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)		
Worker DNEL, long-term	inhalation	systemic	0.02 mg/m ³
Worker DNEL, acute	inhalation	systemic	0.04 mg/m ³

PNEC values

CAS No	Name of agent	
Environmental compartment	Value	
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	
Freshwater	3.39 mg/kg	
Marine water	3.39 mg/kg	
Freshwater sediment	0.027 mg/kg	
Marine sediment	0.027 mg/kg	
Micro-organisms in sewage treatment plants (STP)	0.23 mg/l	
Soil	0.01 mg/kg	

Additional advice on limit values

To date, no national critical limit values exist.

8.2. Exposure controls

Individual protection measures, such as personal protective equipment
Eye/face protection

Eye protection: not required.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material: ≥ 0.1 mm

Breakthrough time: > 480 min

Take recovery periods for skin regeneration.

Skin protection

Use of protective clothing

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Respiratory protection

Usually no personal respiratory protection necessary.

Thermal hazards

No special handling advices are necessary.

Environmental exposure controls

No special environmental measures are necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid
Colour: colourless
Odour: odourless

Test method

Melting point/freezing point:	not determined	
Boiling point or initial boiling point and boiling range:	100 °C	Calculation method.
Flammability:	not determined	
Lower explosion limits:	not determined	
Upper explosion limits:	not determined	
Flash point:	380 °C	Calculated flash point.
Auto-ignition temperature:	not determined	
Decomposition temperature:	not determined	
pH-Value (at 20 °C):	7.2-7.6 (diluted 1:10)	
Viscosity / kinematic:	not determined	
Water solubility: (at 20 °C)	completely miscible	
Solubility in other solvents	not determined	
Partition coefficient n-octanol/water:	not applicable	
Vapour pressure: (at 20 °C)	not determined	
Vapour pressure: (at 50 °C)	not determined	
Density (at 20 °C):	1.110 g/cm ³	
Relative vapour density:	not determined	
Particle characteristics:	not applicable	

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

The product is not: Explosive.

Oxidizing properties

The product is not: oxidising.

Other safety characteristics

Solid content: not determined

Further Information

No known hazardous decomposition products.

SECTION 10: Stability and reactivity

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10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Keep away from heat.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information
11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity

Based on available data, the classification criteria are not met.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)				
	oral	LD50 64 mg/kg	Rat	European Chemicals Agency	OECD 401
	dermal	LD50 87.12 mg/kg	Rabbit	European Chemicals Agency	OECD 402
	inhalation vapour	ATE 0,5 mg/l			
	inhalation (4 h) dust/mist	LC50 0.171 mg/l	Rat	European Chemicals Agency	OECD 403

Irritation and corrosivity

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

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Information on likely routes of exposure

No information available.

Additional information on tests

There are no data available on the preparation/mixture itself.

11.2. Information on other hazards
Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Further information

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information
12.1. Toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)					
	Acute fish toxicity	LC50 mg/l	0.19	96 h	Oncorhynchus mykiss (Rainbow trout)	European Chemicals Agency EPA OPP 72-1
	Acute algae toxicity	ErC50 mg/l	0.0052	72 h	Skeletonema costatum	European Chemicals Agency OECD 201
	Acute crustacea toxicity	EC50 mg/l	0.10	48 h	Daphnia magna (Big water flea)	European Chemicals Agency OECD 202
	Fish toxicity	NOEC mg/l	0.02	38 d	Danio rerio (zebrafish)	European Chemicals Agency OECD 210
	Algae toxicity	NOEC mg/l	0.00049	2 d	Skeletonema costatum	European Chemicals Agency OECD 201
	Crustacea toxicity	NOEC mg/l	0.0036	21 d	Daphnia magna (Big water flea)	European Chemicals Agency OECD 202
	Acute bacteria toxicity	EC50 mg/l ()	0.91	3 h	Activated sludge	European Chemicals Agency OECD 209

12.2. Persistence and degradability

The single components are biodegradable.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)			
	OECD 301B	<50 %	28	European Chemicals Agency
	The single components are biodegradable.			

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	0.401

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BCF

CAS No	Chemical name	BCF	Species	Source
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	0.12	Lepomis macrochirus (Bluegill)	European Chemicals Agency

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations
13.1. Waste treatment methods
Disposal recommendations

Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

160509 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

List of Wastes Code - used product

160509 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

List of Wastes Code - contaminated packaging

150102 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); plastic packaging

Contaminated packaging

Non-contaminated packages may be recycled.

SECTION 14: Transport information
Land transport (ADR/RID)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.

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14.4. Packing group: No dangerous good in sense of this transport regulation.**Air transport (ICAO-TI/IATA-DGR)****14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.**14.4. Packing group:** No dangerous good in sense of this transport regulation.**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 75

Information according to Directive 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

National regulatory informationWater hazard class (D): 1 - slightly hazardous to water
Skin resorption/Sensitization: Causes allergic hypersensitivity reactions.**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 1,4,7,8,9,12.

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Abbreviations and acronyms

Acute Tox: Acute toxicity
 Skin Corr: Skin corrosion
 Eye Dam: Eye damage
 Skin Sens: Skin sensitisation
 Aquatic Acute: Acute aquatic hazard
 Aquatic Chronic: Chronic aquatic hazard
 CLP: Classification, labelling and Packaging
 REACH: Registration, Evaluation and Authorization of Chemicals
 GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
 UN: United Nations
 CAS: Chemical Abstracts Service
 DNEL: Derived No Effect Level
 DMEL: Derived Minimal Effect Level
 PNEC: Predicted No Effect Concentration
 ATE: Acute toxicity estimate
 LC50: Lethal concentration, 50%
 LD50: Lethal dose, 50%
 LL50: Lethal loading, 50%
 EL50: Effect loading, 50%
 EC50: Effective Concentration 50%
 ErC50: Effective Concentration 50%, growth rate
 NOEC: No Observed Effect Concentration
 BCF: Bio-concentration factor
 PBT: persistent, bioaccumulative, toxic
 vPvB: very persistent, very bioaccumulative
 ADR: Accord européen sur le transport des marchandises dangereuses par Route
 (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 RID: Regulations concerning the international carriage of dangerous goods by rail
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation
 intérieures)
 IMDG: International Maritime Code for Dangerous Goods
 EmS: Emergency Schedules
 MFAG: Medical First Aid Guide
 IATA: International Air Transport Association
 ICAO: International Civil Aviation Organization
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships
 IBC: Intermediate Bulk Container
 SVHC: Substance of Very High Concern
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

Relevant H and EUH statements (number and full text)

H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.
EUH208	Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.
EUH210	Safety data sheet available on request.

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Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)

Seramun® Sample diluent C

Revision date: 16.07.2024

Print date: 16.07.2024

SECTION 1: Identification of the substance/mixture and of the company/undertaking
1.1. Product identifier

 Product name: Seramun® Sample diluent C
 Article number: LSG-1-000-3101N

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

 Component for in vitro tests for scientific research and development or quality control analysis.
 Restricted to professional users.

1.3. Details of the supplier of the safety data sheet

 Company name: Seramun Diagnostica GmbH
 Street: Spreenhagener Str. 1
 Place: 15754 Heidesee
 Germany
 Telephone: +49 33767 791-10
 E-mail: regulatory@seramun.com
 Internet: www.seramun.com

1.4. Emergency telephone number:

 +49 33767 791-10
 from 9:00 am to 3:00 pm CET, excluding weekends and public holidays in Germany

SECTION 2: Hazards identification
2.1. Classification of the substance or mixture
Regulation (EC) No 1272/2008

This mixture is not classified as hazardous in accordance with Regulation (EC) No 1272/2008.

2.2. Label elements
Regulation (EC) No 1272/2008
Special labelling of certain mixtures

 EUH208 Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.
 EUH210 Safety data sheet available on request.

Labelling of packages where the contents do not exceed 125 ml

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2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients
3.2. Mixtures
Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)			< 0.0015 %
	611-341-5	613-167-00-5	01-2120764691-48	
	Acute Tox. 2, Acute Tox. 2, Acute Tox. 3, Skin Corr. 1C, Eye Dam. 1, Skin Sens. 1A, Aquatic Acute 1, Aquatic Chronic 1; H330 H310 H301 H314 H318 H317 H400 H410 EUH071			

Full text of H and EUH statements: see section 16.

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Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
55965-84-9	611-341-5	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	< 0.0015 %
	inhalation: ATE = 0,5 mg/l (vapours); inhalation: LC50 = 0.171 mg/l (dusts or mists); dermal: LD50 = 87.12 mg/kg; oral: LD50 = 64 mg/kg Skin Corr. 1C; H314: >= 0,6 - 100 Skin Irrit. 2; H315: >= 0,06 - < 0,6 Eye Dam. 1; H318: >= 0,6 - 100 Eye Irrit. 2; H319: >= 0,06 - < 0,6 Skin Sens. 1A; H317: >= 0,0015 - 100 Aquatic Acute 1; H400: M=100 Aquatic Chronic 1; H410: M=100		

SECTION 4: First aid measures
4.1. Description of first aid measures
General information

When in doubt or if symptoms are observed, get medical advice.

After inhalation

Provide fresh air.

After contact with skin

Wash with plenty of water.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.
 Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth thoroughly with water.

4.2. Most important symptoms and effects, both acute and delayed

Allergic reactions

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures
5.1. Extinguishing media
Suitable extinguishing media

Foam
 Dry extinguishing powder
 Carbon dioxide (CO₂)

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated:
 Carbon monoxide
 Carbon dioxide (CO₂)

5.3. Advice for firefighters

Co-ordinate fire-fighting measures to the fire surroundings.

SECTION 6: Accidental release measures
6.1. Personal precautions, protective equipment and emergency procedures
General advice

Use personal protection equipment.

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For non-emergency personnel

Wear personal protection equipment (refer to section 8).

For emergency responders

Use personal protective equipment as required.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up**For containment**

Take up mechanically.

For cleaning up

Wipe up with absorbent material (eg. cloth, fleece).

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Observe instructions for use.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

When using do not eat, drink, smoke, sniff.

Wash hands before breaks and after work.

Take off contaminated clothing.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed.

Keep cool.

Keep/Store only in original container.

Never return spills in original containers for re-use.

Hints on joint storage

Keep away from: Food and feedingstuffs

Further information on storage conditions

storage temperature of 2 °C - 8 °C.

7.3. Specific end use(s)

Component for in vitro tests for scientific research and development or quality control analysis.

Restricted to professional users.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

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DNEL/DMEL values

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Worker DNEL, long-term	inhalation	systemic	0.02 mg/m ³
Worker DNEL, acute	inhalation	systemic	0.04 mg/m ³

PNEC values

CAS No	Name of agent	
Environmental compartment	Value	
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	
Freshwater	3.39 mg/kg	
Marine water	3.39 mg/kg	
Freshwater sediment	0.027 mg/kg	
Marine sediment	0.027 mg/kg	
Micro-organisms in sewage treatment plants (STP)	0.23 mg/l	
Soil	0.01 mg/kg	

Additional advice on limit values

Does not contain substances above concentration limits fixing an occupational exposure limit.

8.2. Exposure controls
Individual protection measures, such as personal protective equipment
Eye/face protection

Eye protection: not required.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material \geq 0.1 mm

Breakthrough time: > 480 min

Take recovery periods for skin regeneration.

Skin protection

Use of protective clothing

Respiratory protection

Usually no personal respiratory protection necessary.

Thermal hazards

No special handling advices are necessary.

Environmental exposure controls

Avoid release to the environment.

SECTION 9: Physical and chemical properties
9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	red
Odour:	odourless

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Test method

Melting point/freezing point:	not determined	
Boiling point or initial boiling point and boiling range:	100 °C	Calculation method.
Flammability:	not determined	
Lower explosion limits:	not determined	
Upper explosion limits:	not determined	
Flash point:	380 °C	Calculated flash point.
Auto-ignition temperature:	not determined	
Decomposition temperature:	not determined	
pH-Value (at 20 °C):	7.3-7.5	Experimental data
Viscosity / kinematic:	not determined	
Water solubility:	completely miscible	
(at 20 °C)		
Solubility in other solvents		
not determined		
Partition coefficient n-octanol/water:	not applicable	
Vapour pressure:	not determined	
(at 20 °C)		
Density (at 20 °C):	1.0082 g/cm ³	Experimental data
Relative vapour density:	not determined	
Particle characteristics:	not applicable	

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

The product is not: Explosive.

Oxidizing properties

The product is not: oxidising.

Other safety characteristics

Solid content:

not determined

Further Information

No known hazardous decomposition products.

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Keep away from heat.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

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

Based on available data, the classification criteria are not met.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)				
	oral	LD50 64 mg/kg	Rat	European Chemicals Agency	OECD 401
	dermal	LD50 87.12 mg/kg	Rabbit	European Chemicals Agency	OECD 402
	inhalation vapour	ATE 0,5 mg/l			
	inhalation (4 h) dust/mist	LC50 0.171 mg/l	Rat	European Chemicals Agency	OECD 403

Irritation and corrosivity

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

No information available.

Additional information on tests

There are no data available on the preparation/mixture itself.

11.2. Information on other hazards
Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Further information

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information
12.1. Toxicity

Based on available data, the classification criteria are not met.

The product is not: Ecotoxic.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)					
	Acute fish toxicity	LC50 mg/l	0.19	96 h	Oncorhynchus mykiss (Rainbow trout)	European Chemicals Agency EPA OPP 72-1
	Acute algae toxicity	ErC50 mg/l	0.0052	72 h	Skeletonema costatum	European Chemicals Agency OECD 201
	Acute crustacea toxicity	EC50 mg/l	0.10	48 h	Daphnia magna (Big water flea)	European Chemicals Agency OECD 202
	Fish toxicity	NOEC mg/l	0.02	38 d	Danio rerio (zebrafish)	European Chemicals Agency OECD 210
	Algae toxicity	NOEC mg/l	0.00049	2 d	Skeletonema costatum	European Chemicals Agency OECD 201
	Crustacea toxicity	NOEC mg/l	0.0036	21 d	Daphnia magna (Big water flea)	European Chemicals Agency OECD 202
	Acute bacteria toxicity	EC50 mg/l ()	0.91	3 h	Activated sludge	European Chemicals Agency OECD 209

12.2. Persistence and degradability

The single components are biodegradable.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)			
	OECD 301B	<50 %	28	European Chemicals Agency
	The single components are biodegradable.			

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	0.401

BCF

CAS No	Chemical name	BCF	Species	Source
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	0.12	Lepomis macrochirus (Bluegill)	European Chemicals Agency

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

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13.1. Waste treatment methods
Disposal recommendations

Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

160509 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

List of Wastes Code - used product

160509 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

List of Wastes Code - contaminated packaging

150102 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); plastic packaging

Contaminated packaging

Non-contaminated packages may be recycled.

SECTION 14: Transport information
Land transport (ADR/RID)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

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EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 75

Information according to Directive
2012/18/EU (SEVESO III):

Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Water hazard class (D):

1 - slightly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 1,2,4,9,12.

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Abbreviations and acronyms

Acute Tox: Acute toxicity
 Skin Corr: Skin corrosion
 Eye Dam: Eye damage
 Skin Sens: Skin sensitisation
 Aquatic Acute: Acute aquatic hazard
 Aquatic Chronic: Chronic aquatic hazard
 CLP: Classification, labelling and Packaging
 REACH: Registration, Evaluation and Authorization of Chemicals
 GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
 UN: United Nations
 CAS: Chemical Abstracts Service
 DNEL: Derived No Effect Level
 DMEL: Derived Minimal Effect Level
 PNEC: Predicted No Effect Concentration
 ATE: Acute toxicity estimate
 LC50: Lethal concentration, 50%
 LD50: Lethal dose, 50%
 LL50: Lethal loading, 50%
 EL50: Effect loading, 50%
 EC50: Effective Concentration 50%
 ErC50: Effective Concentration 50%, growth rate
 NOEC: No Observed Effect Concentration
 BCF: Bio-concentration factor
 PBT: persistent, bioaccumulative, toxic
 vPvB: very persistent, very bioaccumulative
 ADR: Accord européen sur le transport des marchandises dangereuses par Route
 (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 RID: Regulations concerning the international carriage of dangerous goods by rail
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation
 intérieures)
 IMDG: International Maritime Code for Dangerous Goods
 EmS: Emergency Schedules
 MFAG: Medical First Aid Guide
 IATA: International Air Transport Association
 ICAO: International Civil Aviation Organization
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships
 IBC: Intermediate Bulk Container
 SVHC: Substance of Very High Concern
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

Relevant H and EUH statements (number and full text)

H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.
EUH208	Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.
EUH210	Safety data sheet available on request.

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Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)

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Precautionary statements

P280 Wear protective gloves/protective clothing.
 P302+P352 IF ON SKIN: Wash with plenty of water and soap.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

Labelling of packages where the contents do not exceed 125 ml
Signal word: Warning

Pictograms:

Hazard statements

H317-H412

Precautionary statements

P280-P302+P352-P333+P313

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients
3.2. Mixtures
Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)			<0.06 %
	611-341-5	613-167-00-5	01-2120764691-48	
	Acute Tox. 2, Acute Tox. 2, Acute Tox. 3, Skin Corr. 1C, Eye Dam. 1, Skin Sens. 1A, Aquatic Acute 1, Aquatic Chronic 1; H330 H310 H301 H314 H318 H317 H400 H410 EUH071			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
55965-84-9	611-341-5	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	<0.06 %
	inhalation: ATE = 0,5 mg/l (vapours); inhalation: LC50 = 0.171 mg/l (dusts or mists); dermal: LD50 = 87.12 mg/kg; oral: LD50 = 64 mg/kg Skin Corr. 1C; H314: >= 0,6 - 100 Skin Irrit. 2; H315: >= 0,06 - < 0,6 Eye Dam. 1; H318: >= 0,6 - 100 Eye Irrit. 2; H319: >= 0,06 - < 0,6 Skin Sens. 1A; H317: >= 0,0015 - 100 Aquatic Acute 1; H400: M=100 Aquatic Chronic 1; H410: M=100		

SECTION 4: First aid measures
4.1. Description of first aid measures
General information

When in doubt or if symptoms are observed, get medical advice.

After inhalation

Provide fresh air.

After contact with skin

Wash with plenty of water.

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Take off contaminated clothing and wash it before reuse.
If skin irritation occurs: Get medical advice/attention.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.
Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth thoroughly with water.

4.2. Most important symptoms and effects, both acute and delayed

Allergic reactions.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Foam
Dry extinguishing powder
Carbon dioxide (CO₂)

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated:

Carbon monoxide
Carbon dioxide (CO₂)

5.3. Advice for firefighters

Co-ordinate fire-fighting measures to the fire surroundings.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Use personal protection equipment.

For non-emergency personnel

Wear personal protection equipment (refer to section 8).

For emergency responders

Use personal protective equipment as required.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up**For containment**

Take up mechanically.

For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

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7.1. Precautions for safe handling
Advice on safe handling

Observe instructions for use.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

When using do not eat, drink, smoke, sniff.

Wash hands before breaks and after work.

Take off contaminated clothing.

7.2. Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels

Keep container tightly closed.

Keep cool.

Keep/Store only in original container.

Never return spills in original containers for re-use.

Hints on joint storage

Keep away from: Food and feedingstuffs

Further information on storage conditions

storage temperature of 2 °C - 8 °C.

7.3. Specific end use(s)

Component for in vitro tests for scientific research and development or quality control analysis.

Restricted to professional users.

SECTION 8: Exposure controls/personal protection
8.1. Control parameters
DNEL/DMEL values

CAS No	Name of agent		
DNEL type	Exposure route	Effect	Value
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)		
Worker DNEL, long-term	inhalation	systemic	0.02 mg/m ³
Worker DNEL, acute	inhalation	systemic	0.04 mg/m ³

PNEC values

CAS No	Name of agent	
Environmental compartment	Value	
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	
Freshwater	3.39 mg/kg	
Marine water	3.39 mg/kg	
Freshwater sediment	0.027 mg/kg	
Marine sediment	0.027 mg/kg	
Micro-organisms in sewage treatment plants (STP)	0.23 mg/l	
Soil	0.01 mg/kg	

Additional advice on limit values

Does not contain substances above concentration limits fixing an occupational exposure limit.

8.2. Exposure controls



Individual protection measures, such as personal protective equipment

Eye/face protection

Eye protection: not required.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material ≥ 0.1 mm

Breakthrough time: > 480 min

Take recovery periods for skin regeneration.

Skin protection

Use of protective clothing

Respiratory protection

Usually no personal respirative protection necessary.

Thermal hazards

No special handling advices are necessary.

Environmental exposure controls

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	red
Odour:	odourless

Test method

Melting point/freezing point:	not determined	
Boiling point or initial boiling point and boiling range:	100 °C	Calculation method.
Flammability:	not determined	
Lower explosion limits:	not determined	
Upper explosion limits:	not determined	
Flash point:	380 °C	Calculated flash point.
Decomposition temperature:	not determined	
pH-Value (at 20 °C):	7.3-7.5	Experimental data
Viscosity / kinematic:	not determined	
Water solubility: (at 20 °C)	completely miscible	
Solubility in other solvents not determined		
Partition coefficient n-octanol/water:	not applicable	
Vapour pressure: (at 20 °C)	not determined	

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Vapour pressure: (at 50 °C)	not determined
Density (at 20 °C):	1.0082 g/cm ³ Experimental data
Relative vapour density:	not determined
Particle characteristics:	not applicable

9.2. Other information
Information with regard to physical hazard classes
Explosive properties

The product is not: Explosive.

Oxidizing properties

The product is not: oxidising.

Other safety characteristics

Solid content:

not determined

Further Information

No known hazardous decomposition products.

SECTION 10: Stability and reactivity
10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Keep away from heat.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information
11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity

Based on available data, the classification criteria are not met.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)					
	oral	LD50	64 mg/kg	Rat	European Chemicals Agency	OECD 401
	dermal	LD50	87.12 mg/kg	Rabbit	European Chemicals Agency	OECD 402
	inhalation vapour	ATE	0,5 mg/l			
	inhalation (4 h) dust/mist	LC50	0.171 mg/l	Rat	European Chemicals Agency	OECD 403

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Irritation and corrosivity

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

May cause an allergic skin reaction. (reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1))

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

No information available.

Additional information on tests

There are no data available on the preparation/mixture itself.

11.2. Information on other hazards

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Further information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information

12.1. Toxicity

Harmful to aquatic life with long lasting effects.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)					
	Acute fish toxicity	LC50 mg/l	0.19	96 h	Oncorhynchus mykiss (Rainbow trout)	European Chemicals Agency EPA OPP 72-1
	Acute algae toxicity	ErC50 mg/l	0.0052	72 h	Skeletonema costatum	European Chemicals Agency OECD 201
	Acute crustacea toxicity	EC50 mg/l	0.10	48 h	Daphnia magna (Big water flea)	European Chemicals Agency OECD 202
	Fish toxicity	NOEC mg/l	0.02	38 d	Danio rerio (zebrafish)	European Chemicals Agency OECD 210
	Algae toxicity	NOEC mg/l	0.00049	2 d	Skeletonema costatum	European Chemicals Agency OECD 201
	Crustacea toxicity	NOEC mg/l	0.0036	21 d	Daphnia magna (Big water flea)	European Chemicals Agency OECD 202
	Acute bacteria toxicity	EC50 mg/l ()	0.91	3 h	Activated sludge	European Chemicals Agency OECD 209

12.2. Persistence and degradability

The single components are biodegradable.

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CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)			
	OECD 301B	<50 %	28	European Chemicals Agency
	The single components are biodegradable.			

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	0.401

BCF

CAS No	Chemical name	BCF	Species	Source
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	0.12	Lepomis macrochirus (Bluegill)	European Chemicals Agency

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations
13.1. Waste treatment methods
Disposal recommendations

Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

160509 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

List of Wastes Code - used product

160509 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

List of Wastes Code - contaminated packaging

150102 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); plastic packaging

Contaminated packaging

Non-contaminated packages may be recycled.

SECTION 14: Transport information

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Land transport (ADR/RID)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

Information according to Directive 2012/18/EU (SEVESO III):

Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D):

2 - obviously hazardous to water

Skin resorption/Sensitization:

Causes allergic hypersensitivity reactions.

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,2,4,9,12,13.

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Abbreviations and acronyms

Acute Tox: Acute toxicity
 Skin Corr: Skin corrosion
 Eye Dam: Eye damage
 Skin Sens: Skin sensitisation
 Aquatic Acute: Acute aquatic hazard
 Aquatic Chronic: Chronic aquatic hazard
 CLP: Classification, labelling and Packaging
 REACH: Registration, Evaluation and Authorization of Chemicals
 GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
 UN: United Nations
 CAS: Chemical Abstracts Service
 DNEL: Derived No Effect Level
 DMEL: Derived Minimal Effect Level
 PNEC: Predicted No Effect Concentration
 ATE: Acute toxicity estimate
 LC50: Lethal concentration, 50%
 LD50: Lethal dose, 50%
 LL50: Lethal loading, 50%
 EL50: Effect loading, 50%
 EC50: Effective Concentration 50%
 ErC50: Effective Concentration 50%, growth rate
 NOEC: No Observed Effect Concentration
 BCF: Bio-concentration factor
 PBT: persistent, bioaccumulative, toxic
 vPvB: very persistent, very bioaccumulative
 ADR: Accord européen sur le transport des marchandises dangereuses par Route
 (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 RID: Regulations concerning the international carriage of dangerous goods by rail
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
 IMDG: International Maritime Code for Dangerous Goods
 EmS: Emergency Schedules
 MFAG: Medical First Aid Guide
 IATA: International Air Transport Association
 ICAO: International Civil Aviation Organization
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships
 IBC: Intermediate Bulk Container
 SVHC: Substance of Very High Concern
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Skin Sens. 1; H317	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

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

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H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product name: Serazym® Ovalbumin Conjugate
Article number: KJG-1-041-0001
UFI: YT0M-NGGK-GFF3-CY8J

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Component for in vitro tests for scientific research and development or quality control analysis.
Restricted to professional users.

1.3. Details of the supplier of the safety data sheet

Company name: Seramun Diagnostica GmbH
Street: Spreenhagener Str. 1
Place: 15754 Heidesee
Germany
Telephone: +49 33767 791-10
E-mail: regulatory@seramun.com
Internet: www.seramun.com

1.4. Emergency telephone

number: +49 33767 791-10
from 9:00 am to 3:00 pm CET, excluding weekends and public holidays in Germany

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Repr. 1B; H360D

Full text of hazard statements: see SECTION 16.

2.2. Label elements**Regulation (EC) No 1272/2008****Hazard components for labelling**

N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone

Signal word: Danger**Pictograms:****Hazard statements**

H360D May damage the unborn child.

Precautionary statements

P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves/protective clothing and eye protection/face protection.
P308+P313 IF exposed or concerned: Get medical advice/attention.

Special labelling of certain mixtures

EUH208 Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.
Restricted to professional users.

Labelling of packages where the contents do not exceed 125 ml

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Signal word:

Danger

Pictograms:

Hazard statements

H360D

Precautionary statements

P280-P308+P313

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients
3.2. Mixtures
Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
872-50-4	N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone			0.3 - < 1 %
	212-828-1	606-021-00-7		
	Repr. 1B, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; H360D H315 H319 H335			
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)			< 0.0015 %
	611-341-5	613-167-00-5	01-2120764691-48	
	Acute Tox. 2, Acute Tox. 2, Acute Tox. 3, Skin Corr. 1C, Eye Dam. 1, Skin Sens. 1A, Aquatic Acute 1, Aquatic Chronic 1; H330 H310 H301 H314 H318 H317 H400 H410 EUH071			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
872-50-4	212-828-1	N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone	0.3 - < 1 %
		dermal: LD50 = 8000 mg/kg; oral: LD50 = 3600 mg/kg STOT SE 3; H335: >= 10 - 100	
55965-84-9	611-341-5	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	< 0.0015 %
		inhalation: ATE = 0,5 mg/l (vapours); inhalation: LC50 = 0.171 mg/l (dusts or mists); dermal: LD50 = 87.12 mg/kg; oral: LD50 = 64 mg/kg Skin Corr. 1C; H314: >= 0,6 - 100 Skin Irrit. 2; H315: >= 0,06 - < 0,6 Eye Dam. 1; H318: >= 0,6 - 100 Eye Irrit. 2; H319: >= 0,06 - < 0,6 Skin Sens. 1A; H317: >= 0,0015 - 100 Aquatic Acute 1; H400: M=100 Aquatic Chronic 1; H410: M=100	

SECTION 4: First aid measures
4.1. Description of first aid measures
General information

When in doubt or if symptoms are observed, get medical advice.

After inhalation

Provide fresh air.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap.

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Take off immediately all contaminated clothing and wash it before reuse.

After contact with eyes

After eye contact: Rinse immediately carefully and thoroughly with eye-bath or water.

After ingestion

Let water be drunken in little sips (dilution effect).

4.2. Most important symptoms and effects, both acute and delayed

Allergic reactions.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Foam
Dry extinguishing powder
Carbon dioxide (CO₂)

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated:

Carbon dioxide (CO₂)
Carbon monoxide
Nitrogen oxides (NO_x)

5.3. Advice for firefighters

Co-ordinate fire-fighting measures to the fire surroundings.

In case of fire: Wear self-contained breathing apparatus.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.

Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Provide adequate ventilation.
Do not breathe gas/fumes/vapour/spray.
Avoid contact with skin, eyes and clothes.
Use personal protection equipment.

For non-emergency personnel

Wear personal protection equipment (refer to section 8).

For emergency responders

Use personal protective equipment as required.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up**For containment**

Take up mechanically.

For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

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6.4. Reference to other sections

Safe handling: see section 7
 Personal protection equipment: see section 8
 Disposal: see section 13

SECTION 7: Handling and storage
7.1. Precautions for safe handling
Advice on safe handling

Observe instructions for use.
 If handled uncovered, arrangements with local exhaust ventilation have to be used.
 Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

When using do not eat, drink, smoke, sniff.
 Wash hands before breaks and after work.
 Take off contaminated clothing.

7.2. Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels

Keep container tightly closed.
 Keep cool.
 Keep/Store only in original container.
 Never return spills in original containers for re-use.
 Keep locked up.
 Store in a place accessible by authorized persons only.
 Provide adequate ventilation as well as local exhaustion at critical locations.

Hints on joint storage

Keep away from: Food and feedingstuffs

Further information on storage conditions

storage temperature of 2 °C - 8 °C.

7.3. Specific end use(s)

Component for in vitro tests for scientific research and development or quality control analysis.
 Restricted to professional users.

SECTION 8: Exposure controls/personal protection
8.1. Control parameters
Occupational exposure limit values

CAS No	Name of agent	ppm	mg/m ³	fib/cm ³	Category	Origin
872-50-4	n-Methyl-2-pyrrolidone	10	40		TWA (8 h)	
		20	80		STEL (15 min)	

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DNEL/DMEL values

CAS No	Name of agent	Exposure route	Effect	Value
872-50-4	N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone			
Worker DNEL, long-term		inhalation	systemic	14,4 mg/m ³
Worker DNEL, long-term		inhalation	local	40,0 mg/m ³
Worker DNEL, long-term		dermal	systemic	4,8 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	3,6 mg/m ³
Consumer DNEL, long-term		inhalation	local	4,5 mg/m ³
Consumer DNEL, long-term		dermal	systemic	2,5 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,85 mg/kg bw/day
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)			
Worker DNEL, long-term		inhalation	systemic	0.02 mg/m ³
Worker DNEL, acute		inhalation	systemic	0.04 mg/m ³

PNEC values

CAS No	Name of agent	Environmental compartment	Value
872-50-4	N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone		
		Freshwater	0,25 mg/l
		Freshwater (intermittent releases)	5 mg/l
		Marine water	0,025 mg/l
		Freshwater sediment	1,09 mg/kg
		Marine sediment	0,109 mg/kg
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)		
		Freshwater	3.39 mg/kg
		Marine water	3.39 mg/kg
		Freshwater sediment	0.027 mg/kg
		Marine sediment	0.027 mg/kg
		Micro-organisms in sewage treatment plants (STP)	0.23 mg/l
		Soil	0.01 mg/kg

8.2. Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Individual protection measures, such as personal protective equipment
Eye/face protection

Wear eye protection/face protection. Eye glasses with side protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the

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specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material ≥ 0.4 mm

Breakthrough time: > 480 min

Take recovery periods for skin regeneration.

Skin protection

Use of protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Thermal hazards

No special handling advices are necessary.

Environmental exposure controls

Avoid release to the environment.

SECTION 9: Physical and chemical properties
9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	green
Odour:	odourless

	Test method
Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	100 °C Calculation method.
Flammability:	not determined
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	380 °C Calculated flash point.
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value (at 20 °C):	6.6-7.2 Experimental data
Viscosity / kinematic:	not determined
Water solubility:	completely miscible
Solubility in other solvents	
not determined	
Partition coefficient n-octanol/water:	not applicable
Vapour pressure:	not determined
Vapour pressure:	not determined
Density (at 20 °C):	1.0432 g/cm ³ Experimental data
Relative vapour density:	not determined
Particle characteristics:	not applicable

9.2. Other information
Information with regard to physical hazard classes

Explosive properties

The product is not: Explosive.

Oxidizing properties

The product is not: oxidising.

Other safety characteristics

Solid content: not determined

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Further Information

No known hazardous decomposition products.

SECTION 10: Stability and reactivity
10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Keep away from heat.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information
11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity

Based on available data, the classification criteria are not met.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
872-50-4	N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone				
	oral	LD50 3600 mg/kg	Rat	IUCLID	
	dermal	LD50 8000 mg/kg	Rabbit	IUCLID	
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)				
	oral	LD50 64 mg/kg	Rat	European Chemicals Agency	OECD 401
	dermal	LD50 87.12 mg/kg	Rabbit	European Chemicals Agency	OECD 402
	inhalation vapour	ATE 0,5 mg/l			
	inhalation (4 h) dust/mist	LC50 0.171 mg/l	Rat	European Chemicals Agency	OECD 403

Irritation and corrosivity

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.

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Carcinogenic/mutagenic/toxic effects for reproduction

May damage the unborn child. (N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone)
 Germ cell mutagenicity: Based on available data, the classification criteria are not met.
 Carcinogenicity: Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone H: skin resorptive

Additional information on tests

There are no data available on the preparation/mixture itself.

11.2. Information on other hazards
Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Further information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information
12.1. Toxicity

Based on available data, the classification criteria are not met.
 The product is not: Ecotoxic.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
872-50-4	N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone					
	Acute fish toxicity	LC50	832 mg/l	96 h	Lepomis macrochirus	IUCLID
	Acute algae toxicity	ErC50	> 500 mg/l	72 h	Scenedesmus subspicatus	IUCLID
	Acute crustacea toxicity	EC50	ca. 4897 mg/l	48 h	Daphnia magna	IUCLID
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)					
	Acute fish toxicity	LC50	0.19 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	European Chemicals Agency EPA OPP 72-1
	Acute algae toxicity	ErC50	0.0052 mg/l	72 h	Skeletonema costatum	European Chemicals Agency OECD 201
	Acute crustacea toxicity	EC50	0.10 mg/l	48 h	Daphnia magna (Big water flea)	European Chemicals Agency OECD 202
	Fish toxicity	NOEC	0.02 mg/l	38 d	Danio rerio (zebrafish)	European Chemicals Agency OECD 210
	Algae toxicity	NOEC	0.00049 mg/l	2 d	Skeletonema costatum	European Chemicals Agency OECD 201
	Crustacea toxicity	NOEC	0.0036 mg/l	21 d	Daphnia magna (Big water flea)	European Chemicals Agency OECD 202
	Acute bacteria toxicity	EC50	0.91 mg/l ()	3 h	Activated sludge	European Chemicals Agency OECD 209

12.2. Persistence and degradability

The single components are biodegradable.

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CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)			
	OECD 301B	<50 %	28	European Chemicals Agency
	The single components are biodegradable.			

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
872-50-4	N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone	-0,54 (25° C)
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	0.401

BCF

CAS No	Chemical name	BCF	Species	Source
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	0.12	Lepomis macrochirus (Bluegill)	European Chemicals Agency

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations
13.1. Waste treatment methods
Disposal recommendations

Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

List of Wastes Code - used product

160508 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded organic chemicals consisting of or containing hazardous substances; hazardous waste

List of Wastes Code - contaminated packaging

150102 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); plastic packaging

Contaminated packaging

Hazardous waste according to Directive 2008/98/EC (waste framework directive). Handle contaminated packages in the same way as the substance itself.

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SECTION 14: Transport information
Land transport (ADR/RID)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
EU regulatory information

Authorisations (REACH, annex XIV):

Substances of very high concern, SVHC (REACH, article 59):

N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 30, Entry 75

Directive 2010/75/EU on industrial emissions: 0,866 % (9,034 g/l)

Directive 2004/42/EC on VOC in paints and varnishes: 0,866 % (9,036 g/l)

Information according to Directive 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

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Revision date: 13.06.2024

Print date: 05.08.2024

Water hazard class (D):	1 - slightly hazardous to water
Skin resorption/Sensitization:	Causes allergic hypersensitivity reactions.

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 1,2,8,9,11,12,15.

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Revision date: 13.06.2024

Print date: 05.08.2024

Abbreviations and acronyms

Acute Tox: Acute toxicity
 Skin Corr: Skin corrosion
 Skin Irrit: Skin irritation
 Eye Dam: Eye damage
 Eye Irrit: Eye irritation
 Skin Sens: Skin sensitisation
 Repr: Reproductive toxicity
 STOT SE: Specific target organ toxicity - single exposure
 Aquatic Acute: Acute aquatic hazard
 Aquatic Chronic: Chronic aquatic hazard
 CLP: Classification, labelling and Packaging
 REACH: Registration, Evaluation and Authorization of Chemicals
 GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
 UN: United Nations
 CAS: Chemical Abstracts Service
 DNEL: Derived No Effect Level
 DMEL: Derived Minimal Effect Level
 PNEC: Predicted No Effect Concentration
 ATE: Acute toxicity estimate
 LC50: Lethal concentration, 50%
 LD50: Lethal dose, 50%
 LL50: Lethal loading, 50%
 EL50: Effect loading, 50%
 EC50: Effective Concentration 50%
 ErC50: Effective Concentration 50%, growth rate
 NOEC: No Observed Effect Concentration
 BCF: Bio-concentration factor
 PBT: persistent, bioaccumulative, toxic
 vPvB: very persistent, very bioaccumulative
 ADR: Accord européen sur le transport des marchandises dangereuses par Route
 (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 RID: Regulations concerning the international carriage of dangerous goods by rail
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation
 intérieures)
 IMDG: International Maritime Code for Dangerous Goods
 EmS: Emergency Schedules
 MFAG: Medical First Aid Guide
 IATA: International Air Transport Association
 ICAO: International Civil Aviation Organization
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships
 IBC: Intermediate Bulk Container
 VOC: Volatile Organic Compounds
 SVHC: Substance of Very High Concern
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Repr. 1B; H360D	Calculation method

Relevant H and EUH statements (number and full text)

H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.

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H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H335	May cause respiratory irritation.
H360D	May damage the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.
EUH208	Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)

SeramunBlau® automat fast

Revision date: 16.07.2024

Print date: 16.07.2024

SECTION 1: Identification of the substance/mixture and of the company/undertaking
1.1. Product identifier

Product name: SeramunBlau® automat fast
 Article number: SUB-0-100-0280
 SUB-0-100-0280N
 UFI: A1XG-K622-028C-9423

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

Component for in vitro tests.
 Component for in vitro tests for scientific research and development or quality control analysis.
 Restricted to professional users.

1.3. Details of the supplier of the safety data sheet

Company name: Seramun Diagnostica GmbH
 Street: Spreehagener Str. 1
 Place: 15754 Heidesee
 Germany
 Telephone: +49 33767 791-10
 E-mail: regulatory@seramun.com
 Internet: www.seramun.com

1.4. Emergency telephone number:

+49 33767 791-10
 from 9:00 am to 3:00 pm CET, excluding weekends and public holidays in
 Germany

SECTION 2: Hazards identification
2.1. Classification of the substance or mixture
Regulation (EC) No 1272/2008

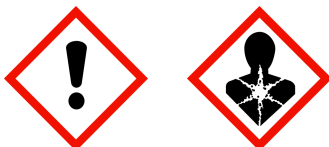
Eye Irrit. 2; H319
 Repr. 1B; H360

Full text of hazard statements: see SECTION 16.

2.2. Label elements
Regulation (EC) No 1272/2008
Hazard components for labelling

2-Pyrrolidone

Signal word: Danger

Pictograms:

Hazard statements

H319 Causes serious eye irritation.
 H360 May damage fertility or the unborn child.

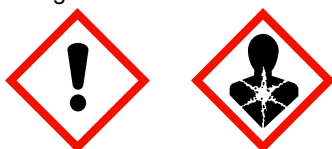
Precautionary statements

P201 Obtain special instructions before use.
 P280 Wear protective gloves/protective clothing and eye protection/face protection.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P308+P313 IF exposed or concerned: Get medical advice/attention.

Special labelling of certain mixtures

Restricted to professional users.

Labelling of packages where the contents do not exceed 125 ml
Signal word: Danger

Pictograms:

Hazard statements

H360

Precautionary statements

P201-P280-P308+P313

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients
3.2. Mixtures
Relevant ingredients

CAS No	Chemical name	Quantity
	EC No	Index No
	REACH No	
	Classification (Regulation (EC) No 1272/2008)	
616-45-5	2-Pyrrolidone	10 - < 15 %
	210-483-1	01-2119475471-37
	Repr. 1B, Eye Irrit. 2; H360 H319	

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
616-45-5	210-483-1	2-Pyrrolidone	10 - < 15 %
	dermal: LD50 = >2000 mg/kg; oral: LD50 = >2000 mg/kg Repr. 1B; H360: >= 3 - 100		

SECTION 4: First aid measures
4.1. Description of first aid measures
General information

When in doubt or if symptoms are observed, get medical advice.

After inhalation

Provide fresh air.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap.

Take off contaminated clothing and wash it before reuse.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.

Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Mund gründlich mit Wasser ausspülen

Let water be drunken in little sips (dilution effect).

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4.2. Most important symptoms and effects, both acute and delayed

Causes serious eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**Foam
Dry extinguishing powder
Carbon dioxide (CO₂)**Unsuitable extinguishing media**

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated:

Carbon dioxide (CO₂)
Carbon monoxide
Nitrogen oxides (NO_x)**5.3. Advice for firefighters**

Co-ordinate fire-fighting measures to the fire surroundings.

Additional informationSuppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.
Do not allow entering drains or surface water.**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General advice**Use personal protection equipment.
Provide adequate ventilation.
Do not breathe gas/fumes/vapour/spray.
Avoid contact with skin, eyes and clothes.**For non-emergency personnel**

Wear personal protection equipment (refer to section 8).

For emergency responders

Use personal protective equipment as required.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up**For containment**

Take up mechanically.

For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sectionsSafe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13**SECTION 7: Handling and storage**

7.1. Precautions for safe handling
Advice on safe handling

Observe instructions for use.
 Avoid: Eye contact

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

When using do not eat, drink, smoke, sniff.
 Wash hands before breaks and after work.
 Take off contaminated clothing.

7.2. Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels

Keep container tightly closed.
 Keep cool. Protect from sunlight.
 Keep/Store only in original container.
 Never return spills in original containers for re-use.
 Keep locked up.
 Store in a place accessible by authorized persons only.
 Provide adequate ventilation as well as local exhaust at critical locations.

Hints on joint storage

Keep away from: Food and feedingstuffs

Further information on storage conditions

storage temperature of 2 °C - 8 °C.

7.3. Specific end use(s)

Component for in vitro tests.
 Component for in vitro tests for scientific research and development or quality control analysis.
 Restricted to professional users.

SECTION 8: Exposure controls/personal protection
8.1. Control parameters
DNEL/DMEL values

CAS No	Name of agent		
DNEL type	Exposure route	Effect	Value
616-45-5	2-Pyrrolidone		
Worker DNEL, long-term	inhalation	systemic	29.62 mg/m ³
Worker DNEL, long-term	dermal	systemic	4.2 mg/kg bw/day

PNEC values

CAS No	Name of agent	
Environmental compartment	Value	
616-45-5	2-Pyrrolidone	
Freshwater	0.5 mg/l	
Marine water	0.05 mg/l	
Freshwater sediment	0.4205 mg/kg	
Micro-organisms in sewage treatment plants (STP)	10 mg/l	
Soil	0.0612 mg/kg	

Additional advice on limit values

To date, no national critical limit values exist.

8.2. Exposure controls



Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye protection/face protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material ≥ 0.1 mm

Breakthrough time: > 480 min

Take recovery periods for skin regeneration.

Skin protection

Use of protective clothing

Respiratory protection

Usually no personal respirative protection necessary.

Thermal hazards

No special handling advices are necessary.

Environmental exposure controls

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	colourless - pale yellow
Odour:	characteristic

	Test method
Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	100 °C Calculation method.
Flammability:	not determined
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	380 °C Calculated flash point.
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value (at 20 °C):	4.1-4.6 Experimental data
Viscosity / kinematic:	not determined
Water solubility: (at 20 °C)	completely miscible

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Solubility in other solvents	
not determined	
Partition coefficient n-octanol/water:	not applicable
Vapour pressure:	not determined
(at 20 °C)	
Vapour pressure:	not determined
(at 50 °C)	
Density (at 20 °C):	1.0175 g/cm ³ Experimental data
Relative vapour density:	not determined
Particle characteristics:	not applicable

9.2. Other information
Information with regard to physical hazard classes
Explosive properties

The product is not: Explosive.

Oxidizing properties

The product is not: oxidising.

Other safety characteristics

Solid content:

not applicable

Further Information

No known hazardous decomposition products.

SECTION 10: Stability and reactivity
10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Keep away from heat.

Protect from sunlight.

10.5. Incompatible materials

metals

Oxidising agent

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information
11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity

Based on available data, the classification criteria are not met.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

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CAS No	Chemical name					
	Exposure route	Dose	Species	Source	Method	
616-45-5	2-Pyrrolidone					
	oral	LD50 >2000 mg/kg	Rat	European Chemicals Agency	OECD 401	
	dermal	LD50 >2000 mg/kg	Rabbit	European Chemicals Agency		

Irritation and corrosivity

Serious eye damage/eye irritation: Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

May damage fertility or the unborn child. (2-Pyrrolidone)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

Dimethylsulfoxide (DMSO) H: skin resorptive

Additional information on tests

There are no data available on the preparation/mixture itself.

11.2. Information on other hazards
Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Further information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information
12.1. Toxicity

Based on available data, the classification criteria are not met.

The product is not: Ecotoxic.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
616-45-5	2-Pyrrolidone					
	Acute fish toxicity	LC50 10000 mg/l	96 h	Danio rerio (zebrafish)	European Chemicals Agency	OECD 203
	Acute algae toxicity	ErC50 >500 mg/l	72 h	Desmodesmus subspicatus	European Chemicals Agency	
	Acute crustacea toxicity	EC50 >500 mg/l	48 h	Daphnia magna (Big water flea)	European Chemicals Agency	

12.2. Persistence and degradability

The single components are biodegradable.

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12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
616-45-5	2-Pyrrolidone	-0,71

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations
13.1. Waste treatment methods
Disposal recommendations

Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

List of Wastes Code - used product

160508 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded organic chemicals consisting of or containing hazardous substances; hazardous waste

List of Wastes Code - contaminated packaging

150102 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); plastic packaging

Contaminated packaging

Hazardous waste according to Directive 2008/98/EC (waste framework directive). Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information
Land transport (ADR/RID)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.

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Revision date: 16.07.2024

Print date: 16.07.2024

14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

Information according to Directive 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

Marketing and use of explosives precursors (Regulation (EU) 2019/1148):

This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information
Changes

This data sheet contains changes from the previous version in section(s): 1,2,4,6,7,8,9,11,12,15.

Abbreviations and acronyms

Eye Irrit: Eye irritation
 Repr: Reproductive toxicity
 CLP: Classification, labelling and Packaging
 REACH: Registration, Evaluation and Authorization of Chemicals
 GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
 UN: United Nations
 CAS: Chemical Abstracts Service
 DNEL: Derived No Effect Level
 DMEL: Derived Minimal Effect Level
 PNEC: Predicted No Effect Concentration
 ATE: Acute toxicity estimate
 LC50: Lethal concentration, 50%
 LD50: Lethal dose, 50%
 LL50: Lethal loading, 50%
 EL50: Effect loading, 50%
 EC50: Effective Concentration 50%
 ErC50: Effective Concentration 50%, growth rate
 NOEC: No Observed Effect Concentration
 BCF: Bio-concentration factor
 PBT: persistent, bioaccumulative, toxic
 vPvB: very persistent, very bioaccumulative
 ADR: Accord européen sur le transport des marchandises dangereuses par Route
 (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 RID: Regulations concerning the international carriage of dangerous goods by rail
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation
 intérieures)
 IMDG: International Maritime Code for Dangerous Goods
 EmS: Emergency Schedules
 MFAG: Medical First Aid Guide
 IATA: International Air Transport Association
 ICAO: International Civil Aviation Organization
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships
 IBC: Intermediate Bulk Container
 SVHC: Substance of Very High Concern
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Eye Irrit. 2; H319	Calculation method
Repr. 1B; H360	Calculation method

Relevant H and EUH statements (number and full text)

H319 Causes serious eye irritation.
 H360 May damage fertility or the unborn child.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)

SeramunBlau® stop

Revision date: 16.07.2024

Print date: 16.07.2024

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product name: SeramunBlau® stop
Article number: STO-001-00
STO-1-100-0010
STO-0-100-0010N
UFI: UH2G-8N6C-G6KU-G2U8

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Component for in vitro tests.
Component for in vitro tests for scientific research and development or quality control analysis.
Restricted to professional users.

1.3. Details of the supplier of the safety data sheet

Company name: Seramun Diagnostica GmbH
Street: Spreehagener Str. 1
Place: 15754 Heidesee
Germany
Telephone: +49 33767 791-10
E-mail: regulatory@seramun.com
Internet: www.seramun.com

1.4. Emergency telephone number:

+49 33767 791-10
from 9:00 am to 3:00 pm CET, excluding weekends and public holidays in Germany

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Hazard Statements:
May be corrosive to metals.

2.2. Label elements**Regulation (EC) No 1272/2008**

Hazard components for labelling
sulphuric acid 2.5 %

Signal word: Warning

Pictograms:

**Hazard statements**

H290 May be corrosive to metals.

Labelling of packages where the contents do not exceed 125 ml

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.2. Mixtures**

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
7664-93-9	sulphuric acid			1 - < 3 %
	231-639-5	016-020-00-8		
	Met. Corr. 1, Skin Corr. 1A; H290 H314			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
7664-93-9	231-639-5	sulphuric acid	1 - < 3 %
	inhalation: LC50 = 0.375 mg/l (dusts or mists); oral: LD50 = 2140 mg/kg Skin Corr. 1A; H314: >= 15 - 100 Skin Irrit. 2; H315: >= 5 - < 15 Eye Irrit. 2; H319: >= 5 - < 15		

SECTION 4: First aid measures
4.1. Description of first aid measures
General information

When in doubt or if symptoms are observed, get medical advice.

After inhalation

Provide fresh air.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap.

Take off contaminated clothing and wash it before reuse.

If skin irritation occurs: Get medical advice/attention.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Let water be drunken in little sips (dilution effect).

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.

SECTION 5: Firefighting measures
5.1. Extinguishing media
Suitable extinguishing media

Water mist

Water spray

Dry extinguishing powder

Carbon dioxide (CO₂)

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated:

Sulphur oxides

5.3. Advice for firefighters

Co-ordinate fire-fighting measures to the fire surroundings.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Use personal protection equipment.

For non-emergency personnel

Wear personal protection equipment (refer to section 8).

For emergency responders

Use personal protective equipment as required.

6.2. Environmental precautions

No special environmental measures are necessary.

6.3. Methods and material for containment and cleaning up**For containment**

Take up mechanically.

For cleaning up

Wipe up with absorbent material (eg. cloth, fleece).

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Observe instructions for use.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

When using do not eat, drink, smoke, sniff.

Wash hands before breaks and after work.

Take off contaminated clothing.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed.

Keep cool.

Keep/Store only in original container.

Never return spills in original containers for re-use.

Unsuitable container/equipment material: Metal.

Hints on joint storage

Keep away from: Food and feedingstuffs

Further information on storage conditions

storage temperature of 2 °C - 25 °C.

7.3. Specific end use(s)

Component for in vitro tests.

Component for in vitro tests for scientific research and development or quality control analysis.

Restricted to professional users.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit values

CAS No	Name of agent	ppm	mg/m ³	fib/cm ³	Category	Origin
7664-93-9	Sulphuric acid (mist)	-	0.05		TWA (8 h)	

DNEL/DMEL values

CAS No	Name of agent	Exposure route	Effect	Value
7664-93-9	sulphuric acid			
Worker DNEL, long-term		inhalation	local	0.05 mg/m ³
Worker DNEL, acute		inhalation	local	0.1 mg/m ³

8.2. Exposure controls

Individual protection measures, such as personal protective equipment

Eye/face protection

Eye protection: not required.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material: ≥ 0.1 mm

Breakthrough time: > 480 min

Take recovery periods for skin regeneration.

Skin protection

Use of protective clothing. The type of personal protection equipment has to be chosen based on the concentration and amount of the dangerous substance at the workplace.

Respiratory protection

Usually no personal respiratory protection necessary.

Thermal hazards

No special handling advices are necessary.

Environmental exposure controls

No special environmental measures are necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid	
Colour:	colourless	
Odour:	odourless	
Melting point/freezing point:		not determined
Boiling point or initial boiling point and boiling range:		100 °C
Flammability:		not determined

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Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	380 °C
Decomposition temperature:	not determined
pH-Value (at 20 °C):	1.0
Viscosity / kinematic:	not determined
Water solubility: (at 20 °C)	completely miscible
Solubility in other solvents not determined	
Partition coefficient n-octanol/water:	not applicable
Vapour pressure: (at 20 °C)	not determined
Vapour pressure: (at 50 °C)	not determined
Density (at 20 °C):	1.0200 g/cm ³
Relative vapour density:	not determined
Particle characteristics:	not applicable

9.2. Other information
Information with regard to physical hazard classes
Explosive properties

The product is not: Explosive.

Oxidizing properties

The product is not: oxidising.

Other safety characteristics

Solid content:

not determined

Further Information

No known hazardous decomposition products.

SECTION 10: Stability and reactivity
10.1. Reactivity

Corrosive to metals.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Stable under recommended storage and handling conditions.

10.5. Incompatible materials

metals

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information
11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity

Based on available data, the classification criteria are not met.

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ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7664-93-9	sulphuric acid				
	oral	LD50 mg/kg	2140	Rat	European Chemicals Agency OECD 401
	inhalation (4 h) dust/mist	LC50 mg/l	0.375	Rat	European Chemicals Agency OECD 403

Irritation and corrosivity

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

No information available.

Additional information on tests

There are no data available on the preparation/mixture itself.

11.2. Information on other hazards
Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

SECTION 12: Ecological information
12.1. Toxicity

Based on available data, the classification criteria are not met.

The product is not: Ecotoxic.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
7664-93-9	sulphuric acid					
	Acute fish toxicity	LC50 >16 mg/l	96 h	Lepomis macrochirus (Bluegill)	European Chemicals Agency	
	Acute algae toxicity	ErC50 100 mg/l	72 h	Desmodesmus subspicatus	European Chemicals Agency	OECD 201
	Acute crustacea toxicity	EC50 >100 mg/l	48 h	Daphnia magna (Big water flea)	European Chemicals Agency	OECD 202
	Algae toxicity	NOEC 100 mg/l	3 d	Desmodesmus subspicatus	European Chemicals Agency	OECD 201

12.2. Persistence and degradability

The single components are biodegradable.

12.3. Bioaccumulative potential

Does not bioaccumulate.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
7664-93-9	sulphuric acid	-1

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations
13.1. Waste treatment methods
Disposal recommendations

Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

060199 WASTES FROM INORGANIC CHEMICAL PROCESSES; wastes from the manufacture, formulation, supply and use (MFSU) of acids; wastes not otherwise specified

List of Wastes Code - used product

060199 WASTES FROM INORGANIC CHEMICAL PROCESSES; wastes from the manufacture, formulation, supply and use (MFSU) of acids; wastes not otherwise specified

List of Wastes Code - contaminated packaging

150102 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); plastic packaging

Contaminated packaging

Non-contaminated packages may be recycled.

SECTION 14: Transport information
Land transport (ADR/RID)

14.1. UN number or ID number: UN 3264
14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid)
14.3. Transport hazard class(es): 8
14.4. Packing group: III
 Hazard label: 8



Classification code: C1
 Special Provisions: 274
 Limited quantity: 5 L
 Excepted quantity: E1
 Transport category: 3
 Hazard No: 80
 Tunnel restriction code: E

Inland waterways transport (ADN)

14.1. UN number or ID number: UN 3264
14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid)
14.3. Transport hazard class(es): 8
14.4. Packing group: III
 Hazard label: 8



Classification code: C1
 Special Provisions: 274
 Limited quantity: 5 L
 Excepted quantity: E1

Marine transport (IMDG)

14.1. UN number or ID number: UN 3264
14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid)
14.3. Transport hazard class(es): 8
14.4. Packing group: III
 Hazard label: 8



Special Provisions: 223, 274
 Limited quantity: 5 L
 Excepted quantity: E1
 EmS: F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 3264
14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid)
14.3. Transport hazard class(es): 8
14.4. Packing group: III
 Hazard label: 8



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Special Provisions:	A3 A803	
Limited quantity Passenger:	1 L	
Passenger LQ:	Y841	
Excepted quantity:	E1	
IATA-packing instructions - Passenger:		852
IATA-max. quantity - Passenger:		5 L
IATA-packing instructions - Cargo:		856
IATA-max. quantity - Cargo:		60 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: strongly corrosive.

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
EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 75

Information according to Directive 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

Marketing and use of explosives precursors (Regulation (EU) 2019/1148):

This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): - - non-hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information
Changes

This data sheet contains changes from the previous version in section(s): 1,5,7,8,9,12.

Abbreviations and acronyms

Met. Corr: Substance or mixture corrosive to metals
Skin Corr: Skin corrosion
CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
CAS: Chemical Abstracts Service
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
IMDG: International Maritime Code for Dangerous Goods
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
SVHC: Substance of Very High Concern
For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

Relevant H and EUH statements (number and full text)

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

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)