

SDS_LSG-0-000-2255_v02_2025-06-02_GB_en .....	2
SDS_LSG-1-000-3211_v03_GB_en.....	13
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SDS_KST-1-049-1001_v02_GB_en.....	34
SDS_KJG-1-049-6001_v02_2025-06-02_GB_en .....	45
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SDS_STO-1-100-0010_v04_GB_en .....	63

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

Product name: Seramun® Wash buffer K (10x)  
 Article number: LSG-0-000-2255

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

Component for in-vitro tests.  
 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**
**GB CLP Regulation**

This mixture is not classified as hazardous in accordance with GB CLP Regulation.

**2.2. Label elements**
**GB CLP Regulation**
**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**

—

**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 (GB CLP Regulation)			
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 %
	-	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	-	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.

If skin irritation occurs: Get medical advice/attention.

**After contact with eyes**

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

**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 (CO<sub>2</sub>)

**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 (CO<sub>2</sub>)

**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**

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.

**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.

Restricted to professional users.

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

**DNEL/DMEL values**

CAS No	Substance		
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 <sup>3</sup>
Worker DNEL, acute	inhalation	systemic	0,04 mg/m <sup>3</sup>

**PNEC values**

CAS No	Substance	
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:  $\geq 0.1$  mm

Breakthrough time:  $> 480$  min

Take recovery periods for skin regeneration.

**Skin protection**

Use of protective clothing

**Respiratory protection**

Usually no personal respirative 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	
		<b>Test method</b>
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):	7,0-7,6	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	
Vapour pressure: (at 50 °C)	not determined	
Density (at 20 °C):	1,100 g/cm <sup>3</sup>	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 GB CLP Regulation**
**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 mixture itself.

**11.2. Information on other hazards**

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**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.

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 UK REACH.

**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)**

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

**Inland waterways transport (ADN)**

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

**Marine transport (IMDG)**

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

**Air transport (ICAO-TI/IATA-DGR)**

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

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): 2,3,4,5,6,7,8,9,10,11,12,13,16.

**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>  
 For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety  
 assessment, chapter R.20 (Table of terms and abbreviations).

**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

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EUH210

2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.  
Safety data sheet available on request.

**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 P**

Revision date: 12.05.2025

Print date: 12.05.2025

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

 Product name: Seramun® Sample diluent P  
 Article number: LSG-1-000-3211

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

 Component for in-vitro tests.  
 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**
**GB CLP Regulation**

This mixture is not classified as hazardous in accordance with GB CLP Regulation.

**2.2. Label elements**
**GB CLP Regulation**
**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**

—

**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 (GB CLP Regulation)			
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 %
	-	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.

**Seramun® Sample diluent P**

Revision date: 12.05.2025

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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	-	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 (CO<sub>2</sub>)

**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 (CO<sub>2</sub>)

**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.

**Seramun® Sample diluent P**

Revision date: 12.05.2025

Print date: 12.05.2025

**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.

**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.

Restricted to professional users.

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

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**DNEL/DMEL values**

CAS No	Substance			
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 <sup>3</sup>	
Worker DNEL, acute	inhalation	systemic	0,04 mg/m <sup>3</sup>	

**PNEC values**

CAS No	Substance		
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:  $\geq 0.1$  mm

Breakthrough time:  $> 480$  min

Take recovery periods for skin regeneration.

**Skin protection**

Use of protective clothing.

**Respiratory protection**

Usually no personal respirative 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:	orange-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):	7,1-7,7	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)		
Vapour pressure:	not determined	
(at 50 °C)		
Density (at 20 °C):	1,008 g/cm <sup>3</sup>	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 GB CLP Regulation**
**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 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**

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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
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 UK REACH.

**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)

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

### Inland waterways transport (ADN)

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

### Marine transport (IMDG)

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

### Air transport (ICAO-TI/IATA-DGR)

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

### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

### 14.6. Special precautions for user

No information available.

### 14.7. Maritime transport in bulk according to IMO instruments

not applicable

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**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 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): 4,8,9,12.

**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

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: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

**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.

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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.

**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® Anti-Francisella tularensis Negative Control  
Article number: KST-1-049-0001

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

Component for in-vitro tests.  
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.

**Further Information**

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

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GB CLP Regulation**

This mixture is not classified as hazardous in accordance with GB CLP Regulation.

**2.2. Label elements****GB CLP Regulation****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**

—

**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 (GB CLP Regulation)			
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 %
	-	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	-	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 (CO<sub>2</sub>)

Carbon monoxide

**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**

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.

**Further information on handling**

Do not eat, drink or smoke when using this product.

**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

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**Further information on storage conditions**

storage temperature of 2 °C - 8 °C.

**7.3. Specific end use(s)**

Component for in-vitro tests.  
Restricted to professional users.

**SECTION 8: Exposure controls/personal protection**
**8.1. Control parameters**
**Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
57-50-1	Sucrose	-	10		TWA (8 h)	WEL
		-	20		STEL (15 min)	WEL

**DNEL/DMEL values**

CAS No	Substance	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 <sup>3</sup>
Worker DNEL, acute		inhalation	systemic	0,04 mg/m <sup>3</sup>

**PNEC values**

CAS No	Substance	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

**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: &gt; 480 min

Take recovery periods for skin regeneration.

**Skin protection**

Use of protective clothing

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**Respiratory protection**

Usually no personal respirative protection necessary.

**Thermal hazards**

No special handling advices are necessary.

**Environmental exposure controls**

No special measures are necessary.

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

Physical state:	Liquid
Colour:	blue
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:	260 °C	Calculated flash point.
Auto-ignition temperature:	not determined	
Decomposition temperature:	not determined	
pH-Value (at 20 °C):	8,1-8,7	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	
Vapour pressure: (at 50 °C)	not determined	
Density (at 20 °C):	1,011 g/cm <sup>3</sup>	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**

**Serazym® Anti-Francisella tularensis Negative Control**

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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 GB CLP Regulation**
**Acute toxicity**

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

**ATEmix calculated**

ATE (oral) &gt; 2000 mg/kg; ATE (dermal) &gt; 2000 mg/kg; ATE (inhalation vapour) &gt; 20 mg/l; ATE (inhalation dust/mist) &gt; 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 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.

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 UK REACH.

**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)**

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

**Inland waterways transport (ADN)**

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

**Marine transport (IMDG)**

<b>14.1. UN number or ID number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.

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**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 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): 1,4,7,9,15.

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

 Product name: Serazym® Anti-Francisella tularensis Positive control  
 Article number: KST-1-049-1001

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

 Component for in-vitro tests.  
 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**
**GB CLP Regulation**

This mixture is not classified as hazardous in accordance with GB CLP Regulation.

**2.2. Label elements**
**GB CLP Regulation**
**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**

—

**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 (GB CLP Regulation)			
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 %
	-	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	-	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	

**Further Information**

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

**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. 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 (CO<sub>2</sub>)

**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 (CO<sub>2</sub>)

**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**

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**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.

**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.

Restricted to professional users.

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

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**Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
57-50-1	Sucrose	-	10		TWA (8 h)	WEL
		-	20		STEL (15 min)	WEL

**DNEL/DMEL values**

CAS No	Substance	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 <sup>3</sup>
Worker DNEL, acute		inhalation	systemic	0,04 mg/m <sup>3</sup>

**PNEC values**

CAS No	Substance	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

**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

**Skin protection**

Use of protective clothing.

**Respiratory protection**

Usually no personal respirative protection necessary.

**Thermal hazards**

No special handling advices are necessary.

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**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:	blue
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:	260 °C	Calculated flash point.
Auto-ignition temperature:	not determined	
Decomposition temperature:	not determined	
pH-Value (at 20 °C):	6,4-7,0	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)		
Vapour pressure:	not determined	
(at 50 °C)		
Density (at 20 °C):	1,0341 g/cm <sup>3</sup>	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**

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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 GB CLP Regulation

#### 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 mixture itself.

### 11.2. Information on other hazards

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**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.

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.

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### 12.5. Results of PBT and vPvB assessment

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

### 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)

<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.

**Serazym® Anti-Francisella tularensis Positive control**

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**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 information**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): 3,4,7,9,12.

**Serazym® Anti-Francisella tularensis Positive control**

Revision date: 09.05.2025

Print date: 09.05.2025

**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: ECHA Guidance on information requirements and chemical safety  
 assessment, chapter R.20 (Table of terms and abbreviations).

**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.

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EUH210

Safety data sheet available on request.

**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.)*

**Serazym® Anti-Francisella tularensis Conjugate**

Revision date: 12.05.2025

Print date: 02.06.2025

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

Product name: Serazym® Anti-Francisella tularensis Conjugate  
Article number: KJG-1-049-6001

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

Component for in-vitro tests.  
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****GB CLP Regulation**

This mixture is not classified as hazardous in accordance with GB CLP Regulation.

**2.2. Label elements**

—

Labelling of packages where the contents do not exceed 125 ml

—

**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**

none (according to UK REACH Regulation)

**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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**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**

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**

Foam  
Dry extinguishing powder  
Carbon dioxide (CO<sub>2</sub>)

**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 (CO<sub>2</sub>)  
Carbon monoxide

**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**

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**

## Serazym® Anti-Francisella tularensis Conjugate

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### 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.  
Restricted to professional users.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
103-90-2	Paracetamol, inhalable dust	-	10		TWA (8 h)	WEL
57-50-1	Sucrose	-	10		TWA (8 h)	WEL
		-	20		STEL (15 min)	WEL

#### DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
103-90-2	Acetaminophen			
Worker DNEL, long-term		inhalation	systemic	12.006 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	6.81 mg/kg bw/day

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**PNEC values**

CAS No	Substance	
Environmental compartment		Value
103-90-2	Acetaminophen	
Freshwater		0.134 mg/l
Marine water		0.013 mg/l
Freshwater sediment		209.812 mg/kg
Micro-organisms in sewage treatment plants (STP)		1.89 mg/l
Soil		73.586 mg/kg

**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 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:	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

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pH-Value (at 20 °C):	6,4-7,0	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	
Vapour pressure: (at 50 °C)	not determined	
Density (at 20 °C):	1,0156 g/cm <sup>3</sup>	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 GB CLP Regulation**
**Acute toxicity**

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

**ATEmix calculated**

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

**Irritation and corrosivity**

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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 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.

**12.2. Persistence and degradability**

The single components are biodegradable.

**12.3. Bioaccumulative potential**

No indication of bioaccumulation potential.

**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 UK REACH.

**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.

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**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.  
**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

**Serazym® Anti-Francisella tularensis Conjugate**

Revision date: 12.05.2025

Print date: 02.06.2025

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

**National regulatory information**

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): 2,4,6,8,9,12,15.

**Abbreviations and acronyms**

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>

**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.

**Serazym® Anti-Francisella tularensis Conjugate**

Revision date: 12.05.2025

Print date: 02.06.2025

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

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

Product name: SeramunBlau® fast2  
 Article number: SUB-0-100-1000

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

Component for in-vitro tests.  
 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**
**GB CLP Regulation**

This mixture is not classified as hazardous in accordance with GB CLP Regulation.

**2.2. Label elements**
**GB CLP Regulation**
**Special labelling of certain mixtures**

EUH210 Safety data sheet available on request.

**Labelling of packages where the contents do not exceed 125 ml**

—

**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 (GB CLP Regulation)			
616-45-5	2-Pyrrolidone			1 - < 3 %
	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	1 - < 3 %
	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**

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**

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**

Foam

Dry extinguishing powder

Carbon dioxide (CO<sub>2</sub>)

**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 (CO<sub>2</sub>)

Nitrogen oxides (NO<sub>x</sub>)

**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. Protect from sunlight.

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.

Restricted to professional users.

**SECTION 8: Exposure controls/personal protection**
**8.1. Control parameters**
**Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
7722-84-1	Hydrogen peroxide	1	1.4		TWA (8 h)	WEL
		2	2.8		STEL (15 min)	WEL

**DNEL/DMEL values**

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
616-45-5	2-Pyrrolidone		
Worker DNEL, long-term	inhalation	systemic	29,62 mg/m <sup>3</sup>
Worker DNEL, long-term	dermal	systemic	4,2 mg/kg bw/day

**PNEC values**

CAS No	Substance	
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	

**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 respirative 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-pale blue
Odour:	odourless

Melting point/freezing point:

Test method  
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):	3,5-4,0	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	
Vapour pressure: (at 50 °C)	not determined	
Density (at 20 °C):	1,0111 g/cm <sup>3</sup>	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

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.

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 GB CLP Regulation**
**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
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**

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 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.

**SeramunBlau® fast2**

Revision date: 12.05.2025

Print date: 12.05.2025

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

**12.2. Persistence and degradability**

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
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 UK REACH.

**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)**

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

**Inland waterways transport (ADN)**

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

**Marine transport (IMDG)**

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

**Air transport (ICAO-TI/IATA-DGR)**

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

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**

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): 4,8,9,12.

**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>

**Relevant H and EUH statements (number and full text)**

H319	Causes serious eye irritation.
H360	May damage fertility or the unborn child.
EUH210	Safety data sheet available on request.

**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: 08.05.2025

Print date: 08.05.2025

**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****GB CLP Regulation**

Hazard Statements:  
May be corrosive to metals.

**2.2. Label elements****GB CLP Regulation**

**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**

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 (GB CLP Regulation)			
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 (CO<sub>2</sub>)

**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

#### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
7664-93-9	Sulphuric acid (mist)	-	0.05		TWA (8 h)	WEL

#### DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
7664-93-9	sulphuric acid			
Worker DNEL, long-term		inhalation	local	0,05 mg/m <sup>3</sup>
Worker DNEL, acute		inhalation	local	0,1 mg/m <sup>3</sup>

### 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

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
Lower explosion limits:		not determined

## SeramunBlau® stop

Revision date: 08.05.2025

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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 <sup>3</sup>
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 GB CLP Regulation

#### 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
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 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.

**SeramunBlau® stop**

Revision date: 08.05.2025

Print date: 08.05.2025

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 UK REACH.

**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



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): 2,8,9.

**Abbreviations and acronyms**

Met. Corr: 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.)*