

**Seramun® Wash and Incubation Buffer (5x)**

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

**1.1. Product identifier**

Product name: Seramun® Wash and Incubation Buffer (5x)  
Article number: LSG-0-000-4255  
REACH Registration Number: not applicable

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

**Use of the substance/mixture**

For use in in vitro test systems.  
Restricted to professional users.

**Uses advised against**

None identified.

**1.3. Details of the supplier of the safety data sheet**

Company name: Seramun Diagnostica GmbH  
Street: Spreenhagener Str. 1  
Place: D-15754 Heidesee  
Telephone: +49 33767 791-10  
e-mail: quality@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

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Regulation (EC) No 1272/2008**

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

**2.2. Label elements**

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**Regulation (EC) No 1272/2008**

**Special labelling of certain mixtures**

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

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

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**2.3. Other hazards**

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

**SECTION 3: Composition/information on ingredients**

**3.2. Mixtures**

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)			<0.0015 %
	-	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® Wash and Incubation Buffer (5x)**

**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 M acute; H400: M=100 M chron.; 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.

**Seramun® Wash and Incubation Buffer (5x)**

**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

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**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)**

For use in in vitro test systems.

Restricted to professional users.

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**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Seramun® Wash and Incubation Buffer (5x)**

**Occupational exposure limit values**

CAS No	Name of agent	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
64-19-7	Acetic acid	10	25		TWA (8 h)	
		20	50		STEL (15 min)	
7664-38-2	Orthophosphoric acid	-	1		TWA (8 h)	
		-	2		STEL (15 min)	

**DNEL/DMEL values**

CAS No	Name of agent	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	Name of agent	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

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.

**Seramun® Wash and Incubation Buffer (5x)**

**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:	light yellow-white
Odour:	characteristic

**Test method**

**Changes in the physical state**

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	100 °C Calculation method.
Flash point:	120 °C Calculated flash point.

**Flammability**

Solid/liquid:	not determined
Gas:	not applicable

**Explosive properties**

The product is not: Explosive.

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value (at 20 °C):	6.2-6.4 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:	not determined
Density (at 20 °C):	1.1100 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**

Oxidizing properties  
The product is not: oxidising.

**Other safety characteristics**

Solid content:	not applicable
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**Further Information**

No known hazardous decomposition products.

**SECTION 10: Stability and reactivity**

**Seramun® Wash and Incubation Buffer (5x)**

**10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

No known hazardous reactions.

**10.4. Conditions to avoid**

Keep away from heat.

**10.5. Incompatible materials**

No information available.

**10.6. Hazardous decomposition products**

No known hazardous decomposition products.

**SECTION 11: Toxicological information**

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

**Acute toxicity**

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

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**

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

**Sensitising effects**

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**

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

**STOT-single exposure**

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

**STOT-repeated exposure**

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

**Aspiration hazard**

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

**Information on likely routes of exposure**

No information available.

**Additional information on tests**

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

**11.2. Information on other hazards**

**Endocrine disrupting properties**

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

**Seramun® Wash and Incubation Buffer (5x)**
**Further information**

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

**SECTION 12: Ecological information**
**12.1. Toxicity**

The ecotoxicological properties of this mixture are determined by the ecotoxicological properties of the single components (see section 3).

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**

On the basis of existing data about the elimination/degradation and bioaccumulation potential longer term damage to the environment is unlikely.

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
	Part of the components is biodegradable.			

**12.3. Bioaccumulative potential**

On the basis of existing data about the elimination/degradation and bioaccumulation potential longer term damage to the environment is unlikely.

**Partition coefficient n-octanol/water**

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

**BCF**

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

**12.4. Mobility in soil**

The product has not been tested.

**12.5. Results of PBT and vPvB assessment**

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

**Seramun® Wash and Incubation Buffer (5x)**

**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



**Seramun® Wash and Incubation Buffer (5x)**

**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

2010/75/EU (VOC):	0,025 % (0,281 g/l)
2004/42/EC (VOC):	0,025 % (0,281 g/l)
Information according to 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): 1,8,9.

**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

**Seramun® Wash and Incubation Buffer (5x)**

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>  
VOC: Volatile Organic Compounds

**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.

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

**Seraline® Anti-Borrelia-8 IgG Conjugate**

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

**1.1. Product identifier**

Product name: Seraline® Anti-Borrelia-8 IgG Conjugate  
Article number: LIA-006-8 G  
REACH Registration Number: not applicable

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

**Use of the substance/mixture**

For use in in vitro test systems.  
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: D-15754 Heidesee  
Telephone: +49 33767 791-10  
e-mail: quality@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

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Regulation (EC) No 1272/2008**

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

**2.2. Label elements**

**Regulation (EC) No 1272/2008**

**Special labelling of certain mixtures**

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**

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
616-45-5	2-Pyrrolidone			0.3 - < 1 %
	210-483-1		01-2119475471-37	
	Repr. 1B, Eye Irrit. 2; H360 H319			

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

**Seraline® Anti-Borrelia-8 IgG Conjugate**

**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	0.3 - < 1 %
		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. Take off contaminated clothing and wash it before reuse.

**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**

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**

Non-flammable. In case of fire may be liberated:  
Carbon dioxide (CO<sub>2</sub>)  
Carbon monoxide  
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.

**Seraline® Anti-Borrelia-8 IgG Conjugate**

**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)**

For use in in vitro test systems.

Restricted to professional users.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Occupational exposure limit values**

CAS No	Name of agent	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
7647-01-0	Hydrogen chloride	5	8		TWA (8 h)	
		10	15		STEL (15 min)	

**Seraline® Anti-Borrelia-8 IgG Conjugate**

**DNEL/DMEL values**

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

**PNEC values**

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

**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:	red
Odour:	odourless

**Test method**

**Changes in the physical state**

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	100 °C Calculation method.

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Sublimation point:	not determined
Softening point:	not determined
Flash point:	120 °C Calculated flash point.
<b>Flammability</b>	
Solid/liquid:	not determined
Gas:	not applicable
<b>Explosive properties</b>	
The product is not: Explosive.	
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value (at 20 °C):	6.5-7.1 Experimental data
Viscosity / dynamic:	not determined
Water solubility: (at 20 °C)	completely miscible
<b>Solubility in other solvents</b>	
not determined	
Partition coefficient n-octanol/water:	not applicable
Vapour pressure:	not determined
Vapour pressure:	not determined
Density (at 20 °C):	1.0179 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**

Oxidizing properties  
The product is not: oxidising.

**Other safety characteristics**

Solid content: not applicable

**Further Information**

No known hazardous decomposition products.

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

No known hazardous reactions.

**10.4. Conditions to avoid**

Keep away from heat.

**10.5. Incompatible materials**

No information available.

**10.6. Hazardous decomposition products**

No known hazardous decomposition products.

## SECTION 11: Toxicological information

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

#### Acute toxicity

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

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

#### Irritation and corrosivity

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

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

#### STOT-single exposure

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

#### STOT-repeated exposure

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

#### Aspiration hazard

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

#### Information on likely routes of exposure

No information available.

#### Additional information on tests

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

### 11.2. Information on other hazards

#### Endocrine disrupting properties

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

#### Further information

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

## SECTION 12: Ecological information

### 12.1. Toxicity

The product is not: Ecotoxic.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
616-45-5	2-Pyrrolidone					
	Acute fish toxicity	LC50 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



**Seraline® Anti-Borrelia-8 IgG Conjugate**

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 REACH, annex XIII.

**12.6. Endocrine disrupting properties**

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

**12.7. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Disposal recommendations**

Dispose of waste according to applicable legislation.

**List of Wastes Code - residues/unused products**

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

**List of Wastes Code - used product**

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

**List of Wastes Code - contaminated packaging**

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

**Contaminated packaging**

Non-contaminated packages may be recycled.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

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

**Inland waterways transport (ADN)**

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

**Marine transport (IMDG)**

- 14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.
- 14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.

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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

2004/42/EC (VOC): 0 % (0,002 g/l)  
Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**National regulatory information**

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

**15.2. Chemical safety assessment**

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

**SECTION 16: Other information**

**Changes**

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

**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

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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>  
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)**

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

**SeramunBlau® prec**

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

**1.1. Product identifier**

Product name: SeramunBlau® prec  
Article number: SUB-0-200-0020  
REACH Registration Number: not applicable

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

**Use of the substance/mixture**

For use in in vitro test systems.  
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: D-15754 Heidesee  
Telephone: +49 33767 791-10  
e-mail: quality@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

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Regulation (EC) No 1272/2008**

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

**2.2. Label elements**

**Regulation (EC) No 1272/2008**

**Special labelling of certain mixtures**

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**

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
872-50-4	N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone			0.1 - < 0.3 %
	212-828-1	606-021-00-7		
	Repr. 1B, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; H360D H315 H319 H335			

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	
872-50-4	212-828-1	N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone	0.1 - < 0.3 %
		dermal: LD50 = 8000 mg/kg; oral: LD50 = 3600 mg/kg STOT SE 3; H335: >= 10 - 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.

**After ingestion**

Rinse mouth thoroughly with water. 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**

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.

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**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)**

For use in in vitro test systems.

Restricted to professional users.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Occupational exposure limit values**

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

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**DNEL/DMEL values**

CAS No	Name of agent		
DNEL type	Exposure route	Effect	Value
872-50-4	N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone		
Worker DNEL, long-term	inhalation	systemic	14,4 mg/m <sup>3</sup>
Worker DNEL, long-term	inhalation	local	40,0 mg/m <sup>3</sup>
Worker DNEL, long-term	dermal	systemic	4,8 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	3,6 mg/m <sup>3</sup>
Consumer DNEL, long-term	inhalation	local	4,5 mg/m <sup>3</sup>
Consumer DNEL, long-term	dermal	systemic	2,5 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	0,85 mg/kg bw/day

**PNEC values**

CAS No	Name of agent	
Environmental compartment	Value	
872-50-4	N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone	
Freshwater	0,25 mg/l	
Freshwater (intermittent releases)	5 mg/l	
Marine water	0,025 mg/l	
Freshwater sediment	1,09 mg/kg	
Marine sediment	0,109 mg/kg	

**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 - light yellow

**SeramunBlau® prec**

Odour: odourless

**Test method**

**Changes in the physical state**

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	100 °C Calculation method.
Flash point:	120 °C Calculated flash point.

**Flammability**

Solid/liquid:	not determined
Gas:	not applicable

**Explosive properties**

The product is not: Explosive.

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value (at 20 °C):	4.9-5.3 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:	not determined
Vapour pressure:	not determined
Density (at 20 °C):	1.013 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**

Oxidizing properties  
The product is not: oxidising.

**Other safety characteristics**

Solid content: not applicable

**Further Information**

No known hazardous decomposition products.

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

No known hazardous reactions.

**10.4. Conditions to avoid**

Keep away from heat.



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Protect from sunlight.

**10.5. Incompatible materials**

metals  
Oxidising agent

**10.6. Hazardous decomposition products**

No known hazardous decomposition products.

**SECTION 11: Toxicological information**

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

**Acute toxicity**

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
872-50-4	N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone				
	oral	LD50 3600 mg/kg	Rat	IUCLID	
	dermal	LD50 8000 mg/kg	Rabbit	IUCLID	

**Irritation and corrosivity**

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**

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

**STOT-single exposure**

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

**STOT-repeated exposure**

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

**Aspiration hazard**

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

**Information on likely routes of exposure**

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

**Additional information on tests**

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

**11.2. Information on other hazards**

**Endocrine disrupting properties**

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

**Further information**

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

**SECTION 12: Ecological information**

**12.1. Toxicity**

The product is not: Ecotoxic.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
872-50-4	N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone					
	Acute fish toxicity	LC50	832 mg/l	96 h	Lepomis macrochirus	IUCLID
	Acute algae toxicity	ErC50 mg/l	> 500	72 h	Scenedesmus subspicatus	IUCLID
	Acute crustacea toxicity	EC50 mg/l	ca. 4897	48 h	Daphnia magna	IUCLID

### **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
872-50-4	N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone	-0,54 (25° C)

### **12.4. Mobility in soil**

The product has not been tested.

### **12.5. Results of PBT and vPvB assessment**

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

### **12.6. Endocrine disrupting properties**

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

### **12.7. Other adverse effects**

No information available.

## **SECTION 13: Disposal considerations**

### **13.1. Waste treatment methods**

#### **Disposal recommendations**

Dispose of waste according to applicable legislation.

#### **List of Wastes Code - residues/unused products**

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

#### **List of Wastes Code - used product**

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

#### **List of Wastes Code - contaminated packaging**

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

#### **Contaminated packaging**

Non-contaminated packages may be recycled.

## **SECTION 14: Transport information**

### **Land transport (ADR/RID)**

#### **14.1. UN number or ID number:**

No dangerous good in sense of this transport regulation.

#### **14.2. UN proper shipping name:**

No dangerous good in sense of this transport regulation.

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<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.
<b>Inland waterways transport (ADN)</b>	
<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.
<b>Marine transport (IMDG)</b>	
<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.
<b>Air transport (ICAO-TI/IATA-DGR)</b>	
<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.
<b><u>14.5. Environmental hazards</u></b>	
ENVIRONMENTALLY HAZARDOUS:	No
<b><u>14.6. Special precautions for user</u></b>	
No dangerous good in sense of this transport regulation.	
<b><u>14.7. Maritime transport in bulk according to IMO instruments</u></b>	
No dangerous good in sense of this transport regulation.	

## SECTION 15: Regulatory information

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

#### EU regulatory information

Authorisations (REACH, annex XIV):

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

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

Restrictions on use (REACH, annex XVII):

Entry 30, Entry 75

2010/75/EU (VOC): 0,102 % (1,032 g/l)

2004/42/EC (VOC): 0,102 % (1,032 g/l)

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

(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): 1,8.

### 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

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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>  
VOC: Volatile Organic Compounds

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

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H360D	May damage 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 hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*