

# Certificate for

## *sera* Plant Care Set

Manufacturer/Distributor

sera GmbH  
Borsigstr. 49  
D-52525 Heinsberg  
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D-52518 Heinsberg

Responsible Department/Contact Person

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### Declaration

The product *sera* Plant Care Set (EAN 4001942032902) contains the following components:

*sera* florena

*sera* florenette

*sera* CO<sub>2</sub> Start

**For safety information see Safety Data Sheet of each component.**

**Geschäftsführer**

Josef Ravnak  
Amtsgericht Aachen  
HRB 9882  
WEEE-Reg.-Nr. DE 29194989

**Hausanschrift**

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**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**sera florena**

Revision date: 19.09.2023

Product code: florena-01

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

sera florena

**EAN**

4001942032155  
4001942032407  
4001942032506  
4001942032605  
4001942032797  
4001942032803

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

Fertiliser in aquariums: Solution for adjustment of water parameters in aquarium water.

The product is intended for consumer use.

The product is intended for professional use.

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

Company name:	sera Werke Heimtierbedarf	
	J. Ravnak GmbH & Co. KG	
Street:	Borsigstraße 49	
Place:	D-52525 Heinsberg	
Post-office box:	1466	
	D-52518 Heinsberg	
Telephone:	+49 (0)2452 91260	Telefax: +49 (0)2452 5922
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Contact person:	Dr. Matthias Dahm	
e-mail:	sds.info@sera.biz	
Internet:	www.sera.de	
Responsible Department:	Labor	

**1.4. Emergency telephone** +49 (0)2452 91260 (Only available during office hours.)  
**number:** +49 (0)2452 9126555

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

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

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

EUH208 Contains glutaral; glutaraldehyde; 1,5-pentanedial. May produce an allergic reaction.

**Additional advice on labelling**

The product is classified and labelled according to EC directives or corresponding national laws.

**2.3. Other hazards**

No information available.

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

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### Chemical characterization

Aqueous solution of organic and inorganic salts.

### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
111-30-8	glutaral; glutaraldehyde; 1,5-pentanedial			< 0.1 %
	203-856-5	605-022-00-X		
	Acute Tox. 2, Acute Tox. 3, Skin Corr. 1B, Resp. Sens. 1, Skin Sens. 1A, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 2; H330 H301 H314 H334 H317 H335 H400 H411 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		
111-30-8	203-856-5	glutaral; glutaraldehyde; 1,5-pentanedial	< 0.1 %
	inhalation: ATE = 0,5 mg/l (vapours); inhalation: ATE = 0,05 mg/l (dusts or mists); oral: ATE = 100 mg/kg STOT SE 3; H335: >= 0,5 - < 5 Aquatic Acute 1; H400: M=1		

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

Change contaminated, saturated clothing.

#### After inhalation

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

#### After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

#### After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

#### After ingestion

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. When in doubt or if symptoms are observed, get medical advice.

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

No known symptoms to date.

### 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

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

#### Unsuitable extinguishing media

no restriction

### 5.2. Special hazards arising from the substance or mixture

Non-flammable. The product itself does not burn. In case of fire may be liberated: Sulphur oxides, Hydrogen chloride (HCl), Nitrogen oxides (NOx), Carbon dioxide (CO2), Carbon monoxide.

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**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing.

**Additional information**

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

Do not allow entering drains or surface water.

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

Provide adequate ventilation. Do not breathe vapour. Avoid contact with skin, eyes and clothes.

**For non-emergency personnel**

First aider: Pay attention to self-protection! Remove persons to safety.

**For emergency responders**

Use personal protection equipment.

Cover drains. Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

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

Make sure spills can be contained, e.g. in sump pallets or kerbed areas. Contain leaks or spills within cabinets with removable trays.

**For cleaning up**

Large amounts of spillages: Use approved industrial vacuum cleaner for removal.

Small amounts of spillages: Wipe up with absorbent material (eg. cloth, fleece).

Clear contaminated areas thoroughly. Clean contaminated articles and floor according to the environmental legislation.

**Other information**

Treat the recovered material as prescribed in the section on waste disposal.

**6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

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

Do not breathe vapour. Keep out of the reach of children.

**Advice on protection against fire and explosion**

No special fire protection measures are necessary.

**Advice on general occupational hygiene**

Take off contaminated clothing. Keep away from food, drink and animal feedingstuffs. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Avoid contact with skin, eyes and clothes.

**Further information on handling**

Handle and open container with care. Put lids on containers immediately after use.

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

Keep container tightly closed. Keep/Store only in original container.

Protect from direct sunlight.

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Recommended storage temperature: at room temperature.

**Hints on joint storage**

No materials to be specially mentioned

**Further information on storage conditions**

No special measures are necessary. The product is stable under storage at normal ambient temperatures.

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

Fertiliser in aquariums: Solution for adjustment of water parameters in aquarium water.

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

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
111-30-8	Glutaraldehyde	0.05	0.2		STEL (15 min)	

**Additional advice on limit values**

To date, no national critical limit values exist.

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

**8.2. Exposure controls****Appropriate engineering controls**

No special technical protective measures are necessary.

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

Avoid contact with eyes. If splashes are likely to occur, wear: safety glasses

Suitable eye protection: goggles.

**Hand protection**

Avoid contact with skin. Wear suitable gloves.

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material: 0,4 mm

Permeation time (maximum wear duration): > 8 h

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.

**Skin protection**

Body protection: not required. Wash contaminated clothing prior to re-use.

**Respiratory protection**

Usually no personal respirative protection necessary. In the case of vapour formation use a respirator with filter model B2 (according to DIN 3181, 1980).

**Thermal hazards**

Non-flammable. The product itself does not burn. Thermal decomposition can lead to the escape of irritating gases and vapours. In case of fire may be liberated: Sulphur oxides, Hydrogen chloride (HCl), Nitrogen oxides (NO<sub>x</sub>), Carbon dioxide (CO<sub>2</sub>), Carbon monoxide.

**Environmental exposure controls**

No special environmental measures are necessary. Avoid release to the environment.

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

Physical state:	Liquid
Colour:	red brown
Odour:	characteristic
Odour threshold:	not determined
Melting point/freezing point:	< 0 °C
Boiling point or initial boiling point and boiling range:	100 °C
Flammability:	Non-flammable.
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	> 100 °C
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value (at 20 °C):	5,0-6,5
Viscosity / kinematic:	not determined
Water solubility:	completely miscible
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	not applicable
Vapour pressure:	23 hPa
(at 20 °C)	
Density (at 20 °C):	1,05 g/cm³
Relative density:	not determined
Bulk density:	not applicable
Relative vapour density:	not determined
Particle characteristics:	not applicable

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

No ignition, explosion, self-heating or visible decomposition.

The product is not: Explosive

**Sustaining combustion:**

Not sustaining combustion

**Self-ignition temperature**

Solid:

not applicable

Gas:

not applicable

**Oxidizing properties**

Not oxidising.

**Other safety characteristics**

Evaporation rate:	not determined
Solvent separation test:	No data available
Solvent content:	not determined
Solid content:	10,13 %
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	not determined
No data available:	
Viscosity / dynamic:	not determined
Flow time:	not determined

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## 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 chemically stable under recommended conditions of storage, use and temperature.

### 10.3. Possibility of hazardous reactions

No known hazardous reactions.

### 10.4. Conditions to avoid

Protect from direct sunlight. May cause decomposition by long-term light influence.

### 10.5. Incompatible materials

none

### 10.6. Hazardous decomposition products

Hydrochloric gas, Sulphur oxides, Nitrogen oxides (NO<sub>x</sub>), Carbon dioxide, Carbon monoxide.

Thermal decomposition can lead to the escape of irritating gases and vapours.

## SECTION 11: Toxicological information

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

#### Toxicokinetics, metabolism and distribution

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

#### Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
111-30-8	glutaral; glutaraldehyde; 1,5-pentanedial				
	oral	ATE 100 mg/kg			
	inhalation vapour	ATE 0,5 mg/l			
	inhalation dust/mist	ATE 0,05 mg/l			

#### Irritation and corrosivity

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

Frequently or prolonged contact with skin may cause dermal irritation. The inhalation of dust/mist or aerosols causes irritation of the respiratory tract. The statement is derived from the properties of the single components.

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

#### Sensitising effects

Contains glutaral; glutaraldehyde; 1,5-pentanedial. 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

Dermal, inhalation, Eye contact, Ingestion

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**Specific effects in experiment on an animal**

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

**Additional information on tests**

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

**Practical experience**

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

**11.2. Information on other hazards****Endocrine disrupting properties**

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

**Other information**

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

**Further information**

Description of possible hazardous to health effects is based on experience and/or toxicological characteristics of several components. Handle in accordance with good industrial hygiene and safety practice. Health injuries are not known or expected under normal use.

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

There are no data available on the preparation/mixture itself. The ecotoxicological properties of this mixture are determined by the ecotoxicological properties of the single components (see section 3). According to the criteria of the European classification and labelling system, the substance/the product has not to be labelled as "dangerous for the environment".

**12.2. Persistence and degradability**

The product has not been tested.

**12.3. Bioaccumulative potential**

The product has not been tested.

**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.

**Further information**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Ecological injuries are not known or expected under normal use.

**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**

161002 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; aqueous liquid wastes destined for off-site treatment; aqueous liquid wastes other than those mentioned in 16 10 01

**List of Wastes Code - used product**

161002 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; aqueous liquid wastes destined for off-site treatment; aqueous liquid wastes other than those mentioned in 16 10 01



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### 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

Wash with plenty of water. Completely emptied packages can be recycled. If recycling is not practicable, dispose of in compliance with the European Communities (Toxic and Dangerous Waste) Regs 1982, SI 33 of 1982.

## 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

Do not allow to enter into soil/subsoil.

### 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

Authorisations (REACH, annex XIV):

Substances of very high concern, SVHC (REACH, article 59):  
glutaral; glutaraldehyde; 1,5-pentanedial

Restrictions on use (REACH, annex XVII):

Entry 75

2010/75/EU (VOC): 0,095 % (0,998 g/l)

2004/42/EC (VOC): 0,149 % (1,565 g/l)

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

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**Additional information**

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

**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****Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route  
(European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service  
LC50: Lethal concentration, 50%  
LD50: Lethal dose, 50%

**Key literature references and sources for data**

Safety Data Sheet, ECHA

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

H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H330	Fatal if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.
EUH208	Contains glutaral; glutaraldehyde; 1,5-pentanedial. May produce an allergic reaction.

**Further Information**

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP].  
The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. 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.)*

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**sera florenette**

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

sera florenette

**EAN**

4001942033206

4001942033305

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

Fertiliser-tablet in aquariums: Mixture of inorganic salts for adjustment of water parameters in aquarium water.

The product is intended for consumer use.

The product is intended for professional use.

**1.3. Details of the supplier of the safety data sheet**Company name: sera Werke Heimtierbedarf  
J. Ravnak GmbH & Co. KG

Street: Borsigstraße 49

Place: D-52525 Heinsberg

Post-office box: 1466

D-52518 Heinsberg

Telephone: +49 (0)2452 91260

Telefax: +49 (0)2452 5922

e-mail: info@sera.de

Contact person: Dr. Matthias Dahm

e-mail: sds.info@sera.biz

Internet: www.sera.de

Responsible Department: Labor

**1.4. Emergency telephone**

+49 (0)2452 91260 (Only available during office hours.)

**number:**

+49 (0)2452 9126555

**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.

Voluntary safety information following the Safety Data Sheet format according to Regulation (EC) No. 1907/2006 (REACH).

**2.2. Label elements****Additional advice on labelling**

According to EC directives or the corresponding national regulations the product does not have to be labelled.

**2.3. Other hazards**

No information available.

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

Tablets. Mixture of inorganic salts with organic substances.

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**Hazardous components**

none (according to Regulation (EC) No 1907/2006 (REACH))

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

Brush off contaminated clothing. Wash contaminated clothing prior to re-use.

**After inhalation**

In case of inhalation of decomposition products, affected person should be moved into fresh air and kept still.  
Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

**After contact with skin**

Wash with plenty of water. Take off contaminated clothing and wash it before reuse.

**After contact with eyes**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

**After ingestion**

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. When in doubt or if symptoms are observed, get medical advice.

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

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

**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**

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

**Unsuitable extinguishing media**

no restriction

**5.2. Special hazards arising from the substance or mixture**Non-flammable. In case of fire may be liberated: Sulphur oxides, Hydrogen chloride (HCl), Nitrogen oxides (NO<sub>x</sub>), Carbon dioxide (CO<sub>2</sub>), Carbon monoxide.**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing.

**Additional information**

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.  
Do not allow entering drains or surface water.

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

Avoid dust formation. Do not breathe dust. Avoid contact with skin, eyes and clothes.

**For non-emergency personnel**

First aider: Pay attention to self-protection! Remove persons to safety.

**For emergency responders**

Use personal protection equipment.  
Cover drains. Avoid dust formation.

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**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**

Retain contaminated washing water and dispose it.

**For cleaning up**

Large amounts of spillages: Use approved industrial vacuum cleaner for removal.

Small amounts of spillages: Take up dust-free and set down dust-free.

Clear contaminated areas thoroughly. Clean contaminated articles and floor according to the environmental legislation.

**Other information**

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

**6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

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

Keep out of the reach of children.

**Advice on protection against fire and explosion**

No special fire protection measures are necessary.

**Advice on general occupational hygiene**

Keep away from food, drink and animal feedingstuffs. Do not eat, drink or smoke when using this product.

Wash hands before breaks and after work.

**Further information on handling**

Handle and open container with care. Put lids on containers immediately after use.

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

Keep the packing dry and well sealed to prevent contamination and absorption of humidity. Moisture-sensitive.

Recommended storage temperature: at room temperature.

Protect from moisture. Keep away from direct sunlight.

**Hints on joint storage**

Never allow product to get in contact with water during storage.

**Further information on storage conditions**

No special measures are necessary. The product is stable under storage at normal ambient temperatures.

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

Fertiliser-tablet in aquariums: Mixture of inorganic salts for adjustment of water parameters in aquarium water.

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

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### Occupational exposure limits

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
9004-34-6	Cellulose	-	10		TWA (8 h)	
57-50-1	Sucrose	-	10		TWA (8 h)	
		-	20		STEL (15 min)	

#### Additional advice on limit values

To date, no national critical limit values exist.

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

### 8.2. Exposure controls

#### Appropriate engineering controls

No special technical protective measures are necessary.

#### Individual protection measures, such as personal protective equipment

##### Eye/face protection

Eye protection: not required. Avoid contact with eyes.

##### Hand protection

Hand protection is not required. Avoid contact with skin.

##### Skin protection

Body protection: not required.

##### Respiratory protection

Usually no personal respirative protection necessary. In the case of dust or aerosol formation use respirator with filter model P2 (according to DIN 3181, 1980).

##### Thermal hazards

Thermal decomposition can lead to the escape of irritating gases and vapours. In case of fire may be liberated: Sulphur oxides, Hydrogen chloride (HCl), Nitrogen oxides (NO<sub>x</sub>), Carbon dioxide (CO<sub>2</sub>), Carbon monoxide.

##### 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:	solid
Colour:	green
Odour:	odourless
Odour threshold:	not applicable
Melting point/freezing point:	> 150 °C
Boiling point or initial boiling point and boiling range:	not determined
Flammability:	This material is combustible, but will not ignite readily. not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	not applicable
Auto-ignition temperature:	No data available
Decomposition temperature:	not determined
pH-Value:	not applicable
Viscosity / kinematic:	not applicable
Water solubility:	partially soluble

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Solubility in other solvents

not determined

Partition coefficient n-octanol/water:

not applicable

Vapour pressure:

not determined

Density:

not determined

Relative density:

not determined

Bulk density:

not determined

Relative vapour density:

not applicable

Particle characteristics:

not determined

**9.2. Other information****Information with regard to physical hazard classes**

Explosive properties

No ignition, explosion, self-heating or visible decomposition.

Sustaining combustion:

Not sustaining combustion

Self-ignition temperature

Solid:

not determined

Gas:

not applicable

Oxidizing properties

Not oxidising.

**Other safety characteristics**

Evaporation rate:

not applicable

Solvent separation test:

not applicable

Solvent content:

0 %

Solid content:

100,00 %

Sublimation point:

No data available

Softening point:

not applicable

Pour point:

not applicable

Viscosity / dynamic:

not applicable

Flow time:

not applicable

**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 chemically stable under recommended conditions of storage, use and temperature.

Moisture-sensitive.

**10.3. Possibility of hazardous reactions**

No known hazardous reactions.

**10.4. Conditions to avoid**

UV-radiation/sunlight. Exposure to air or moisture over prolonged periods. Decomposition under influence of moisture is highly accelerated by heating.

**10.5. Incompatible materials**

Humidity

**10.6. Hazardous decomposition products**Hydrochloric gas, Sulphur oxides, Nitrogen oxides (NO<sub>x</sub>), Carbon dioxide, Carbon monoxide.

Thermal decomposition can lead to the escape of irritating gases and vapours.

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

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**Toxicokinetics, metabolism and distribution**

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

**Acute toxicity**

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

**ATEmix calculated**

ATE (inhalation dust/mist) 81,802 mg/l

**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**

Inhalation of dust/particles, Skin contact, Eye contact, Ingestion

**Specific effects in experiment on an animal**

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

**Additional information on tests**

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

**Practical experience**

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

**11.2. Information on other hazards****Endocrine disrupting properties**

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

**Other information**

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

**Further information**

Handle in accordance with good industrial hygiene and safety practice.

Health injuries are not known or expected under normal use.

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

There are no data available on the preparation/mixture itself. According to the criteria of the European classification and labelling system, the substance/the product has not to be labelled as "dangerous for the environment". Ecological injuries are not known or expected under normal use.

**12.2. Persistence and degradability**

The product has not been tested. The methods for determining the biological degradability are not applicable to inorganic substances. The organic part of the product is biodegradable.

**12.3. Bioaccumulative potential**

The product has not been tested.

**12.4. Mobility in soil**

The product has not been tested.

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



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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.

### Further information

No special environmental measures are necessary.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal recommendations

Do not allow to enter into surface water or drains. 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

Wash with plenty of water. Completely emptied packages can be recycled. If recycling is not practicable, dispose of in compliance with the European Communities (Toxic and Dangerous Waste) Regs 1982, SI 33 of 1982.

## SECTION 14: Transport information

### Land transport (ADR/RID)

- 14.1. UN number or ID number:**  
**14.2. UN proper shipping name:**  
**14.3. Transport hazard class(es):**  
**14.4. Packing group:**

No dangerous good in sense of this transport regulation.  
No dangerous good in sense of this transport regulation.  
No dangerous good in sense of this transport regulation.  
No dangerous good in sense of this transport regulation.

### Inland waterways transport (ADN)

- 14.1. UN number or ID number:**  
**14.2. UN proper shipping name:**  
**14.3. Transport hazard class(es):**  
**14.4. Packing group:**

No dangerous good in sense of this transport regulation.  
No dangerous good in sense of this transport regulation.  
No dangerous good in sense of this transport regulation.  
No dangerous good in sense of this transport regulation.

### Marine transport (IMDG)

- 14.1. UN number or ID number:**  
**14.2. UN proper shipping name:**  
**14.3. Transport hazard class(es):**  
**14.4. Packing group:**

No dangerous good in sense of this transport regulation.  
No dangerous good in sense of this transport regulation.  
No dangerous good in sense of this transport regulation.  
No dangerous good in sense of this transport regulation.

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

- 14.1. UN number or ID number:**  
**14.2. UN proper shipping name:**  
**14.3. Transport hazard class(es):**

No dangerous good in sense of this transport regulation.  
No dangerous good in sense of this transport regulation.  
No dangerous good in sense of this transport regulation.

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**14.4. Packing group:** No dangerous good in sense of this transport regulation.**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

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

**Additional information**

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

**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****Abbreviations and acronyms**ADR: Accord européen sur le transport des marchandises dangereuses par Route  
(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

**Key literature references and sources for data**

Safety Data Sheet, ECHA

**Further Information**

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

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. 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.)*

# Certificate for

## *sera* Plant Care Set

Manufacturer/Distributor

sera GmbH  
Borsigstr. 49  
D-52525 Heinsberg  
P.O. Box 1466  
D-52518 Heinsberg

Responsible Department/Contact Person

Labor / Dr. Matthias Dahm  
Telefon: +49 (0) 2452-9126-0 bzw. -555  
Telefax: +49 (0) 2452-5922  
Email: [sds.info@sera.biz](mailto:sds.info@sera.biz)  
Internet: [www.sera.de](http://www.sera.de)

### Declaration

The product *sera* Plant Care Set (EAN 4001942032902) contains the following components:

*sera* florena

*sera* florenette

*sera* CO<sub>2</sub> Start

**For safety information see Safety Data Sheet of each component.**

**Geschäftsführer**

Josef Ravnak  
Amtsgericht Aachen  
HRB 9882  
WEEE-Reg.-Nr. DE 29194989

**Hausanschrift**

sera GmbH  
Postfach 1466 · 52518 Heinsberg

**Besuchszeit**

Mo. – Fr. 8 – 16 Uhr

**Telefon**

(0 24 52) 91 26 – 0

**Telefax**

(0 24 52) 59 22

**Safety Data Sheet**

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**sera CO2-Tabs plus**

Product code: CO2\_tabs

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

sera CO2-Tabs plus

**EAN**

4001942080408

UFI:

GJSE-XS9S-VENM-PJ2V

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**Water treatment chemicals: tablet to enhance the carbon dioxide (CO<sub>2</sub>) Concentration in aquarium water.

The product is intended for consumer use.

The product is intended for professional use.

**1.3. Details of the supplier of the safety data sheet**Company name: sera Werke Heimtierbedarf  
J. Ravnak GmbH & Co. KG

Street: Borsigstraße 49

Place: D-52525 Heinsberg

Post-office box: 1466

D-52518 Heinsberg

Telephone: +49 (0)2452 91260

Telefax: +49 (0)2452 5922

e-mail: info@sera.de

Contact person: Dr. Matthias Dahm

e-mail: sds.info@sera.biz

Internet: www.sera.de

Responsible Department: Labor

**1.4. Emergency telephone number:**

+49 (0)2452 91260 (Only available during office hours.)

+49 (0)2452 9126555

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

Skin Irrit. 2; H315

Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

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

Signal word: Warning

Pictograms:

**Hazard statements**

H315

Causes skin irritation.

H319

Causes serious eye irritation.

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### Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.  
P102 Keep out of reach of children.  
P280 Wear protective gloves and eye/face protection.  
P302+P352 IF ON SKIN: Wash with plenty of Water.  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### Additional advice on labelling

The product is classified and labelled according to EC directives or corresponding national laws.

### 2.3. Other hazards

Being an effervescent tablet, this product will react vigorously when in contact with water

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Chemical characterization

Tablets

#### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
110-17-8	fumaric acid			< 15 %
	203-743-0	607-146-00-X		
	Eye Irrit. 2; H319			
124-38-9	carbon dioxide			> 8 %
	204-696-9			
	Liquefied gas; H280			
7646-93-7	potassium hydrogensulphate			< 2 %
	231-594-1	016-056-00-4		
	Skin Corr. 1B, STOT SE 3; H314 H335			

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	
110-17-8	203-743-0	fumaric acid	< 15 %
		dermal: LD50 = 20000 mg/kg; oral: LD50 = 9300 mg/kg	
7646-93-7	231-594-1	potassium hydrogensulphate	< 2 %
		oral: LD50 = >2000 mg/kg	

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

Brush off contaminated clothing. Wash contaminated clothing prior to re-use.

#### After inhalation

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

#### After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse.

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**After contact with eyes**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

**After ingestion**

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. When in doubt or if symptoms are observed, get medical advice.

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

No known symptoms to date.

**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**

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

**Unsuitable extinguishing media**

no restriction

**5.2. Special hazards arising from the substance or mixture**

Non-flammable. The product itself does not burn. In case of fire may be liberated: Sulphur oxides, Carbon monoxide, Carbon dioxide (CO<sub>2</sub>).

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing.

**Additional information**

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

Do not allow entering drains or surface water.

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

Provide adequate ventilation. Avoid dust formation. Do not breathe dust. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

**For non-emergency personnel**

First aider: Pay attention to self-protection! Remove persons to safety.

**For emergency responders**

Cover drains. Avoid dust formation.

**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**

Retain contaminated washing water and dispose it.

**For cleaning up**

Large amounts of spillages: Use approved industrial vacuum cleaner for removal.

Small amounts of spillages: Take up dust-free and set down dust-free.

Clear contaminated areas thoroughly. Clean contaminated articles and floor according to the environmental legislation.

**Other information**

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

**6.4. Reference to other sections**

Safe handling: see section 7

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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

Being an effervescent tablet, this product will react vigorously when in contact with water. Keep out of reach of children.

#### Advice on protection against fire and explosion

No special fire protection measures are necessary.

#### Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs. Do not eat, drink or smoke when using this product.

Wash hands before breaks and after work.

#### Further information on handling

Open drum carefully as content may be under pressure. Put lids on containers immediately after use.

### 7.2. Conditions for safe storage, including any incompatibilities

#### Requirements for storage rooms and vessels

Keep container tightly closed. Keep only in the original container in a cool, well-ventilated place. Protect from direct sunlight. Keep the packing dry and well sealed to prevent contamination and absorption of humidity.

Recommended storage temperature: at room temperature. Protect from moisture.

#### Hints on joint storage

Never allow product to get in contact with water during storage. Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

#### Further information on storage conditions

No special measures are necessary. The product is stable under storage at normal ambient temperatures.

Decomposes in contact with water.

### 7.3. Specific end use(s)

tablet to enhance the carbon dioxide (CO<sub>2</sub>) Concentration in aquarium water.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
124-38-9	Carbon dioxide	5000	9000		TWA (8 h)	
		15000	27000		STEL (15 min)	

#### Additional advice on limit values

To date, no national critical limit values exist.

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

### 8.2. Exposure controls

#### Appropriate engineering controls

No special technical protective measures are necessary.

#### Individual protection measures, such as personal protective equipment

##### Eye/face protection

Avoid contact with eyes. Wear eye/face protection. Suitable eye protection: goggles.

##### Hand protection

Avoid contact with skin. Wear suitable gloves.

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Suitable gloves type: alkali-resistant

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material: 0,2-0,3 mm

Permeation time (maximum wear duration): 2 h

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.

### Skin protection

Body protection: not required.

### Respiratory protection

Usually no personal respirative protection necessary. In the case of dust or aerosol formation use respirator with filter model P2 (according to DIN 3181, 1980).

### Thermal hazards

Thermal decomposition can lead to the escape of irritating gases and vapours. In case of fire may be liberated: Sulphur oxides, Carbon monoxide, Carbon dioxide (CO<sub>2</sub>).

### 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:	solid
Colour:	colourless
Odour:	odourless
Odour threshold:	not applicable
Melting point/freezing point:	> 200 °C
Boiling point or initial boiling point and boiling range:	> 200 °C
Flammability:	Non-flammable.
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	> 100 °C
Auto-ignition temperature:	Non-flammable.
Decomposition temperature:	not determined
pH-Value (at 20 °C):	4,91
Viscosity / kinematic:	not applicable
Water solubility:	completely miscible
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	not applicable
Density:	not determined
Bulk density:	not applicable
Relative vapour density:	not applicable

### 9.2. Other information

#### Information with regard to physical hazard classes

##### Explosive properties

Being an effervescent tablet, this product will react vigorously when in contact with water. Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

Sustaining combustion: Not sustaining combustion



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Self-ignition temperature

Solid:

No self-ignition up to the melting point.

Gas:

not applicable

Oxidizing properties

Not oxidising.

**Other safety characteristics**

Evaporation rate:

not applicable

Solvent separation test:

No data available

Solvent content:

0 %

Solid content:

100 %

Sublimation point:

not determined

Softening point:

not determined

Pour point:

not applicable

Viscosity / dynamic:

not applicable

Flow time:

not applicable

**Further Information**

Decomposes in contact with water.

**SECTION 10: Stability and reactivity****10.1. Reactivity**

Being an effervescent tablet, this product will react vigorously when in contact with water

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures. Moisture-sensitive.

**10.3. Possibility of hazardous reactions**

Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

**10.4. Conditions to avoid**

Protect from direct sunlight. Protect from moisture.

**10.5. Incompatible materials**

Air, humid; Water

**10.6. Hazardous decomposition products**Sulphur oxides, Carbon monoxide, Carbon dioxide (CO<sub>2</sub>).

Thermal decomposition can lead to the escape of irritating gases and vapours.

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Toxicokinetics, metabolism and distribution**

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

**Acute toxicity**

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

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
110-17-8	fumaric acid				
	oral	LD50 mg/kg 9300	Rat	GESTIS	
	dermal	LD50 mg/kg 20000	Rabbit		
7646-93-7	potassium hydrogensulphate				
	oral	LD50 mg/kg >2000	Rat		OECD 423

### Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

### 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

Ingestion, Inhalation of dust/particles, Skin contact, Eye contact

### Specific effects in experiment on an animal

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

### Additional information on tests

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

### Practical experience

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

## 11.2. Information on other hazards

### Endocrine disrupting properties

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

### Other information

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

### Further information

Handle in accordance with good industrial hygiene and safety practice.

Health injuries are not known or expected under normal use.

## SECTION 12: Ecological information

### 12.1. Toxicity

There are no data available on the preparation/mixture itself. No special environmental measures are necessary. Ecological injuries are not known or expected under normal use.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
110-17-8	fumaric acid					
	Acute fish toxicity	LC50 mg/l	>100	96 h	Danio rerio (zebrafish)	
	Acute algae toxicity	ErC50 mg/l	>100		Pseudokirchneriella subcapitata	
	Acute crustacea toxicity	EC50 mg/l	>100	48 h	Daphnia magna (Big water flea) Pseudokirchneriella subcapitata	
7646-93-7	potassium hydrogensulphate					
	Acute crustacea toxicity	EC50 mg/l	>1000	48 h	Daphnia magna (Big water flea)	

### 12.2. Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances. The organic part of the product is biodegradable.

### 12.3. Bioaccumulative potential

The product has not been tested.

### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
110-17-8	fumaric acid	0,46
124-38-9	carbon dioxide	0,83

### 12.4. Mobility in soil

The product has not been tested.

### 12.5. Results of PBT and vPvB assessment

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

### 12.6. Endocrine disrupting properties

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

### 12.7. Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal recommendations

Dispose of waste according to applicable legislation.

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

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

#### List of Wastes Code - used product

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

#### List of Wastes Code - contaminated packaging

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150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

### Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled. Dispose of waste according to applicable legislation.

## SECTION 14: Transport information

### Land transport (ADR/RID)

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

### Inland waterways transport (ADN)

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

### Marine transport (IMDG)

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

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

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

### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

### 14.6. Special precautions for user

No information available.

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

#### Additional information

To follow: 850/2004/EC, 79/117/EEC, 689/2008/EC

#### National regulatory information

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

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**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): 8,9,10,16.

**Abbreviations and acronyms**ADR: Accord européen sur le transport des marchandises dangereuses par Route  
(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

**Key literature references and sources for data**

Safety Data Sheet, ECHA

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

Classification	Classification procedure
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method

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

H280 Contains gas under pressure; may explode if heated.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

**Further Information**

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

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. 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.)*